

Accountability in research: the relationship of scientific and humanistic values

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VALUES PLAY various roles in scientific research. In Kaplan's analysis of scientific inquiry, the influence of one's personal values on the selection of research problems, design, and methodology is emphasized. It is claimed that the questions asked and answers derived from scientific study reflect, and to some extent are determined by, the researcher's values or the values of those who have influenced his or her choices.^{1(p95)}

Values can also occur in scientific inquiry as the ethics of a profession committing the researcher to values embodied in being a "good" professional.^{2(p377)} In this capacity, the relationship of values to the research enterprise is relevant to the understanding of accountability in nursing research. Since values influence the conduct of scientific inquiry, accountability in research will be understandably

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influenced by the extent to which professional values enter into the research enterprise.

VALUES AND VALUE SYSTEMS: A CONCEPTUAL FRAMEWORK

Social psychologist Milton Rokeach defines values as referring to end-states of existence or to modes of conduct.^{3,4} Those referring to end-states are called *terminal values*. They include intrapersonal values such as salvation or peace of mind and interpersonal values such as world peace and brotherhood. Values referring to behavior or modes of conduct are called *instrumental values*. Some instrumental values have a moral focus, whereas others are concerned with competence or self-actualization. This distinction within instrumental values is important and requires further analysis.

Moral values, referring mainly to modes of conduct such as behaving honestly or responsibly toward others, have an interpersonal focus that when violated arouses "pangs of conscience" or "feelings of guilt for wrongdoing."^{4(p8)} On the other hand, competence values such as behaving intelligently or logically have an intrapersonal focus and are not necessarily concerned with morality. Their violation "leads to feelings of shame about inadequacy rather than to feelings of guilt about wrongdoing."^{4(p8)}

The important aspect of this distinction among kinds of instrumental values is that moral values and competence values may conflict. A person may experience a conflict between being helpful and being ambitious or between two moral values

such as whether to behave honestly or politely. Similarly, a person can experience conflict between two competence values such as whether to plan logically or imaginatively.

It is also important to realize that instrumental values have a greater "ought" character than terminal values. Originating from within society, they are attributed to the demands of a "social milieu within which people can trust and depend upon one another."^{4(p9)} Since competence modes of behavior do not seem to include this kind of ought character, Rokeach claims that "oughtness" is more characterized by those values that concern morality or obligations of behavior toward others.

Scientific values

Scientific values are concerned with scientific inquiry—its purpose, design, and methodology. In accordance with Rokeach's definition of value, scientific values are competence values and not necessarily concerned with morality. They are those beliefs about the scientific inquiry or end-purpose of scientific inquiry that are preferable to other methods, designs, or purposes.^{4(p5)}

Scientific values do, however, share some common characteristics with moral values. Like moral values they have an enduring character that enables them to be applied in a relatively consistent manner in scientific endeavors. Kaplan adds to this concept by claiming that scientific values constitute one aspect of a profession's ethics, working to eradicate or minimize bias within the particular scientific problem under investigation.^{1(p93)} Values, there-

fore, occur as a "basis for the selection of problems, the order in which they are dealt with, and the resources expended on their solution."^{1(p95)}

As with moral values, scientific values are both prescriptive and proscriptive beliefs. They are prescriptive in that they indicate what the purpose, design, and methodology of scientific inquiry should be, and proscriptive in indicating what is not true scientific inquiry.

Scientific values also have cognitive, affective, and behavioral components. They influence inquiry and the desired end-state of knowledge. Feelings are attached to scientific values by the preferring of one method over another to reach the desired ends of inquiry. For example, the nurse researcher may prefer the methodology of a double blind study to reduce investigator bias that might influence the results of the study. This methodology would be affectively preferred over the methodology of, say, a simple random sample. The behavioral component in scientific values leads one to conduct scientific inquiry in a certain manner.

Unlike moral values, the curtailment of scientific values does not necessarily affect one's conscience or generate guilt feelings. Their violation would therefore lead to feelings of inadequacy about one's scientific expertise or to professional shame.

Because of their nature, scientific values might conflict with moral values or with other competence values. For example, one may feel strongly about the components of scientific study and be tempted to ignore moral values toward human subjects in the face of study methodology. In a double blind study the investigator

forgoes certain types of information so that investigator bias will be reduced to a minimum. In forgoing this knowledge, the investigator loses the ability to monitor the effect of agents or procedures being studied, thereby increasing the potential harm to individual research subjects. The outcome of the conflict—minimization of investigator bias versus potential harm to research subjects—would be determined by the importance of each competing value and its ascribed priority in the given situation.

Humanistic values

Humanistic values are defined as those values concerned with the state of existence of human welfare or behavior between humans. Following Rokeach's definition of value, humanistic values are moral values or beliefs about the way persons behave or conduct themselves in human interaction.⁴ Although not fixed entities, moral values appear to have a persistent enough quality to yield predictability about one's actions. For example, a person may not always act responsibly, yet can be expected to act responsibly toward others most of the time. Consistency of behavior reflects the stability of one's belief in responsible actions toward others.

Beliefs about moral behavior toward

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humans are also integrated into personal value systems. Some theorists propose that moral values are placed on a higher level than other values because they need other values to exist.¹ Others have suggested that values are ranked according to their relativity or relation to absolute values.^(pp97-100) Rokeach claims that values are arranged in a hierarchy, representing a learned organization of rules for making choices and for resolving conflicts.^(p168) In his system, behavioral outcomes in any situation are the result of the relative importance of all competing values activated by the situation. Moral values, whether culturally or socially defined, are held within this value system by their relative importance to other values in the system.

Within the range of human beliefs, moral values are prescriptive in that they indicate how one should or ought to behave. They are proscriptive in that they indicate behavior or modes of conduct that are considered immoral or undesirable by members in the society. Since moral values are reputed to have a greater ought character than other values in the value hierarchy, they encompass a person's sense of duty or responsibility toward others in social existence.

On a cognitive level, moral values indicate that one knows the way one should act or what end-state to strive for. Affectively, one can attach feelings to moral values and act in response to these feelings. Since moral values refer to modes of behavior toward others, their violation will understandably affect one's conscience or generate guilt feelings.

Because of the cognitive, affective, and behavioral components peculiar to moral values, their conflict with other values in

the value hierarchy may be inevitable. Knowledge of how one ought to act toward persons might conflict with the values attached to social position or recognition. For example, the nurse researcher may feel professionally obligated to minimize discomfort to subjects in a research study, yet be so anxious to see the results of the project, publish its conclusions, and receive the social benefits from so doing that the discomforts of the study's participants are ignored. The values of competence and self-actualization may be, in some instances, at opposite poles from moral values in a person's value hierarchy.

Conflict is especially acute when moral values are at odds with each other. The nurse may value honest, truthful interaction with a client as well as providing beneficial care. When forced to make a choice between these two values, the nurse may experience ethical conflict. The most honest answer to a client's questions may not be perceived as beneficial.

When different moral values are close together in a value hierarchy, potentially unresolvable conflicts may result. Choices are made among alternative courses of actions on the basis of preference or justifiability. When forced to make a choice between moral and competence values, a person will respond in relation to the location of one value over another in a personal value hierarchy.

VALUE ASSUMPTIONS OF PROFESSIONAL NURSE BEHAVIOR IN RESEARCH SETTINGS

At various times and in different contexts, nursing has been defined as an

act of caring, an art, and more recently, a profession. These conceptions of nursing point to the different yet compatible values ascribed to expected nurse behavior. To say that nursing is an act of caring is to emphasize the humanistic values involved in the physical and emotional caring of one person for another. Characterizing nursing as an art emphasizes the value attached to technological skills and methodological efficiency involved in the practice of nursing.

To say that nursing is a profession emphasizes the theoretical constructs and scientific verifications that provide the basis for nursing practice. As Alfred North Whitehead has asserted, implicit in the concept of profession is the expectation that its activities will be subjected to theoretical analysis and that the activities will be modified by theoretical conclusions derived from that analysis.^{7(p72)} Nursing carries out Whitehead's observation through research as a means by which the theoretical constructs of nursing are tested and verified and the practice of nursing is improved. Thus, as a profession, nursing also ascribes to and is influenced by values related to scientific inquiry—its methodology, purpose, and goals.

Following Rokeach's definition of instrumental values, we can assert that the concept of nursing embodies the scientific (competence) values of technological skills, scientific inquiry, and knowledge gained from scientific study, as well as humanistic (moral) values of caring and the promotion of individual welfare and rights. Upon entering the profession of nursing, one is socialized to these values. They become a part of one's professional behavior in all aspects of nursing practice.

In research settings, the behavior or mode of conduct of the nurse investigator is influenced by the instrumental values of competence and moral concern inherent in the practice of professional nursing. Where are these inherent values explicated and how do they influence nurse behavior in research settings? These values, in the form of value assumptions, are best illustrated in three professional documents: The American Nurses' Association *Standards of Nursing Practice*,⁸ *Human Rights Guidelines for Nurses in Clinical and Other Research*,⁹ and the *Code for Nurses with Interpretive Statements*.¹⁰

Standards of nursing practice

The eight Standards focus primarily on nursing practice and the use of the nursing process, the profession's scientific method, in all practice settings. They also identify those characteristics of high-quality nursing care received by the client or patient.

The first value assumption encountered in the Standards is that the professional nurse believes the systematic approach to nursing practice to be the best method of providing high-quality nursing care to the client. The systematic approach to nursing practice (the nursing process) includes the assessment of client status, the plan of nursing actions, the implementation of the plan, and evaluation.⁸ It is assumed that the nurse in all practice settings, including those involving research, believes that this method is the way to practice nursing.

This belief guides the nurse's modes of conduct and specific behaviors. If given alternative methods of client care, the nurse would choose the nursing process as the most desirable method by which to

practice; it would be preferred over all others. In fact, this belief would be enduring enough for one to predict that, in most cases, the nurse would use the systematic approach to nursing practice in all nursing settings and situations. Since nursing is a practice discipline, we might even say that this method of nursing practice would rank very high in the nurse's hierarchical value system. This belief would constitute an important value assumption of the profession.

The second value assumption of the Standards is that the promotion, maintenance, and restoration of health are desirable and proper ends of nursing actions based on the nursing process. It is assumed that the nurse values health and that this value—a prescriptive belief—is conceptualized by the nurse as the proper end-state for which to strive. Affectively, the nurse will behave in such a way as to achieve the promotion, maintenance, and restoration of health.

The third value assumption of the Standards is that the nurse believes that participation by the client in the health care plan is a necessary part of the promotion, maintenance, and restoration of health. It is the proper end of nursing actions based on the nursing process. The nurse's systematic approach to nursing care includes client participation throughout its various processes. As a desired and proper end of nursing actions, health is an interactive process among the clients, the physical environment, and the members of the client's social environment, including the health provider—in this case, the nurse. The nurse acts in accordance with this belief, ensuring that the client is afforded

the opportunity to participate in the health care plan.

These three value assumptions are inherent in the practice of professional nursing. They have been included in the *Standards of Nursing Practice*, thereby guiding nurse behavior in all practice settings. In accordance with Rokeach's formulations, these value assumptions function to (1) guide the presentation of the nursing profession to the public and the individual health care consumer; (2) provide the assessment factors by which the profession, collectively and individually, may judge its competency and moral sentiment; and (3) influence other professions by creating a value standard for nursing against which other values and beliefs may be challenged, influenced, or changed.^{4(p13)}

In research settings, the value assumptions of the Standards direct the nurse's conduct of the scientific inquiry. These values are even operationalized to the point where they become learned plans by which conflicts between values can be resolved in research situations. It is not possible to predict which of these value assumptions of professional nurse behavior can be explicated from the *Standards of Nursing Practice*.

Human rights guidelines

The guidelines for human rights protection in *Human Rights Guidelines for Nurses in Clinical and Other Research* were written in response to recent social and technological changes that altered nursing and nursing practice. Basically, the guidelines are concerned with the human rights of all persons who are recipients of health care

services or are participants in research performed by nurse investigators. They are also concerned with the rights of qualified nurses to engage in research and to have access to resources necessary for scientific investigation.^{9(p1)}

The document first assumes that the professional nurse values self-determination as a basic right of all persons. Not only does the nurse value the right of individuals to determine what will be done to them, but it is assumed that each practitioner acknowledges an obligation to ensure and support self-determination of persons. It is further assumed that every nurse, whether practitioner, educator, or researcher, freely accepts this obligation and the responsibilities attendant to safeguarding the rights of others.

Second, the document assumes that every nurse believes in a personal obligation to support the accrual of knowledge that broadens the scientific underpinnings of nursing practice and the delivery of nursing services. Inherent in professional responsibility is the high value placed on research by qualified nurses.

Third, the guidelines assume that personal accountability for one's practice is accepted by the practitioner. The profession assumes the practitioner will value the trust relationship between client and nurse as essential to good nursing practice and meet its requirements through personal accountability for one's actions.

As with the *Standards of Nursing Practice*, we can classify the value assumptions of this document as instrumental values of competence and moral concern. The accrual of knowledge from research by qualified nurse investigators is a compe-

tence or scientific value. The right of persons to self-determination and personal accountability for one's actions are humanistic values of moral concern.

The tenor of this document seems to place greater emphasis on the values of moral concern than those of the scientific enterprise. The scope of nursing practice has increased in complexity, creating increased concern for the human rights of all persons who are recipients of nursing services or participants in clinical research.⁹

The value ascribed to scientific inquiry is quite evident, yet the document primarily discusses the rights of human subjects in research settings and the profession's humanistic value assumptions toward such persons. In research settings, these values (both scientific and humanistic) direct the nurse investigator's behavior and modes of conduct throughout the scientific inquiry. There is no explicit priority ascribed to one value over the other in this document, yet the importance and concern with moral prerequisites of professional behavior are quite implicit throughout its wording.

Code for nurses

Adopted in 1950 and revised in 1960, 1968, and 1976, the *Code for Nurses with Interpretive Statements* provides a framework for the nurse to make ethical decisions and discharge responsibilities to the public, to other members of the health team, and to the profession.^{10(p1)} The Code is embodied with prescriptive beliefs about personal and professional nurse behavior with the major emphasis, in its latest revision, on accountability to the client.

As stated in the preamble, the *Code for Nurses* is based on beliefs about the nature of individuals, nursing, health, and society. It assumes that both recipients and providers of nursing services possess basic rights and responsibilities, with individual values and circumstances commanding respect at all times. Like the *Standards of Nursing Practice*, the Code claims that the promotion and restoration of health, prevention of illness, and alleviation of suffering are the proper ends of nursing actions. But its richest assumptions lie in the value-laden behaviors and modes of conduct prescribed to nurses by which these ends may be attained.

The humanistic values of moral concern assumed by this document are those pertaining to human dignity, worth, and respect for individual rights. The nurse is to value the delivery of nursing services based solely on need, irrespective of social and economic status or circumstances. In all situations, the best possible care is offered by the nurse, regardless of the nature of the health problem. Even if personally opposed to the nature of the health problem or procedures to be used in its alleviation, the nurse's obligation to provide the best possible care is still expected. It is assumed that the nurse accepts and acts according to this obligation regardless of the situation, the client, or personal beliefs and values. The value

of "best possible care" is assumed in the provision of nursing services, even in research settings.

The profession assumes that the practitioner values the element of trust between nurse and client. In the *Code for Nurses* this assumption is explicated more fully than in the *Human Rights Guidelines for Nurses in Clinical and Other Research*. The nurse freely assumes an advocacy role on behalf of clients when warranted. The client trusts the nurse to provide the best possible care and safeguard human rights and safety in all situations. The high value placed on this trust relationship automatically places the practitioner in an advocacy role while providing nursing services.

In research settings this value assumption gains greater importance. Research design and methodology must reflect the value placed on the trust relationship between client and nurse. The high value accorded to respect for client privacy will determine how information of a confidential nature will be handled by the nurse investigator. The value accorded to competent, ethical, and legal nursing practice will determine how research will proceed and what protective procedures for clients are included in the research process. The value accorded to self-determined actions and consent will determine how the research process allows for and provides fully-informed consent by research subjects.

Scientific values of competency assumed by the *Code for Nurses* entail practice skills and techniques, continued education, delegation of responsibility, participation in research activities, and

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participation in professional activities. Points 5 to 10 of the Code consider these assumed instrumental values as they relate to competency levels of practice. There is no mistaking the emphasis placed on the value of competency in this document. One's personal responsibility for competency levels through continued education is assumed and expected by licensure and certification procedures.

Participation in research activities is also an assumed value of members of the profession. Calling research "indispensable to the full discharge of a profession's obligations to society," the *Code for Nurses* emphasizes the important role of nurse investigators, as well as those participating in and using the results of research.¹⁰ Although not given great emphasis in this document, participation in professional activities to maintain and improve standards of nursing and the public's image of the profession is also accorded considerable value.

Last, the *Code for Nurses* is unique in the value ascribed to professional and personal accountability for one's actions. Accountability to the self, the client, the employing agency, and the profession for individual nursing judgments and actions involves more than just scientific values of competency or humanistic values of moral concern. With the recent changes in the scope of nursing practice and responsibilities and the growing interest and concern for human rights, accountability has become an important prescriptive value assumption of the profession. As a result, scientific and humanistic values have also assumed new importance in this demand

for and expectation of accountability. It is therefore important to relate the scientific values of competence and humanistic values of moral concern to accountability in nursing research.

RELATIONSHIP OF SCIENTIFIC AND HUMANISTIC VALUES TO ACCOUNTABILITY

Accountability, being answerable to someone for something one has done, has always been an essential aspect of professional nursing practice. In years past, accountability to other members of the health team, especially the physician, has played an important role in the performance of one's professional acts. But as nursing practice has increased in scope and complexity over the years, accountability requirements have taken on new dimensions and importance. As the ranks of nurse researchers have grown, the need for accountability in research has also taken on new dimensions and importance.

The role of the nurse researcher in advancing the goals and purposes of the profession is well documented in professional literature. Schlotfeldt has called the commitment to research the "key predictor of nursing's eventual fulfillment of its potential..."^{11(p4)} During the time of Florence Nightingale, systematic inquiry was valued and encouraged. From the recording of correct observations and the contemplation of their meaning, Nightingale astutely credited systematic inquiry in nursing practice as the reliable means for discovering verifiable knowledge useful for saving lives and for increasing the

health and comfort of human beings, individually and collectively.¹¹ Hence, the relationship of scientific values to accountability in nursing research has its roots deep in the beginnings of professional practice.

During the 1950s and 1960s, the need and demand for scientific accountability in nursing research were frequently voiced by the profession's leaders. Schlotfeldt drew attention to an ethic of scientific inquiry within professional practice in order to make explicit the outcomes for which nurses would be held accountable.¹² Batey encouraged nursing to adopt a scientific perspective characterized by the norms of disinterestedness, organized skepticism, and communality.^{13(p507)} The profession was criticized for the general attitude of esteeming nursing research "more for its accompanying material and social rewards than as a tool of science governed by the norm of disinterestedness."^{13(p508)} The attainment of knowledge fundamental to nursing science was considered dependent on the establishment, within the profession, of a research perspective (or value orientation) toward acquisition of an objective body of knowledge. In Batey's article the primacy of scientific values in nursing research was claimed necessary for the evolution of a science of nursing.

But nursing also has a long tradition of humanitarian concerns. While the historical notion of "profession" usually engenders the idea of commitment and obligation to those who practice the same vocation, the nursing profession has traditionally served the needs of people through altruistic service to the client.^{14(p107)} Florence Nightingale, while supporting the

Building on Florence Nightingale's humanistic foundations, modern nursing leaders have supported humanistic values of moral concern while encouraging research activities by nurses based on strict scientific method.

systematic inquiry of nursing practice and its effect on the health of persons, considered the person to be of primary importance. Her recognition of the hardships suffered by the poor and her deep compassion for human beings shaped her life and her work. Believing that humans are creative, with inherent rights to the pursuit of personal development, interests, and goals, she strongly objected to one person's subjugation to the will of another.^{15(p85)}

Building on Nightingale's humanistic foundations, modern nursing leaders have supported humanistic values of moral concern while encouraging research activities by nurses based on strict scientific method. Berthold noted that "means must be sought to promote scientific progress while simultaneously protecting the rights of the individual."^{16(p516)} Emphasizing the tradition of caring within nursing, Gortner called for a standard of scientific accountability in nursing as the means by which the quality of nursing services will be improved.^{17(p768)}

Recognizing the dual value concerns of the profession, Schlotfeldt calls nursing "a socially significant, scientific, humanistic learned profession."^{11(p1)} But perhaps Ellis expressed the dual role of scientific and humanistic values in nursing accountabil-

ity best in claiming that science is "a means of achieving a kind of caring that includes deliberate, scientifically selected action."^{18(p44)} According to Ellis, science can be an effective tool for the humanist. Thus accountability in nursing research is profoundly affected by the relationship of scientific and humanistic values in research activity.

The need for scientific accountability in order to expand the body of knowledge known as nursing science is clear. Those nurses who are qualified to do so must conduct research in accordance with the scientific method. Yet public insistence on the protection of human rights demands humanistic accountability from all health care providers, particularly the nurse engaged in research.

As a member of the largest group of health providers, the nurse is a partner in a unique trust relationship with clients. It does not matter whether the nurse is personally conducting the research, is caring for clients engaged in research, or is assisting in the gathering of research data. Participation in the research enterprise demands and expects humanistic accountability of every nurse. However, in the face of value conflict, Does the demand for accountability lean toward the importance of scientific values or toward humanistic values? Is it possible to determine which value assumptions of the profession are more important than others?

NURSING PRIORITIES

From the preceding analysis it is possible to make two conclusions about the priority of scientific and humanistic values

affecting nurse behavior and the relationship of this priority to accountability in nursing research.

First, the higher priority of humanistic values over scientific competence values is fundamental to accountability in nursing research. As Barber points out in his survey of biomedical research institutions and individual investigators, the ethical task before researchers is to resolve unavoidable conflict between scientific goals and humanistic values in favor of humane therapy.^{19(p326)} Although the concern for scientific ability may cause some researchers to overvalue scientific work as opposed to humane therapy, the nature of accountability in nursing requires that humanistic values rather than the goal of humane therapy itself receive first priority in research activities conducted by nurses.

The trust relationship between client and nurse with its inherent personal and professional responsibilities inevitably places the nurse researcher in the role of client advocate in all practice settings, including that of research. Yet this role need not be a conflicting one as long as humanistic values of moral concern and responsibility are consciously rendered first priority in nurse actions. As Horosz explains, one's sense of direction in purposeful human behavior is, to a large extent, the source of one's responsibility in human interactions.^{20(p27)} The nurse displays responsibility for other persons by adopting a particular manner of acting—a method of action directed to a desired end-state—in response to humanistic values.^{21(p11)}

In research settings, scientific competence values find their grounding in

humanistic values of moral concern; humanistic values dictate what one ought to do as a responsible person and as a responsible researcher. Scientific values, having no moral content in themselves, gain moral significance only when generated in response to humanistic values of moral concern. Hence, accountability in nursing research depends on the priority of humanistic values in decisions involving research subjects.

Second, the high value ascribed to humanistic accountability in nursing practice, particularly in research settings, is the foundation of the profession's written code of ethics, the *Code for Nurses*. In its simplest form, an ethical code prescribes the duties of the members of a community toward one another. In contrast, the professional code prescribes the duties of the members of a whole group toward those outside the group. Yet it is here, as professional ethics, that the reflection and application of ethical principles are reported to show great weakness. Churchill claims that the "professionalization of ethics" tends to narrow the scope of professional accountability by diminishing or rendering ineffectual the personal (non-professional) resources for ethical reflection.^{22(p13)} He questions whether the moral sensibility embraced in codes of medical practice includes the capacity to step outside the customs and traditions engendered in medical training to inquire into the goodness of professional value commitments themselves.

The nurse might ask the same question of the nursing profession and inquire whether the *Code for Nurses* provides practitioners an avenue by which nursing values may be reflected on and examined

in principle. Surprisingly, the *Code for Nurses* appears to escape Churchill's sentence of "professionalization" by its reflective attitude and emphasis on nurse accountability to the client. As the *Code for Nurses* points out, earlier codes were more prescriptive, identifying expectations of both personal and professional behavior. The 1976 code, however, depends more on nurse accountability to the client, thereby representing a "change to an ethical code."¹⁰

The emphasis of the *Code for Nurses* is therefore unique in two aspects: (1) professional accountability and (2) personal accountability. The nurse's professional encounter with clients and other members of the profession is a response to professional expectations of competence, behavior, and participation in professional activities. The nurse's personal encounter with clients is a response to a normative code of human conduct grounded in the trust relationship shared by client and nurse. Because of this relationship and the nurse's primary commitment to client care and safety, personal accountability provides the foundation on which professional accountability is constructed.

Likewise in nursing research, professional accountability (the response to scientific values of competence) is grounded in personal accountability (the response to humanistic values of moral concern). Since values enter the research enterprise in the form of one's professional ethics committing the researcher to certain modes of behavior, the ordering of scientific and humanistic values within one's hierarchical system thus bears an important relationship to accountability in nursing research involving human subjects.

REFERENCES

1. Kaplan A: Values in inquiry, in Riley G (ed): *Values, Objectivity and the Social Sciences*. Reading, Mass, Addison-Wesley Co, 1974, pp 84-101.
2. Kaplan A: *The Conduct of Inquiry*. San Francisco, Chandler Co, 1964.
3. Rokeach M: *Beliefs, Attitudes and Values: A Theory of Organization and Change*. San Francisco, Jossey-Bass Co, 1968.
4. Rokeach M: *The Nature of Human Values*. New York, The Free Press, 1973.
5. Hartmann N: *Ethics*. New York, Macmillan Co, 1951, vol 2, *Moral Values* (S Coit, trans).
6. Scheler MF: *Formalism in Ethics and Non-Formal Ethics of Value*. (MS Frings and RL Funk, trans) Evanston, Ill, Northwestern University Press, 1973.
7. Whitehead AN: *Adventure of Ideas*. New York, Macmillan Co, 1954.
8. American Nurses' Association: *Standards of Nursing Practice*. Kansas City, Mo, Author, 1973.
9. American Nurses' Association: *Human Rights Guidelines for Nurses in Clinical and Other Research*. Kansas City, Mo, Author, 1975.
10. American Nurses' Association: *Code for Nurses with Interpretive Statements*. Kansas City, Mo, Author, 1976.
11. Schlotfeldt RM: Nursing research: Reflection of values. *Nurs Res* 26:4-7, January-February 1977.
12. Schlotfeldt RM: Planning for progress. *Nurs Outlook* 21:766-769, 1973.
13. Batey MB: Values relative to research and to science in nursing as influenced by a sociological perspective. *Nurs Res* 21:504-508, 1972.
14. Cogan ML: The problem of defining a profession. *Annals* 297:105-111, January 1955.
15. Palmer IS: Florence Nightingale: Reformer, reactionary, researcher. *Nurs Res* 26:84-89, March-April 1977.
16. Berthold JS: Advancement of science and technology while maintaining human rights and values. *Nurs Res* 18:514-522, 1969.
17. Gortner S: Scientific accountability in nursing. *Nurs Res* 22:764-768, 1974.
18. Ellis R: Values and vicissitudes of the scientific nurse. *Nurs Res* 19:440-445, 1970.
19. Barber B: The ethics of experimentation with human subjects, in Reiser SJ, Dyck AJ, Curran WJ (eds): *Ethics in Medicine: Historical Perspectives and Contemporary Concerns*. Cambridge, Mass, The MIT Press, 1977, pp 322-328.
20. Horosz W: *The Crisis of Responsibility*. Norman, Okla, University of Oklahoma Press, 1975.
21. Ross SD: *The Nature of Moral Responsibility*. Detroit, Wayne State University Press, 1973.
22. Churchill LR: The professionalization of ethics: Some implications for accountability in medicine. *Soundings* 60:40-53, Spring 1977.