Course # | Nursing 7009
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Reading # | Three Paradigms for Research

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INTRODUCTION

Methodological disputes in nursing research are often framed in practical or technical terms. For example, the discussions around quantitative versus qualitative research are often presented as a choice of which data-gathering techniques one should use for a particular study. In many of these accounts, a hierarchy is stated or assumed: quantitative data is preferable, but qualitative research may be a helpful, preliminary step to developing quantitative information. This chapter reexamines these distinctions by placing them in the context of the philosophies of science from which they arose. By discussing three central positions in the philosophy of science—analytical empiricism, Heideggerian phenomenology, and critical social theory—in terms of the research they produce, one can make intelligent, informed, and flexible methodological decisions. Further, the hope is that this discussion will make clearer that all three positions generate fruitful nursing research and that it is not a matter of one or two being superseded by another. All three, for example, are explanatory and not "merely" descriptive, and all three can incorporate qualitative and quantitative data gathering and analysis, albeit to different ends. Thus a pluralistic vision of research methodology can do much more to enlighten us about the universe of nursing than any single model.

To facilitate the understanding of similarities and differences, the three philosophical schools are discussed separately but using a common outline. Each section concludes by taking a particular research question—the role of experience in nursing education—and explicates that question from the point
Three Paradigms for Nursing Resea

of view of the philosophical school being discussed. It is hoped that this common ground will help to clarify the theory and method distinctions among the three paradigms.

EMPIRICAL-ANALYTIC PARADIGM

The empirical-analytic paradigm dominates the broader scientific community (especially in the United States) as well as nursing research. Indeed, its tenets are often assumed to be those of "science" itself. Many central features of this position are familiar to most researchers: the emphasis on theory, the centrality of observation and measurement, the ideal of experimental designs. Some of these will be reviewed briefly in the discussion of "Underlying Assumptions," "Definition of Knowledge," "Purpose and Value of Theory," "Organization, Categorization, and Definition of Objects," and, finally, a discussion of researching "The Role of Experience in Nursing Education." (a similar outline is used in discussing Heideggerian Phenomenology and Critical Social Theory).

Underlying Assumptions

An important assumption of this paradigm is that the world is structured by lawlike regularities that can be identified and manipulated. This assumption about the world pertains to research in the physical as well as the biological and human sciences. There is no difference in theory and explanation between the study of humans and that of objects.

It is assumed that human behavior—that is, the social affairs of people—is structured by lawlike regularities that can be identified and manipulated, as can objects in the physical world. In nursing education research, for example, the use of this paradigm assumes that the teaching and learning of nursing operate on the basis of lawlike regularities that can be manipulated to achieve more effective or efficient teaching and learning. Although we and our colleagues in education have not yet been able to identify these laws, this can be attributed to the youth of research in education, indeed research in the social sciences. The assumption, however, is that given the time and resources, one day how students learn nursing will be understood through the development of theory, that is, identification of the lawlike regularities that can be manipulated to improve nursing education.

In this paradigm, theory is considered to be universal and not bound to the specific content in which it is formulated. The universal statements of scientific theories are usually termed laws. Statements that express laws must have the syntactical form of universal conditionals—"if X, then Y." In empirical-analytic science, objects and events are analyzed as dependent and independent variables. Empirical-analytic science investigates the regularities among them.

A simple law would be "if X occurs, then Y will be the effect." In highly developed theory, there are principles or rules of inference that can be deductively arranged to describe the interaction of the parts. By studying the effects of several preoperative nursing interventions on the patient's postoperative course, the ideal would be to find a single intervention that in all instances reduced the rate or severity of postoperative complications.

The theory of universality is linked to a theory of observation. According to this paradigm, the truth or falsity of statements about observations does not depend on the truth or falsity of theories, and theoretical disputes can be resolved by reference to agreed-on observation statements. A statement can only be properly regarded as scientific if its truth or falsity can be ascertained by means of theory-neutral observations.

Finally, this paradigm assumes a world that is ordered—one that can be broken down into a system of independent variables. These variables exist as distinct and analytically separable parts that interact as a system to produce human behavior yet can be studied independently of one another.

As a consequence of these assumptions, research is expected to meet strict standards in defining distinct variables in terms of simple observations. Thus anxiety is defined as a score on a particular scale or as a certain level of circulating catecholamines. Measurability is stressed in part as a function of the need for reproducible, theory-neutral observations.

Definition of Knowledge

The empirical-analytic paradigm stressed the importance of formalizing knowledge. Knowledge is generated when measurable hypotheses can be tested and reproducible findings used to make improvements in theory. Variables of theory must be operationalized into precise and distinct definitions.

In this paradigm, the knower can be completely differentiated from the known. The comparison and manipulation of variables is to confirm or falsify hypotheses as they relate to the development of theory. Precision of variables and reliability of measure assume importance in defining and limiting the scope of empirical-analytic theory. Quantification of variables exposes ambiguities and contradictions. This precision and necessity to quantify variables with a commitment to observations as objective necessitate the assumption of both ontological and epistemological privilege.

Under the assumption of ontological privilege, objects that can be observed have more valid claim to existence. Thus terms belonging to observation language, and only such terms, can be regarded as making genuine reference to items in the physical world. Only such items can properly be said to exist.
These observational statements can be verified or falsified without reference to the truth or falsity of theoretical statements.

Of primary importance is the epistemological claim that those objects that can be observed can be known with more certainty that those that cannot. Thus the truth or falsity of statements containing only observational terms can be known with total certainty, or at least with far greater certainty than those containing nonobservational terms. In addition, there is in this paradigm a commitment to observations as objective that encourages a requirement of mathematics in theory construction.

Purpose and Value of Theory

The goal of this paradigm is quantitative theory whose ultimate purpose is to provide control through explanation and prediction. Scientific explanation is a form of deductive argument. It provides the basis for explaining or predicting the phenomenon described in the conclusion. Empirical-analytic theory enables one to predict an event that has not occurred and to explain that even after its occurrence.

There is a distinction, however, between theory and practice. People create, discover, or invent theories about behavior. These systems are assumed to be separate from practice. In this paradigm, it is not assumed that nurses will consciously use this knowledge to guide the practice of nursing. Thus there exists an important distinction between theory and practice.

Empirical-analytic theory is descriptive of what exists. It espouses neutrality regarding human interests. That is, how people use the theory to guide practice is a question not of science, but of ethics and politics. In this paradigm, the value in theory is in its universality; because of this universality, it is the closest approximation of truth and is distinguishable from nonuniversal, politically and historically contingent human interests.

In summary, the fundamental purpose of empirical-analytic science is control. Through confirming and falsifying of hypotheses in which objects and events are dependent and independent variables, the regularities among them are identified that allow one to control the practice of nursing through the ability to explain and predict. Although this paradigm has as its central interest control through explanation and prediction, it does not follow that nurse researchers personally value the ability to control.

Organization, Categorization, and Definition of Objects

In empirical-analytic science, sophisticated concepts and techniques that can be formally expressed are central. Briefly, objects in this paradigm are distinguishable from any individual's perception of them. Thus research using terms like nonverbal emotional expressiveness and affective sensitivity assumes that these terms are no more dependent on an individual's perception of what it is or should be than arterial oxygen pressure levels are. These characteristics must be precisely defined with both reliability and validity of measurement.

Similarly, when studying the best way to teach a complex set of behaviors, like how to administer parenteral medications, the assumption is made that studying small parts of the process will ultimately result in understanding the reality of the entire event. The organization and categorization in this paradigm are assumed to be additive; each study contributes another part and, when viewed in totality, constitutes the reality of the object or event.

The Role of Experience

The study of experience, in this paradigm, is usually treated as if experience were a trait, a possession of the person based on the past. Although there are a number of competing theories to account for how the person learns from experience (e.g., cognitivism, behaviorism), the rational-empirical paradigm contributes the view of the person as a subject who represents external objects. This Cartesian tradition is a particular epistemological view of a world made up of minds and matter. Minds more or less approximate reality through mental representations, and intelligibility is won through rationality. Because this paradigm treats experience as a trait, most research analyzes the "present state" best and has more difficulty depicting historical influences or the impact of future goals on present activity. Experience is thus reduced to distinct observables, such as age or degree preparation, or the number of times a particular activity was performed. Relationships between these variables, such as degree preparation and the achievement scores on state board exams, can then be expressed to establish causation. The goal, in this instance, is to predict the outcome on board scores based on degree preparation. Research in this area holds true for all times and places, that is, any state board exam and any baccalaureate grade. One goal, then, of research on experience in nursing education is to identify the lawlike regularities that exist that can be manipulated to, in this case, help students to pass boards.

Theoretical terms in this paradigm must be expressed as observable events. Therefore, role strain or anxiety can be reduced to a series of observations that are neutral, that is, interpretation-free. And they can be used in all instances to describe the event.
HEIDEGGERIAN PHENOMENOLOGY

Underlying Assumptions

The underlying assumption of this paradigm is that the study of pragmatic activity, that is, everyday understanding and practices, and the study of relational issues are distinctly different from the study of objects, as in the natural sciences, or even biophysiological events on the tissue and cellular level.6

The view of the person in this paradigm breaks with the Cartesian subject/object, mind-body distinctions. In the Heideggerian view, to be human is to be-in-the-world, to participate in cultural, social, and historical contexts. This is a relational view of the person, and "human nature" is not considered fixed. The person is self-interpreting through and through, and these self-interpretations are not individually generated, but are handed down in the language and cultural practices. Social practices and perceptions are already laden with interpretations. For example, Caudill and Weinstein6 found that Japanese and American babies were distinctly Japanese and American by the age of four months. It seems that all the child-rearing practices of the Japanese embody meanings and interpretations of the sort: the infant is an independent creature that must be civilized and made dependent. By contrast, the child-rearing practices of American mothers embody the understanding that the infant is a dependent creature that must be made independent. Underlying all interpretation-laden practices and self-understanding handed down through language and culture is the notion of "The Background." This full-blown notion of the background preunderstanding is one of the major distinctions between Heideggerian phenomenology and critical theory, which is discussed in the next section. This background cannot be made fully explicit; nor can we get completely clear about it or clear of it. Consequently, purely neutral, noninterpreted observation is impossible.6 The background gives us the conditions for our actions. This background makes human beings different from computers, which always must build up the story element by element, whereas human beings come with a story—and a history.

Definition of Knowledge

In this paradigm, meaning resides neither solely within the individual nor solely within the situation. Meaning is a transaction between the two so that the individual both constitutes and is constituted by the situation. This position expects commonalities and recurring similarities and dissimilarities, but unlike analytical empiricism, it does not look for these recurring similarities and differences in laws, mechanisms, structures, and processes that are unrelated to meaning. No higher court than meaning, or deeper explanation than meaning, exists in this paradigm. Explanation is making meaning as apparent as possible, not simply juxtaposing two sequential events ("If X, then Y"). However, meaning is not based on private meanings given by individual subjects or on consensus of private meanings (intersubjectivity). Meaning is shared and handed down culturally through language, skills, and practices and is directly perceived by the individual. Experience is already interpreted—it is never perceived as sense data to be interpreted by a subject.6

Explanatory knowledge is not expected, ultimately, to lie in mechanisms, laws, structures that are ahistorical and free of value and interpretation. All of knowledge is not necessarily explicit. Human beings have embodied ways of knowing that show up in skills, perceptions, and sensory knowledge and in ways of organizing the perceptual field. These bodily perceptual skills, instead of being primitive and lower on the hierarchy, are essential to expert human problem solving, which relies on recognition of the whole. These perceptual skills are missing with purely structural, conceptual, and mechanistic aspects of knowledge capable of being simulated by a computer. This paradigm is concerned with the ontological basis for knowledge, that is, the conditions for the possibility of any way of knowing.6

Purpose and Value of Theory

Theory is viewed as a skeleton, deprived view of reality that is drawn from everyday practical activity and knowledge. Theory is always context-specific, not universal. Thus some knowledge may be generated by developing a theory from practice and then extended and refined by testing that theory in practice, but there was knowledge in the practice before the theory was derived. For the beginner, typically, formal theory is used to direct the learner to the accurate region of the problem, to direct the cue sensitivity and approach to the problem. As expertise is gained, the theory is refined and taken over by practical knowledge so that the theory is elaborated, changed, or discarded. Highest levels of skilled performance are achieved when the performer uses past concrete experiences as a perceptual lens. The actual comparison of similar and dissimilar situations is far more complex than any explicit formal model because it has nonspecified globally recognized aspects. It follows, then, that the range and complexity of the theory useful to novices and experts will be different.

Organization, Categorization, and Definition of Objects

Theory, in this model, does not ascribe to criteria developed by Socrates and elaborated by 17th-century scientists, such as explicitness, abstractedness, discreteness, systematicity, prediction, and completeness. Theory takes
on a new prospect, since the aim is to describe family resemblances, prototypes, exemplars, or paradigm cases that convey contextual, relational, and transactional explanations and interpretations.6

Critique of Other Paradigms—Similarities and Differences

From the perspective of this paradigm, the goal in the human sciences, particularly in studying health and illness, is to get beyond the purely intentionalistic descriptions, as in cognitivism, and the purely stimulus-response descriptions of behaviorism. Of interest in studying human behavior is the role of cultural practices, skills, and meanings, the role of the situation, and the role of the body in addition to beliefs, values, and intentions.

Everyday understanding, meanings, practices, relational concerns, and skilled activities are the focus of study in this paradigm. The actual practices of clinicians take on new significance, as does the practical knowledge gained by patients living with an illness. Patients who learn how to manage chronic symptoms or accomplish remarkable recoveries may possess practical knowledge not yet captured by a purely theoretical account of the disease. There are patterns or regularities (knowledge) in the practices of clinicians and the struggles of people with chronic illness. These regularities can be expressed numerically as frequencies or analyzed as covariance. The crucial differences for hermeneutics lie at the kind and level of description and explanation. What is important about the patterns is the meanings or interpretation they reflect, and the explanation of those patterns lies in the meanings that shape them. Teleological explanations are used to account for human agency and historicity. Thus in studying social activity, both description and explanation are grounded or constituted by meaning, but that does not make their study inimical to quantitative techniques. Rather, what is claimed for quantitative techniques and their derivative role in explanation varies from the analytic-epistemic's account.

The Role of Experience in Clinical Knowledge Acquisition

Experience has a dialogical character in the hermeneutical phenomenological paradigm. Experience, as understood by Heidegger and Gadamer,10 is not longevity or mere passage of time, but the turning around, or refining, of preconceptions. This position holds that one never approaches a situation without a preunderstanding. This preunderstanding has different levels of specificity, which Heidegger outlined as the prestructure of knowledge. Experience is one step away from fluid, nonproblematic skilled performance because there is a discrepancy or a disruption that causes one to reflect on the activity and to come to terms with why expectations are not met by the performance or the situation. Heidegger departs from the tradition that detached, objective knowledge is preferable to knowledge acquired through involved practical activity. In fact, he posits that involved skilled activity precedes theory.

To examine the nature of a hammer, to use Heidegger’s example, in terms of its objective properties, such as heaviness, density, smoothness of the metal, is not to understand hammering. Furthermore, these properties can only make sense in relation to the task of hammering itself. We encounter the world through involved activity. With breakdown or incongruency we notice or have an experience that causes us to reflect on the breakdown or unmet expectations. Distortion is created when we mistake the description apparent in breakdown for normal functioning. In nursing education, experience is often distorted through the misguided belief that telling is teaching, or that the procedural steps given to the beginner adequately describe the flexible performance of the expert. It is a misguided notion to think that it is possible to convey everything the student must know in principles, theories, and directions, or, in a less extreme form, that you can tell students all the cues that they should notice. Although all this instruction is helpful, it is not the same as noticing cues in their relative importance to a particular patient's history and illness trajectory and the particular patient care context. Passing a nasogastric tube on a mannequin in a skills lab is not the same as inserting a nasogastric tube on a thin anxious patient, or on an obtunded obese one, or as deciding when the patient might be better off without the tube.

The paradigm of knowledge that values reflective, detached, objectified knowledge and distrusts involved practical activity ignores the knowledge that resides in the working out of knowledge in skilled performance. Knowledge that is highly context-dependent and relational is overlooked or oversimplified. This does a great disservice to the complexity of actual nursing practice, where the nurse must frequently weigh the important against the important.8,11

Given this view of experience, the study of clinical practice must be done in realistic practice settings, and time must be given to examine what the situation challenges, teaches, refines, alters. Practice becomes a place to interact with and refine theory, not a place where one naïvely gives theory priority and expects to apply or match it with practical situations. Theory provides the foreknowledge that raises questions and points to relevant behaviors, signs, and symptoms. But knowledge and ways of knowing are not exhausted by theoretical understanding; therefore, practice itself is seen as a repository of knowledge and takes on a new importance. Clinical practice is no longer a mere shadow of reality that may or may not match up to the idea posed by theoretical understanding. Instead, expert practice is an important original source of knowledge. Expertise in this model is a hybrid of theoretical knowledge (knowing that) and practical knowledge (knowing how to).
As expertise develops, the nature of theory that will actually provide a heuristic, or an understanding, also changes. The theory useful to the beginner cannot rely on holistic understanding, a sense of salience, or graded qualitative distinctions (comminionality) because these can only be acquired through experience. With expertise, the most relevant theories can have relational and context-dependent formulations. They can be more interpretive. Necessarily the rules generated in a theory for experts about pragmatic activity and relational issues will be conditional rules that will hold only as long as all other things remain equal or when there is consensus between the practitioner and the patient about what the goals of health care should be. The rules could never be context-independent, as is the ideal for rational/empirical theories.

The model of the person differs from the cartesianism of the empirical paradigm. The individual is not capable of being a passive receiver of noninterpreted stimuli; or to put it another way, brute, or "raw," data is not a possibility. Anything that is perceived is already meaningful owing to the active nature of perception. Unlike that of the cognitivists, this position does not hold to a mental representation theory of the mind. That is, the mind is not full of programs, rules, symbols, or templates that are then matched to reality.

The person can have direct access to situations because of concrete memories and perception of similarities with dissimilarities from past events. This view of knowledge dictates that clinical learners be systematic record keepers of what they learn from experience. When a clinical situation teaches the clinician something new about helping, or about signs and symptoms, this should be preserved. The good clinician does this informally, but this model predicts that systematic record keeping of clinical knowledge in the form of paradigm cases and other forms of practical knowledge will enhance the systematic growth of clinical knowledge. For example, over time, clinicians would have clusters of paradigm cases around issues, such as recognizing early signs of septic shock, or around maintaining a healing relationship with patients who are depressed or discouraged. Such systematic record keeping could begin in the undergraduate years and continue. A notebook of paradigm cases would provide the clinician advancing to research with a wealth of significant clinical questions and issues for research. Research can only be enriched by such a seedbed of recognizable clinical knowledge.

This view of experience has implications for clinical evaluation. In the quest for objective evaluation, educators have increasingly moved to written works as a means of evaluating clinical practice. Part of the reason for moving to written case plans or written case studies for clinical evaluation is based on the need for "objective" evidence that will bear scrutiny during a grievance procedure. Descriptive anecdotes of actual clinical practice are considered too subjective, especially in a litigation-conscious environment.

Consequently, we have ceased to evaluate clinical practice and are currently evaluating the ability to document it. The ability to document our practice is a necessary skill, but it is not the same as actual skilled performance. A return to direct observation, clinical diaries, narrative descriptive accounts of actual practice, and teacher-taped recorded or written descriptions of actual practice are essential tools for the evaluation of actual clinical performance.

CRITICAL SOCIAL THEORY

Underlying Assumptions

Critical social theory is part of the tradition of scientific theory that includes Thomas Kuhn, Karl Popper, and Ludwig Wittgenstein. This tradition stands in sharp contrast to the foundational assumption of analytic empiricism that there is a "foundation" of pure fact, i.e., theory-free observation, that can always be appealed to for questions of truth. Instead, critical theory and hermeneutics maintain that standards of truth or evidence are always social. In other words, the criteria that scientists (or anyone) use to separate knowledge from fiction or mere belief are always based on social conventions, on a negotiated agreement, not on some transcendental appeal to "facts" against which one can supposedly measure the validity of an assertion. These conventions or agreements change historically (forming what some call "paradigms").

If standards of truth for a given community of scientists are based on their consent to a negotiated agreement about what they will accept as evidence or knowledge, it is obviously of the utmost importance that their agreement be as rational, as uncoerced as possible. Rationality in turn entails two central values: autonomy and responsibility. One must be autonomous in the (ideal) sense of free of any conscious or unconscious constraints because the whole community must base its decisions on the best possible argument. If I am afraid to say what I believe because of an unconscious fear of authority or a conscious fear of retribution, then the interests of truth and rationality are not served. But I am also responsible for creating social conditions in which others can speak their minds as freely as I can. If I personally intimidate or socially threaten, then again the community (and therefore I) will suffer from not having heard all possible positions before deciding on the best one.

Critical theory labels its interest in creating conditions of autonomy and responsibility an "emancipatory" interest. That is, its central interest as a theory is in emancipating speakers from conscious or unconscious constraints in the hopes of making community life more rational.

Another central assumption of critical theory—and here it is in agreement with the hermeneutic perspective—is that social life is structured by meaning, by rules, conventions, or habits adhered to by individuals as social beings. To
understand the patterns or regularities that structure human activity is to
comprehend the meaning or conventions underlying that activity. Critical
social theory differs from hermeneutics by its interest in the relationship
between the meanings—including embodied activity—and social structure or
power. Meanings are negotiated, but the negotiation is often one-sided. Social
meanings, for example, the meanings in the discourse of sexuality or gender,
are closely tied to social domination. There is, then, according to critical
social theory and hermeneutics, a radical difference between explaining
physical events and explaining human activity.

Definition of Knowledge

Knowledge is warranted belief. That is, knowledge is separated from
personal opinion by the “warrants” or evidence that can be used to support
that belief. These warrants, as the previous section suggested, are historical
conventions negotiated by a community. Knowledge is not discovered, it is
created. Knowledge of social activity is cognizance of the meaning that social
actors use to structure their world. It is always contextual, not universal,
because how one acts depends on how one interprets the context in which one
is acting. Interpretation is grounded in the last instance on language.
Language is socially and historically variable, so knowledge cannot be
universal. There is no a-historical foundation for knowledge. Although the
empiricist claims that the contents of observation constitute such a founda-
tion, no observation can possibly support ascribing such status to observa-
tions. The privileging of observation by the empiricist is itself a theoretical
position that cannot be supported by appeal to observation. All knowledge is
theoretical in the sense that it is grounded in interpretation. Many critical
theorists would agree with the Heideggerian position that theory is derivative
from, but at the same moment corrective of, implicit understandings.

Purpose and Value of Theory

Critical theory argues that one cannot separate theory and value, as the
empiricist claims. Every theory is penetrated by value interests. The
empirical-analytic theories are structured by an interest in control, just as
critical theory is structured by an interest in emancipation. Because theory—
as a systematized understanding of social activity—is the basis of understand-
ing, including understanding the contents of observation, there is a close
linkage between theory and knowledge. Theory makes knowledge as
warranted belief—possible. The value of theory lies in making shared
meanings as explicit as possible and in suggesting ways in which they limit
autonomy and responsibility. Nurses, for example, organize much of their
occupational identity and many educational practices around various mean-
ings of “professionalism.” Yet these meanings can constrain as well as
facilitate nursing’s movement toward autonomy and responsibility.

Organization, Categorization, and Definition of Objects

Objects are defined and organized through language. Language is the
means by which we “carve up” the universe by identifying which features we
will attend to, which will be relegated to “background” or context. Cultures
vary in their definition and organization of objects. In this sense, order is
social, created by meaning, which is in turn made possible through language.
One aspect of this process to which critical social theory attends is the way
meaning is created and sustained. Certain institutions—in our society,
education and media—are central to the production of meaning. These
institutions are controlled (not in an uncontested way, however) by certain
interest groups, who can produce a vision of reality favorable to the
perpetuation of their interests. In other words, the social production of
meaning is not equally distributed among social classes, genders, or races.
This in turn blocks the possibility of “rational”—autonomous and responsi-
ble—social discourse. Advertising media, for example, communicate restric-
tive definitions of men and women. To the extent that a woman internalizes
these definitions into her own concept of what it is to be a feminine, her social
reality can be restricted and controlled. A central political struggle
concerns control over these meaning-generating institutions, which is why
research grounded in critical theory is so central to research in nursing
education. Nursing education is a primary shaper and conveyer of the
meaning of nursing and, consequently, of how nursing participates in other
social meanings, such as “The Family.”

The Role of Experience in Nursing Education

When reflecting on the role of experience in nursing education, critical
investigations attend as much to how meaning or knowledge is created and
passed on as to what specific knowledge is transmitted. For example, when
current “knowledge,” such as Maslow’s model, is passed to students as
empirical fact, and when students are rewarded or punished on the degree to
which they treat that knowledge as truth, problems are generated on at least
two levels. First, the analytic-empirical paradigm encourages viewing informa-
tion as fact, as neutral information torn from its theoretical and historical
context. The social meanings or experiences that generate the patterns
theorized by Maslow are seldom discussed. The patterns—even assuming
they are accurately described—are presented as self-contained. Second, this
decontextualization of knowledge encourages a pedagogical model in which
acquisition of meaning and experience is treated as a passive process.
students are reinforced for taking a passive stance toward authority, and they are blinded to the process of negotiation that underlies the emergence of that knowledge as well as to the controversies surrounding it. Similarly, when attitudes and behaviors are sanctioned as “inappropriate” or “unprofessional” with no analysis of how or why those standards have become dominant, students are unprepared to recognize the extent to which clinical experience, what is to be defined as legitimate nursing, is controlled by others, such as administrators and doctors.

If a hypothetical researcher grounded in the empirical-analytic paradigm researched the outcomes of this educational experience, the conclusion might be an assertion of covariance: when students are exposed to Maslow or professionalism under certain conditions, they score well on an exam or are able correctly to identify professional and unprofessional activity. The attunement exists because of shared meanings, but the sharing is possible because preexistent interpretations (such as the American ideal of the autonomous individual or the capitalist vision of unalienated labor in a situation where an individual worker controls the means of production). Without this context, empiricism’s covariance would disappear. Further, even if the hermeneutic scientist made those meanings as explicit as possible (including their historical roots and historical alternatives), and it turned out that all the students shared an understanding of “free market individualism,” one would need an analysis of the consequences of sharing that interpretation. Such an understanding would include an analysis of its impact on nursing as a gender-segregated occupation and would be essential to developing an agenda for change. The choice of methodological technique, then, depends on what kind of description/explanation is being sought. There is no “ultimate” description or explanation apart from purposes or intents.

But the experience—the meaning—of nursing is intimately tied to the social processes that legitimate nonnursing meanings as well. Our social definitions as men and women, our social placement in class hierarchies, and our existence in a sexually stratified workplace all influence how we experience nursing and how we encourage others to experience it.

What is essential about experience in nursing education is that students learn to analyze the sources of their own interpretations, to question and exist the predefined meanings educators encourage them to adopt, and to develop the tools to negotiate a world in which the twin goals of autonomy and responsibility are achievable. From the point of view of research in nursing education, critical theory reframes the dilemma concerning the value-laden nature of education. Interpretation and values are inseparable, including the interpretation of what it means to be scientific as well as what it means to be a nurse.

CONCLUSION

The preceding discussion, it is hoped, helps to clarify why methodological decisions need to be made in the context of the philosophic position from which the research emerges. Statistical data, for example, can be used in all three paradigms. In the analytic-empirical paradigm, such quantitative techniques can serve both descriptive and explanatory purposes. Their central function in hermeneutic and critical research is descriptive. On the other hand, the hermeneutic and critical positions would argue that empirical-analytic research should be restricted to quantitative techniques only when meaning is not a factor in the emergence of patterns—cellular level oxygenation studies, for example. Any research on human activity must, they suggest, take meaning into account, if only as a premise (as in much statistical social science). Hermeneutic and critical social research differ in matters of emphasis and explanation. Hermeneutics—for example, Benzer’s clinical research—or recent studies of nursing textbooks attends to explicating implicit meanings. Critical theory focuses on the relationships between those meanings and the social ideal of autonomy and responsibility. The techniques they use—statistical analysis, diaries, textual analysis—vary with the social domain being interrogated. Certainly a fully dimensional field of nursing research needs to take all three philosophical paradigms into consideration in debating methodological choices.

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