The Philosophy of Science from a Nursing-Scientific Perspective

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The purpose of this article concerning philosophy of science is to increase familiarity with different traditions of science and theories of knowledge viewed from a nursing-scientific perspective. The science of sciences is seen as a philosophical discipline for investigating fundamental questions concerning methodology and theory-development. Our fundamental assumptions in basic nursing science are the view of human being and the conception of health. These assumptions have consequences with regard to how nursing research shall be performed, which questions we regard as research questions, what we consider is relevant research, our choice of methodology, and what we consider is the substantial contribution of nursing knowledge in the nursing theories. The discipline of nursing is viewed as an autonomous science with its own theoretical perspective 'good nursing', with practicable scientific methods and with practicable nursing theories developed from its own field and with its own scientific ideal. A health conception without any reference to disease is the foundation for nursing science understood as an autonomous science.

Keywords: philosophy of science, discipline of nursing, ontology, epistemology, methodology.


I. Introduction and aim

1. Scientific exploration

SCIENTIFIC WORK IS A question of investigating the nature of phenomena and how such phenomena are related to each other, which involves finding out the nature of every possible way in which these can be described, understood and explained (Kjorup, 1999; Newton-Smith, 2000). All scientific work is born out of curiosity, and research is basically about making discoveries. To discover may imply demonstrating new, not earlier known phenomena or deepening knowledge and understanding of familiar phenomena (Taylor, 1978; von Wright, 1975).

The primary goal of science includes truth, simplicity and explanatory power (Newton-Smith, 2000). Within the nursing area it is a question of understanding the unique person's meaning-field, for example of living with chronic illness.

The scientific investigation is done on the basis of different norms, beliefs and values, with specific demands that involve complying with specific criteria of reliability and authenticity (Molander, 1988). Many researchers have strongly stressed that the aim of scientific work is
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to explain phenomena and that scientists create theories for the purpose of explanation. According to Kvernbekk (1994, p. 29) “theories are applied to the real systems for a variety of purposes: for instance description, prediction and explanation of phenomena, testing of theory – and modification of the world.” Within nursing science nursing theories are developed for explaining different types of data, both subjective and objective, which are considered as relevant for the development of knowledge within nursing (Gustafsson and Andersson 2001a; Pörn and Gustafsson, 2002). ‘Good nursing’ could be looked upon as the theoretical perspective of nursing research, which implies that nursing research has as scientific ideal “being better able to meet the requirements of persons who seek nursing through the mapping out of nursing actions which result in good nursing” (Gustafsson, Pörn and Norberg, 1993, p. 10). Different forms of knowledge such as knowledge involving judgement, meaning and virtue can be elucidated for attaining this goal (Pörn, 1990). (Cf Benner’s (1984), Carper’s (1978), Sarvimäki’s (1988) systematization of forms of nursing knowledge).

2. Theory-building in nursing

The development of theories has importance for articulation of the discipline of nursing, for providing descriptions of how to support patients’ health and well-being, and for offering a common language for different views and philosophical underpinnings in nursing. The purpose of theory-building in nursing is to provide a substantial knowledge basis for the discipline of nursing involving systematic development from different frameworks involving respectively facts (Fawcett, 1995; Meleis, 1997; Roeke, 1997). This substantial contribution of nursing knowledge could be understood as related to three levels of knowledge according to “The-Nine-Field-Model” elaborated by Gustafsson and Andersson (2001a), inspired by Wulff, Pedersen and Rosengren (1990, pp. 40-45) and Aristotle’s virtues of knowledge (Flyvbjerg, 1994). On the scientific level it is a question of ‘theories of’ (scientific maps) and knowledge of episteme type, on the technological level it is a question of ‘theories for’ (means and methods) and knowledge of techne type, and on the technical level it is a question of ‘theories in’ (skills and techniques) and knowledge of phronesis type (Gustafsson, 1996). The scientific level concerns basic nursing research with ‘knowing what’ and ‘knowing why’-questions, the technological level clinical nursing research with ‘knowing how’-questions and the technical level concerns clinical practice with ‘knowing that’-questions (cf Suppe, 1977) (for an overview, see Table 1).

Table 1. The development of nursing knowledge in nursing theories (Modification of original model in Gustafsson and Andersson, 2001a, p.14).

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The development of nursing knowledge starts at all levels based on models, whose characteristics are given by definitions and relations between these, and the theories make use of the models for the development of hypotheses (Giere, 1984; Hausman, 1981; Pörn, 1985). The development of a discipline is closely related to the generation of theories and models out of its own field of knowledge. The purpose of nursing theories is to give guiding principles for good nursing (Kirkevold, 2000).
Rooke (1997) has found that the development of nursing knowledge in Sweden successfully could be interpreted in relation to Henderson’s fourteen needs. Nursing research (Heyman, 1995; Rinell Hermansson, 1993; 1999) could, in relation to “The Nine-Field-Model”, belong to the technological level with classification of nursing actions and to the technical level with use of the nursing process and the hermeneutic circle for understanding the patient as a unique human being. But there is also a lot of concept-and theory-building, i.e. basic nursing research, going on. Rooke (1997) has pointed out that the SAUC model for confirming nursing developed by Gustafsson and Pörn (1994; Gustafsson 2000) has contributed to the development of the discipline of nursing in Sweden (cf Willman and Stoltz, 2002). The model has given a theoretical framework and identity to the discipline of nursing. Willman and Stoltz (2002) have analyzed Swedish nursing science both from a natural science and human science approach and found that the development today is moving to a development based on human science.

3. The science of nursing
The multiplicity of science which we have today is characterised by a gradual process in which new and often highly specialized sciences are established (Newton-Smith, 2000). A science of a more recent date is the science of nursing (Fawcett, 1995; Meleis, 1997; Pörn, 1984). The purpose of nursing research is to contribute to a humanistic and wholeness-directed nursing through an increased understanding of the human being and her experiential meaning of her present life-situation (Barrett, 2002). In this way nursing science is clearly defined against traditional medicine. Gustafsson, Pörn and Norberg (1993) have done an agent-causal interpretation of the concept of care. This definition emanated from care actions which result in improvement or which prevent deterioration or preserve the status quo in the region of human good in terms of health, adequacy, well-being or meaningful life. Nursing is defined as care on the person level. The nursing actions are complex and involve emotional, attitudinal and epistemic categories and are in the nursing theories spelled out in different ways.

The aim of this article is to increase familiarity with different traditions of science and theories of knowledge viewed from a nursing-scientific perspective. The philosophy of science has special reference to the philosophy of nursing and involves a philosophical analysis of the nature, conditions and status of scientific knowledge.

II. The philosophy of science
1. The science of sciences
The philosophy of science may be regarded as a branch of the science of sciences; the latter is broad in its scope. In this extensive sense the science of sciences includes for example the history of science and the sociology of science (Rosing, 1991; Wallén, 1996). An essential sub-discipline within the science of sciences is philosophical in nature. As a matter of fact the science of sciences is patterned on the philosophy of science. The science of sciences has been defined as a philosophical discipline which investigates fundamental questions concerning methodology and theory-development (Marc-Wogau, 1967; Newton-Smith, 2000). By that is meant partly a philosophical analysis of the concepts which are common to all sciences, partly a philosophical analysis of standpoints and prerequisites in particular sciences or families of sciences, for example the philosophy of social science or the philosophy of nursing science (Pörn, 1984; 1985). The standpoints in particular sciences are often the basic research. The philosophy of science seeks to understand the aim, methods, tools and products of science (Barbosa da Silva and Andersson, 1993; Newton-Smith, 2000).

2. Basic nursing research
According to Niiniluoto (1993, p. 3) “the primary task of basic science is cognitive: the so far best results of science give us elements of a dynamically developing worldview. Knowledge about the current state and the regularities of the world also allows us to explain and understand reality.” Basic research within nursing research takes into account the problems concerning views of human being. The different views presuppose different theories of the nature of human being. The perspective we choose is of importance for how the conception of health will be spelled out, involving what we consider nursing is and how good nursing ought to be manifested, and regarding which characteristics are desirable for a good caregiver (Gustafsson, 2000). The view of what good nursing and a good caregiver is can be the basis of policies and guidelines for nursing practice (Kirkevold, 2000).

The nature of human beings may for example be spelled out in the following way, but it seems important to point out that the views of human nature (ontological assumptions; see Gustafsson, Pörn and Norberg, 1993, p. 8) often are different kinds of combination or development of a view, and not so clearly spelled out as in this presentation. (i) The mechanical and materialistic view of...
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Human nature is based on the approach of natural sciences including behaviorism. This includes the conception of the human being as a biological creature with her system and apparatus attributes (categorical assumptions) in focus concerning human development. These attributes can be manipulated (Kjerup, 1999; Hospers, 1987; Wedberg, 1966). The understanding of the human being sought by a reductionistic method which implies that the parts constitute the whole. (ii) The mechanical and idealistic view of human nature is based on a human-scientific approach and the human being is seen as a religious being with her spiritual attributes (categorical assumptions) in focus concerning human development. Some of the traits of character and salient features are inherited and run in families. The human being may be understood from a religious view as a "marionette" guided, directed and governed by the god, deity, divinity. (iii) According to the dialectical and materialistic view of human nature based on a social-scientific approach the human being's consciousness is determined by material circumstances (categorical assumptions) such as social class, culture and the oppositions between different material entities, which influence the human being and contribute to human development and occur in relation to different factors in society (cf Andersson, 1997). (iv) In the dialectical and idealistic view of human nature based on human science the subject is assigned a crucial role, with subject entities such as intentions, plans, projects, motives, wills, desires, abilities, reflections, environment (categorical assumptions) with the acting and reflecting attributes in focus concerning human development. Self-consciousness originates from the reflections we have of our actions and of ourselves in other human beings (Jacobs, 1989). The human development may be understood as an infinite chain of interactions, and this development is coupled with the oppositions which are in the mental entities such as thoughts, emotions, feelings and perceptions (Hospers, 1987; Marc-Wogau, 1967). The views of human nature could also be understood in a framework of reductionalization and personalization.

It is apparent that the problems concerning the view of human being concern basic nursing research (Fawcett, 1995; Meleis, 1997). The view of human being is related to what are considered as beneficial properties in nursing. For example, if the human being is understood as an acting subject with the ability to initiate actions based on her own ideality, good nursing practice has to contribute to patients' increased possibilities of self-realization linked to their own ideality (Pörn and Gustafsson, 2002).

If mental entities are in focus the enhancement of patients' consciousness by different means and methods is related to good nursing practice.

3. The philosophy of science and epistemology

The philosophy of science, as a philosophical discipline, interfaces with the theory of knowledge in philosophy, also designated epistemology (Molander, 1993; Nordenfelt, 1982; Wedberg, 1966). Epistemology is described generally as the doctrine of the sources, reliability and boundaries of human knowledge. In the light of this we can say that the science of sciences in relation to epistemology is concentrated on scientific organized knowledge. For example, the question concerning sensations and perceptions as a source of reliable knowledge belongs to the general epistemology, but questions concerning sensations and perceptions for the development of scientific knowledge belong to the science of sciences. Another example that nursing science as practical/empirical knowledge, transferred from 'master' to 'apprentice', handed down from one caregiver generation to another, belongs to general epistemology, but the scientific/theoretical knowledge belongs to the science of sciences. The relationship between an empirical and a theoretical discipline belongs also to the latter. Pörn (1984) states that nursing science is both an empirical and a theoretical discipline (cf Benner, 1984; Carper, 1978). Sarvimäki (1988) means that nursing is viewed as a manifestation of a conception of the good life, and therefore nursing is a moral, practical, communicative and creative activity.

4. The philosophy of nursing

The philosophy of nursing science includes the basic research, the standpoints for this particular science with its own special features, its own theoretical perspective spelled out as 'good nursing' and its own scientific ideal: a wish "being better able to meet the requirements of persons who seek nursing through the mapping out of nursing actions which result in good nursing" (Gustafsson, Pörn and Norberg, 1993, p. 10). The discipline of nursing can be divided in the following sub-disciplines: nursing philosophy, nursing history, nursing metaphysics, nursing knowledge theories, nursing logic, nursing epistemology, nursing methodology (methods used in nursing practice), nursing ethics, and nursing aesthetics. In the curriculum building in nursing science I feel it important to stress that the sub-disciplines are a central basis for students' development of nursing knowledge to become a "competent and reflective practitioner" in order to manifest "good nursing" based on the real complexity and individuality in...
the life-worlds of human beings. Cody (2001) stresses the importance of and demands that nurses shall articulate nursing as a distinct discipline with philosophies, goals, theories and methods in education (cf Willman, 2000).

III. Views of knowledge
The different views of knowledge can be differentiated on the basis of how they are connected to: (i) the source of knowledge (rationalism and empiricism), (ii) the reliability of knowledge (reality and consciousness), and (iii) the boundaries of knowledge (evidence and claim to knowledge).

1. The source of knowledge
Firstly, the source of knowledge has the relation between rationalism and empiricism as the basis of division (Hospers, 1987; Wedberg, 1966). With reference to the source of knowledge we have two well-defined positions: (i) The rationalists consider that logical-conceptual thinking, with given numerical systems, based on theoretical analysis is the most important source of knowledge and their methodical ideals are deductions (Follesdal, Walløe and Elster, 1993; Nordenfelt, 1982). (ii) The empiricists argue that knowledge is based on human experiences and that the concepts, the meaning of words, are reflections of observations, the sensory impressions are the real research object (Molander, 1993). The aim of traditional epistemology was to defend science against sceptical doubts by showing how it can be derived from a secure foundation – for example, from clear and distinct ideas (rationalism) or from immediate sensory evidence (empiricism) (Newton-Smith, 2000). In the Western countries magical-spiritual thinking has been replaced by scientific thinking, but for many persons with other cultural backgrounds the magical-spiritual thinking can have more influence for their own experiences of health and unhealth.

The source of knowledge can also be divided in terms of ‘a priori’ and ‘a posteriori’ knowledge (Hospers, 1987; Wedberg, 1966). By knowledge ‘a priori’ is meant knowledge that is independent of our experiences, for example $2 + 2 = 4$, that every cause has an effect and that every thing has an extension. By knowledge ‘a posteriori’ is meant knowledge that is dependent on our experiences, for example that “All nurses on this ward are confirming.”

2. The reliability of knowledge
Secondly, the reliability of knowledge has the relation between reality and consciousness as the basis of division (Wedberg, 1966). With reference to the reliability of knowledge we have two focus concerning development of knowledge: (i) realism, reality and the material world, and (ii) idealism, consciousness and the immaterial world. The realism and idealism depends on whether or not there is a reality which is dependent on a “knowledge-searching” subject. For example, the proponents of materialism argue that existence is material. From that standpoint reality governs what we are thinking. According to that mechanical and material view the development of existence occurs passively by different processes. If the essence of existence is immaterial, idealistic, our thoughts govern reality. In relation to idealism the development of existence is active. Dialectic is a question of the development of thought and existence that occurs through oppositions, tensions between different interests and opinions, i.e. a play of contrasts (cf Andersson, 1997). The reliability in the development of knowledge in different nursing theories is based both on a material and an immaterial perspective.

3. The boundaries of knowledge
Thirdly, the boundaries of knowledge have the relation between evidence and claim to knowledge as the basis of division (Pörn 1985; Wedberg, 1966). Here we have a lot of different scientific views when it comes to justification of the development of knowledge and beliefs. For example, scepticism, dogmatism, apriorism, verificationism and reductionism (Kjørup, 1999; Newton-Smith, 2000; Wedberg, 1966).

According to scepticism the uniform observation of a limited/finite number of different cases does not provide sufficient evidence for generalization. For example, from the observation that “All patients I have met have felt confirmed,” the conclusion cannot be that “All patients who receive care have been confirmed.” The sceptic considers that the evidence of our senses and memories never can contribute to reliability. On the contrary, sceptics consider it can be a question of accidental occurrences which influence the result. The dogmatist considers that the reliability of knowledge can be based on regular, uniform knowledge. The apriorist considers that evidence is definitive because there is an overriding principle which has reference to nature’s uniformity, i.e. that it is correct to move from limited observations to an open class, for example, that “All patients who receive care have been confirmed.” The apriorist says that we have the right to generalize. The verificationist considers it is a question
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of hypotheses, which is to say that “All patients who receive care have been confirmed” is a hypothesis which has to be proved by evidence before it can be accepted (cf Føllesdal, Walløe and Elster, 1993). By use of theoretical constructs, for example nursing theories, this hypothesis can also be given a specification and theoretical reliability. Fawcett et al. (2002) argue that different kinds of nursing theories provide different lenses for critiquing and interpreting the different kinds of evidence essential for theory-guided, evidence-based holistic nursing (cf Willman and Stoltz, 2002b). The reductionist answers questions concerning evidence from the starting point that different behaviours can be interpreted as reflecting the individual’s mental state and there is thus a connection between mental state and behaviours. A mental state is defined by reductionism as a pattern of behaviours which can be observed. The term “holism” refers to a variety of positions which have in common a resistance to understanding larger units as merely the parts without treating them as belonging to such larger wholes (Newton-Smith, 2000).

Edwards (2001, p. 9) points out the following three problems concerning nursing knowledge: “First, the problem of establishing a criterion for knowledge, for example, in order to distinguish knowledge from belief. Second, the problem relating to sources of knowledge, for example, can the senses or reason, or intuition provide knowledge? And third, can we distinguish differing types of knowledge, for example practical and theoretical knowledge, moral, aesthetic and others?”

IV. The scientific paradigm

1. The perspectives on scientific work

In the same way that we within general epistemology can distinguish different views of knowledge – such as rationalism and empiricism (the source of knowledge), reality and consciousness (the reliability of knowledge), and evidence and claim to knowledge (the boundaries of knowledge) - we can within the science of sciences distinguish different ways of looking upon scientific work often verbalized in terms of (i) positivism (natural science and quantitative data) and (ii) hermeneutics (human science and qualitative data) including meaning interpretation (Føllesdal, Walløe and Elster, 1993). In this context we often talk about paradigms. A paradigm is often defined as a set of norms and ideas which in a certain research community influence the researchers’ notions of what the research shall be about, and how it shall be done (Kjørup, 1999; Nordenfelt, 1982). Kuhn (1962) suggested that the defining characteristic of a scientific tradition is its “commitment” to a shared “paradigm.” A paradigm is “the source of the methods, problem-field, and standards of solution accepted by mature scientific community at any given time” (p. 102). When questions arise in this connection, it is of interest to note (i) the way of asking the questions, (ii) the way of answering them, and (iii) the consequences of the answers.

(i) According to positivism scientific work is about measurable and quantitative data and the ideal is to elaborate theories as mathematical connections between such data (Newton-Smith, 2000). The theories are also in a further sense expected to be used in causal explanations (Wallén, 1996). This scientific tradition tries to get answers to ‘Why-questions’. This positivistic scientific ideal has its ‘home base’ in natural science. Positivism involved, originally knowledge which is real, true, useful, secure, precise and positive (Molander, 1988). This true, positive knowledge is designed to discover laws which govern phenomena and facts, and to detect permanent relationships prevailing between these.

(ii) In the hermeneutic tradition scientific work will become interesting when it is based on qualitative data, for example texts, and when the aim is to get answers to questions concerning the importance, understanding and experiential meaning of data (Taylor, 1978). The theories shall be, according to the hermeneutic view, useful for essence explanations, which are based on ‘What-questions’ (Gustafsson and Andersson, 2001a). The hermeneutic scientific ideal belongs to human science. For this knowledge to be designated as scientific knowledge, its development must be based on certain assumptions and follow certain accepted principles and methods.

In hermeneutics I also include postmodernism in nursing, which does not accept the “natural scientific narratives” but has a desire to create own narratives based on a person and holistic perspective of human being and thereby recreate the lost identity in nursing. Postmodernism in nursing also has a will to create debates by asking questions that are taken for granted (Burnard, 1999). The postmodern analysis of narratives about different nursing problems does not focus on facts, but on the hidden and concealed, and the complexity in the narratives. When the narratives are deconstructed possibilities open up for new insights in nursing practice and new questions may be asked (McAllister, 2001; Robinson Wolfe, Lagnér, 2006).
2. Scientific methodology

In the case of scientific exploration the demand is to use the right methodology in relation to the phenomenon which shall be investigated. Quantitative research methods, which focus on measuring, describing and explaining phenomena, are used within positivism (Follesdal, Walloe and Elster, 1993; Kjørup, 1999). The qualitative research methods within the hermeneutic tradition are used for mapping, interpretation and understanding of phenomena by means of verbal description and textual analysis (Palmer, 1988). The demands concerning reliability and validity in scientific methods, techniques and instruments of measurement in qualitative research are as rigorous as in quantitative research.

The scientific conclusions are divided into deductive and inductive (Toulmin, 1964). (i) The deductive research way is about derivations, because the purpose is to prove that the assumptions, the hypotheses, are deduced from the chosen theory and are true or false. It is a question of verification or falsification. By verification is meant that hypotheses agree with reality by falsification is meant that they do not. Falsification is important in all scientific work. Gustafsson and Andersson (2001a) argue that falsification is central in the development of nursing theories. It has to be possible to falsify such theories, otherwise there can be problems, for example “The circularity of descriptions and explanations makes it difficult to follow the theory’s logic” (Kirkevold, 2000, p. 227). The deductive way is from theory to reality. Within positivism the hypothetical-deductive method is intended for creating connection explanations, often causal, i.e. ‘cause – effect’ explanations. But the same method can be used within the hermeneutic tradition in order to create essence explanations of meaning-bearing texts (Follesdal, Walloe and Elster, 1993; Rosing, 1999).

The research methods in the (ii) inductive approach way have not had the same prominent position as in the deductive approach, but there has always been the same demand that the work shall be regarded as scientific. The credibility in the presentation of the research results has to be based on intelligible language and the different stages in the interpretation and analysis of data have to be clearly shown (Follesdal, Walloe and Elster, 1993). By induction is meant that the starting-point is based on reality, which may result in theory-building. The reliability of knowledge is closely related to the scientific methods used within a field of knowledge. The quantitative methods with large volume of data have often been found to have a high reliability.

The researcher’s pre-understanding has also been discussed. For example, are there scientific research methods where the researcher’s pre-understanding is ‘bracketed’ (Kjørup, 1999) and thereby not influence the research results? Is the research dependent or independent of the researcher? In that nurses entered the research community a new knowledge-seeking started within care, with the focus on exploration of patients’ meaning-field and world of experiences and with interest in acquiring wholeness-creating knowledge based on different qualitative methods (Heyman, 1995; Rinell Hermansson, 1993; 1999; Rooke, 1997; Willman and Stoltz, 2002a). This individual-specific knowledge basis is seen as important for manifesting nursing which supports patients as resourceful individuals.

The question also concerns if the results within nursing research are representative and generalizable. For example, can individual-specific data be used for generalization and can general data be used for individualization? Is there in nursing research a main interest in trying to find general laws for nursing, a ‘generalized nursing’, i.e. a nomotetic nursing practice? Or is the main purpose to try to develop knowledge with the goal of ‘individualized nursing’, i.e. an idiographic nursing practice? For these questions the directions have to be based on nursing science’s own theoretical perspective ‘good nursing’ and on the fact that nursing research has in its scientific ideal a wish “being better able to meet the requirements of persons who seek nursing through the mapping out of nursing actions which result in good nursing” (Gustafsson, Pörn and Norberg, 1993, p. 10). Another question concerns how nursing-theoretical constructs can increase reliability in the development of individual-specific nursing knowledge. See Gustafsson and Willman (1999) for specific nursing as disease-divided nursing or individual-divided nursing.

V. Metaphysics

I. Ontology

Metaphysics concerns the most fundamental questions concerning existence and existential conditions (Wedberg,
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1966), and traditionally metaphysics is regarded as the study of what lies behind the world of appearance (Newton-Smith, 2000). For example, are there in the world only concrete things such as nurses, or are there also abstract things such as the class of all nurses? This is a question for ontology. Pörn (1984; 1985) has described ontology as the doctrine of the nature of being, i.e. how existence is constituted and how things that exist can be related to each other. To this area belong questions concerning how knowledge is related to reality and consciousness (Newton-Smith, 2000). The question whether there is a reality which is independent of the researcher often is treated in terms of correspondence between consciousness and reality. By epistemic realism is considered that reality is independent of the researcher’s abilities to understand and to think. By epistemic idealism is meant that things which are real always are real for the researcher, i.e. what is real for the researcher is dependent on the researcher’s mental efforts and capacity to apprehend the world.

2. The view of human being and nursing research
Our fundamental assumptions concerning existence are of importance when it comes to starting-points and concepts in the particular sciences (Pörn, 1984; 1985). One can say for example that in physics the fundamental questions and basic research concern cells and molecules, in economics products and trade, in medicine tissues and organs, in physiotherapy movements and in occupational therapy activities. In nursing science the fundamental assumption concerns the view of human being with the concept of the person as the most central consensus concept, because the concept of health is built on the concept of the person, and the concept of nursing on the concept of health (Gustafsson and Pörn, 1994; 2002).

Often attention is paid to the role of the view of human nature in respect of the design of nursing and valuations in different systems within health care (Barbosa da Silva and Andersson, 1993). This discussion seems to have played as great role in scientific discussion about the conceptual foundations of health and nursing (Fawcett, 1995). Since the concept of the person has a central position, the view of human being and the consequences of this for nursing constitute an important factor in the study of the foundations of nursing science (Gustafsson, 1996).

Our basic assumptions about existence also have consequences with regard to how nursing research shall be performed. This is, for example, connected with questions about what we regard as nursing research problems and nursing research questions, what we consider are relevant research questions within nursing, which of these problems we consider possible to investigate and whether there is clarity and lack of ambiguity in relation to the problem in question (Follesdal, Walløe and Elster, 1993). At different departments of nursing within universities, different nursing research questions are asked and thereby different research interests and areas are in focus (Heyman, 1995; Rinell Hermansson, 1993; 1999; Rooke, 1997; Willman and Stoltz, 2002a).

3. The view of human being and nursing theories
The development of nursing theories and thereby the development of nursing knowledge is based on different scientific perspectives and views of human being. Some examples of these are (i) the reductionistic view of the human being as a biological creature (cf the mechanical and materialistic view of human nature), (ii) the action-theoretic view of the human being as an acting subject (cf the dialectical and idealistic view of human nature), (iii) the ideal-relativistic view with the human being as a mental being (cf the dialectical and idealistic view of human nature), (iv) the religious view of the human being as a spiritual being (cf the mechanical and idealistic view of human nature), and (v) the cultural view of the human being as a cultural being (cf dialectical and materialistic human nature).

I suggest that the nursing theories may be systematized in terms of these perspectives on human being. For example:
(i) the need, activities and behavioral models can be understood from a theory-building based on the reductionistic view of human being as the basis for human development and “good nursing,” for example Henderson’s “Definition of Nursing,” Nightingale’s “Modern Nursing,” Roper’s, Logan’s and Tierney’s “A Model of Nursing based on Model of Living” (Marriner Tomey and Raile Alligood, 1998), (ii) the interaction, self-relation and self-care models from an action-theoretic view of human being as the basis for human development and “good nursing”, for example Gustafsson’s and Pörn’s “SAUC Model for Confirming Nursing” (Gustafsson, 2000), King’s “Theory of Goal-Attainment” and Orem’s “Self-Care Theory of Nursing,” (iii) the human becoming models from an ideal-relativistic view of human being as the basis for human development and “good nursing,” for example Parse’s “Human Becoming,” Roger’s “Unitary Human Beings,” Travelbee’s “Human-to-Human
relationship model” and Watson’s “Philosophy and Science of Caring,” (iv) the interdependence models from a religious view of human being as the basis for human development and “good nursing”, for example Martinsen’s “Caring Model” and Eriksson’s “Caritative Nursing Model” (Kirkevold, 2000), and (v) the cultural models from a cultural view of human being as the basis for human development and “good nursing,” for example Leininger’s “Culture Care: Diversity and Universality Model.”

The beneficial properties of nursing theories are based on the scientific perspective and the view of human being. Also the cultural contexts and laws influence in different ways which qualities will be focused on in nursing theories. In Western countries the subject view of the human being and the ‘I-Thou relationship’ has influenced the theory-building in terms of patient-involvement, influence, autonomy and creation of good relationship with the patient and relatives (cf Fawcett, 1995; Meleis, 1997). A more unifying central phenomenon could be viewed as restoration of human dignity. The discussion today also concerns a broader approach to aesthetics, a theoretical approach to nursing aesthetics (Wainwright, 2000; cf Carper, 1978).

VI. Discussion

Nursing research in Sweden is based on different research traditions, has had an empirical tradition, and has been clinically focused, or has been based on the nursing process as structure for the development of new knowledge (Heyman, 1995; Rinell Hermansson, 1993; 1999; Rooke, 1997; Willman and Stoltz, 2002a); also it has involved the exploration of people’s experiences, which contributes to nursing practice based on patients’ own experiential meaning of their situation. Today there is an increased theoretical awareness, with nursing theories as theoretical frameworks for logical-conceptual thinking which can contribute to the development of individual-specific nursing knowledge.

Nursing knowledge primarily concerns issues on the agency level of the patient as emotions, desires, wills, beliefs, attitudes etc. (categorical assumptions) as opposed to issues of lower levels as cells, organs, tissues etc. (categorical assumptions). The generalization of nursing knowledge on agency level is possible if the complexity and individuality related to the unique human being is taken into account and if humanistic and wholeness-creating understanding of individuals is possible. In the generalization the individual life-worlds should not be allowed to disappear or be distorted by simplification. If the generalization implies that essential elements in the complex individual life-worlds are taken into account generalization of nursing knowledge is possible. The generalization can both be based on knowledge produced by research and biographies written by patients and relatives, but also by literary novels that can help the caregivers to support patients based on an understanding perspective, which implies that the patients are supported in self-recognition, in acquiring life-competence as unique individuals in their specific life-situation. Evidence-based nursing is one way to generalize nursing knowledge (Willman and Stoltz, 2002b). But if evidence-based nursing really shall contribute to the improvement of nursing quality from a person and holistic perspective, the demand is that the evidence of nursing knowledge seriously considers the complexity and individuality in the life-world of the human being and has an understanding for humanistic and wholeness-creating process. Otherwise there is an obvious danger for simplification and reduction of the human being.

The discipline of nursing is today viewed as an autonomous science, related to (i) its own theoretical perspective ‘good nursing’ (ii) nursing research methods for characterizing the exploration of people’s world of experience, (iii) nursing theories for how ‘good nursing’ shall be manifested, (iv) sanction of society, (v) own scientific communication, and (vi) organization in departments of nursing within universities (cf Gustafsson, Pörn and Norberg, 1993; cf Pörn, 1985). Finally, it seems important to stress that the positive health conception without any link to disease is the basis for interpretation of nursing as an autonomous science. If the health conception is linked to diseases the nursing science is seen as a complement to medicine (Gustafsson and Willman, 1999; Gustafsson and Andersson, 2001a; Pörn, 1993). Therefore the conception of the person and the conception of health are especially important in the philosophy of science from a nursing-scientific perspective.

References


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