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MODELS

Hugh McKenna

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# Nursing Theories and Models

Nursing theory is a key element of all modern nursing courses, yet nurses are rarely encouraged to evaluate the models they are taught.

In *Nursing Theories and Models*, Hugh McKenna challenges the notion that certain nursing models are infallible, and examines strategies for bridging the gap between theory and practice. Readers are guided through the confusing terminology associated with nursing theory and are encouraged to test established models and assess the positive difference their use can have on patient care.

In addition to exploring the origins and abundance of current ‘popular’ models, the author examines whether new models should emanate from research, practice, or from other theories. He suggests that nurses themselves generate and select theories from their own practice, whether consciously or unconsciously, and that this skill can be developed through reflection and analysis.

*Nursing Theories and Models* is an essential text for students on both undergraduate and postgraduate nursing courses, and provides valuable insight for the practising professional into the strengths and weaknesses of the models they teach.

**Hugh McKenna** is a Senior Lecturer in Nursing at the University of Ulster and has written many books and articles on nursing theory.

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# Nursing Theories and Models

Hugh McKenna



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# Introduction

The knowledge base of a profession is normally expressed in the form of concepts, propositions and theories. Nursing has currently reached this level of theoretical evolution. This book will critically examine the development, selection, application and testing of nursing theories.

Just because practising nurses use nursing theories does not mean that they are theorising about nursing. Therefore, to enable nurses to understand the real importance of theory, the art and science of theorising will be discussed. The reader will be taken on a journey beginning with the identification of phenomena which are of interest to nursing through to conceptualising these phenomena in the form of propositions which can be analysed to form the building blocks of nursing theories.

In the mid-1980s nursing theories were introduced into most curricula and practice settings in Europe. In this regard nurses were following a trend set in the United States. The theories were very popular in the British nursing press and practising nurses were being encouraged to use them by educators and managers alike. In most cases, and with very little understanding as to what they were, nursing theories were applied, often without question, to a wide range of patient care settings. However, it was not immediately apparent what effect their study and use was having on the delivery and outcomes of patient care. One could ask, if nursing theories were as advantageous as reputed, why did most nurses have such a negative perception of them?

In essence, many nurses were brainwashed into believing that these theories held the answer, that they contained the essence of nursing. This was reinforced by the United Kingdom Central Council for Nursing, Midwifery and Health Visiting, which has voiced its support for nursing theories (Giro, 1990). In addition, Kershaw (1990) states that the DHSS 'Strategy for Nursing' takes

as implicit that theory-based practice occurs. Cash (1990) went further by stating that theories are an explicit part of the curriculum for registered nurses.

Respected nursing leaders lent support to the introduction of nursing theories. According to Pearson (1986), a move toward theory-based practice was the most important target for change within nursing. Castledine (1986) believes that the implementation of a nursing theory leads to better nursing care and more reliable and critical observation by the nurse. Others wrote that the application of nursing theories to patient care would help improve the quality of the service delivered (Hardy, 1982; Farmer, 1986). Therefore, in many instances nursing theories were presented in the literature as a panacea for problems in nursing practice, education, management and research. However, few available research reports have confirmed the link between the use of a nursing theory and the quality of care delivered to or received by patients (McKenna, 1994a).

Until recently, criticism of these theories was actively discouraged; to criticise was to demonstrate that you were a laggard, a saboteur of change, an academic Luddite or, worse still, ignorant of these new conceptual initiatives. However, some nurses were worried at what appeared to be unsubstantiated acceptance and support. McFarlane (1986a), almost a lone voice, advocated that all nursing theories require careful analysis and evaluation in practice. Fawcett (1989) refers to this as 'credibility determination'. She states that credibility determination is necessary to avoid the uncritical acceptance of a nursing theory and to establish the effect of using a nursing theory on the outcomes of nursing care.

Yet, as we near the end of the twentieth century, a review of the literature reveals that such empirical information is conspicuous by its scarcity. As a result, there is little research evidence pertaining to the application, let alone the evaluation of nursing theories. None the less, contemporary nurses are beginning to have a healthy cynicism for nursing theories and are taking a more critical stance towards them. Analysing and evaluating these theories requires specific knowledge and skills, and nurses are increasingly being required to show such knowledge and skills.

The content of this book has its origins in the writer's teaching and research (McKenna, 1994a). Over a number of years, students, both at undergraduate and postgraduate levels, have stimulated the writer with their fresh views and critiques of nursing theories (McKenna, 1993). Practitioners too have contributed their opinions as to whether nursing theories were 'ideal' or 'real' (McKenna, 1992). There is the recognition that nurses throughout the world have spent an enormous amount of time and effort formulating, learning and implementing nursing theories. In the late 1990s it is perhaps time to suggest that 'the emperor has no clothes'. Therefore, the end result of these discussions, debates, arguments and reflections is a book which fills a niche in the market, one that uses the extant literature to provide a critical evaluation of nursing theories.

The proposed text differs from existing books on nursing theories in two respects. First, the focus is on exploring with the reader how theorising, analysis and testing should take place. Second, the conceptual basis is broader, taking a critical stance on the subject of nursing theories. It will be contended that real 'practitioner theorising' has been ignored in favour of 'off-the-shelf' theories. The humanistic, holistic and personal aspects of nurse conceptualising will be explored and realistic evaluative methodologies will be considered.

In the early chapters theories will be analysed in terms of their epistemological roots. The question of why they appeared in abundance in the mid-twentieth century will be addressed. Terminology will be explored and the various arguments surrounding the designations 'theory', 'model', 'paradigm' and 'framework' will be dissected. The borrowed versus home grown theory argument will be evaluated, as will the debate as to whether nursing can be a one-theory or multiple-theory profession.

The relationship between research and nursing theory will also be examined critically. There will be an exploration of the literature as to whether nursing theories emanate from research, from practice or from other theories. In addition, the testing of theories will be explored in detail, taking cognisance of the use of qualitative as well as quantitative approaches. Examples of theory testing of known nursing theories will be given.

A section will also be included relating to how educators, researchers and practitioners select nursing theories. The skills involved in this process will be analysed. Readers will be introduced to a comprehensive list of criteria that will enable them to judge the quality of nursing theories and how they affect the processes and outcomes of patient care.

To summarise, this book will give readers an insight into how practitioners theorise and how theories develop. The evolution of the many nursing theories we have today will be examined, taking into account why we have so many and whether one theory or many theories will continue to be our professional legacy. The role of research in theory generation will be analysed and how such theories may in turn guide future research.

Because there are so many nursing theories available to practitioners and academics, an in-depth exploration of selection strategies will be undertaken. Once aware of the pitfall of choosing appropriate theories, the reader will be encouraged to explore how these theories (or propositions within them) are tested by quantitative and qualitative research, or a triangulation of both. Because the plethora of nursing theories (forty-five) currently available to practitioners cannot all be inherently sound, rigorous frameworks for analysing and evaluating them will be presented.

# Chapter 1

## The trouble with terminology

Throughout our lives we are always learning new words and terms. For instance, ‘compact disc’, ‘CD-ROM’, ‘greenhouse effect’ and the ‘Le Shuttle’ are not terms which were familiar to our recent ancestors. Similarly, learning the rules of a new sport, starting a new job or taking up a hobby will bring with it a new set of terms. If we have sufficient interest we will spend some time learning the meaning of these new words.

The development of knowledge in nursing also brings with it new terms. These include ‘theory’, ‘paradigm’ and ‘construct’, to name just three. The same nurses who eagerly learn those new words associated with hobbies and sports often take an anti-intellectual stance when it comes to new words in nursing. This opening chapter proposes to introduce you to a range of terms which many readers may not have come across. My advice is that you look to the meaning behind the words and you will be richer for it.

While trawling the literature I have come across hundreds of definitions for the theoretical terms I will be addressing. I have noted that many definitions contradict each other and there is much disagreement among the experts. Therefore, it is highly probable that for each of the following definitions there is a contrary definition. I have attempted to get around this problem by selecting those definitions which have the most support in the literature.

I have categorised the terms into three groups. These are:

- Global terms
- Working terms
- Middle terms

## 2 *The trouble with terminology*

### Global terms

- Metaparadigm
- Domain
- Philosophy

Global terms are those expressions which represent a very broad view of issues that are relevant to nursing. A global view is like the view of a country from a satellite. The image is so all-encompassing that it is difficult to begin to describe the detail. None the less, this perspective is useful in that it provides you with a truly philosophic vantage-point.

Perhaps the best-known global term is 'metaparadigm'. This term is associated with the writings of Thomas Kuhn (1970), a philosopher, and Jacqueline Fawcett (1995), a nurse. According to Fawcett, a metaparadigm is:

the most global perspective of a discipline acting as an encapsulating unit or framework within which the more restricted structures develop. It identifies certain phenomena which are of interest to a discipline and explains how that discipline deals with those phenomena in an unique manner.  
(Fawcett, 1992: 64)

Most authors subscribe to a four-component metaparadigm. These four components are: 'nursing', 'health', 'person', and 'environment' (Yura and Torres, 1975; Fawcett, 1995). These are also referred to as the 'essential elements' of any theory (Pearson and Vaughan, 1986).

Fawcett (1995) points out that every discipline has a metaparadigm; its purpose is to single out certain phenomena with which the discipline will deal. Most professions have a single metaparadigm from which numerous theories emerge – contemporary nursing appears to have reached this level of theoretical development.

During the 1970s and 1980s authors wrote extensively about the importance of the metaparadigm for nursing science. The argument was put forward that unless a conceptualisation included assumptions about nursing, health, person, and environment, it could not be considered to be a theory (Fitzpatrick and Whall 1996).

However, the complete four-element metaparadigm has its dissenters. For example, Stevens (1979) excludes 'environment', while Kim (1983) excludes 'health'. Others believe that 'nursing' should be omitted as a concept, maintaining that its inclusion is a redundancy of terms and that 'caring' should be included instead (Leininger, cited in Huch, 1995). However, to exclude nursing and include caring would mean that the resultant 'health, person, caring and environment' could well be perceived as a metaparadigm for medicine! The inclusion of nursing, however, may be seen as excluding midwifery and health visiting from the debate.

Since Fitzpatrick and Whall (1996) argue that the metaparadigm represents the foundation stones for nursing theories, one would expect each theorist to outline her (all the major nurse theorists are female) beliefs and assumptions regarding the person, to present an identification of the person's environment, to define her view of nursing and to discuss her views on health. Close examination of nursing theories shows that this is the case. Each theorist does conceptualise the four elements of the metaparadigm, but they tend to view them from different perspectives.

Therefore, how nursing, health, person and environment are described and defined varies greatly from theorist to theorist. So, while each one considers the metaparadigm, they may emphasise different aspects and see them in different relations to one another. Such a rich diversity of assumptions concerning the same factors will only serve to enrich our profession. Nightingale (1859), for instance, believed that nursing put the patient in the best condition for nature to act upon him. She placed great emphasis on the environment and the detrimental effect that poor environments had on people's health. Although she too dealt with each of the metaparadigm components, she focused specifically on the patient and the environment. Of the modern theorists, Martha Rogers (1980) was perhaps the most influential in continuing this emphasis on the importance of the environment.

To illustrate how some theorists have taken cognisance of the metaparadigm I have extracted the components from the works of Roper, Logan and Tierney (1990), Henderson (1966), Orem (1980) and Roy (1971).

#### 4 *The trouble with terminology*

##### *Person/man*

Definitions:

- Biological human beings with inseparable mind and body who share certain fundamental human needs (Henderson, 1966).
- An unfragmented whole who carries out or is assisted in carrying out those activities that contribute to the process of living (Roper, Logan and Tierney, 1990).
- A functional integrated whole with a motivation to achieve self-care (Orem, 1980).
- A bio-psycho-social being who presents as an integrated whole (Roy, 1971).

##### *Nursing*

Definitions:

- A profession whose focus is to help the client to prevent, solve, alleviate or cope with problems associated with the activities he or she carries out in order to live (Roper, Logan and Tierney, 1990).
- A profession that assists the person sick or well in the performance of those activities contributing to health or its recovery (or to a peaceful death) that he or she would perform unaided, given the necessary strength, will or knowledge (Henderson, 1966).
- A human service related to the clients' need and ability to undertake self-care and to help them sustain health, recover from disease and injury or cope with their effects (Orem, 1980).
- A socially valued service whose goal is to promote a positive adaptation to the stimuli and stresses encountered by the client (Roy, 1971).

##### *Health*

- The ability to function independently regarding fourteen activities of daily living (Henderson, 1966).

- The optimum level of independence in each activity of living which enables the individual to function at his/her maximum potential (Roper, Logan and Tierney, 1990).
- A state of wholeness or integrity of the individual, his parts and his modes of functioning (Orem, 1980).
- The adaptation of the person to stimuli on a continuous line between wellness and illness (Roy, 1971).

### *Environment*

Definitions:

- That which may act in a positive or negative way upon the client (Henderson, 1966).
- Circumstances that may impinge upon the individual as he or she travels along the life-span and cause movement towards maximum dependence or maximum independence (Roper, Logan and Tierney, 1990).
- A sub-component of man, and with man forms an integrated system related to self-care (Orem, 1980).
- Both internal and external. From the environment people are subject to stresses (Roy, 1971).

Afaf Meleis, a highly influential author on theorising in nursing, uses the term ‘domain’ when referring to nursing’s field of interest. Although it does not have the exact same components as the metaparadigm, it has a similar meaning. She defines domain as ‘the perspective and territory of a discipline’ (Meleis, 1991: 12). She goes further than Fawcett and identifies seven concepts as central to the domain of nursing. These are: ‘nursing client’, ‘transitions’, ‘interaction’, ‘nursing process’, ‘environment’, ‘nursing therapeutics’ and ‘health’.

To illustrate the relationship between these concepts Meleis (1991) believes that the nurse interacts (*interaction*) in a health/illness situation with a human being (*nursing client*) who is an integral part of his or her socio-cultural context (*environment*) and who is in some sort of transition or is anticipating a transition (*transition*); the nurse–patient interactions are organised around some purpose (*nursing process*), and the nurse uses some actions (*nursing therapeutics*) to enhance or facilitate health (*health*).

## 6 *The trouble with terminology*

In her 1995 book, Fawcett ably addresses the criticisms levelled at her perception of the metaparadigm. She also appears to be coming closer to the ideas of Meleis in that she specifies that ‘nursing’ within her four-component metaparadigm does include nursing therapeutics, and ‘person’ does include groups and communities. In essence, therefore, both metaparadigm and domain are terms which may be used to identify those broad parameters of nursing.

Another global term often referred to in the literature is ‘philosophy’. According to Silva (1986a) a philosophy is concerned with the nature of being, the nature of reality and the limits of knowledge. A philosophy is also perceived as ‘a statement of beliefs and values about the world, a perspective on human beings and their world, and an approach to the development of knowledge’ (Fawcett, 1992: 68). According to Salsberry (1994), a philosophy identifies what is believed to be the basic or central issues of a discipline. This latter definition illustrates that philosophy can have a similar meaning to metaparadigm or domain.

In this text Fawcett’s definition of philosophy will be adopted. Therefore, while you may agree that the client is an essential part of the metaparadigm of nursing, two practitioners may have varying values and beliefs (*philosophy*) as to how they perceive the client: one may believe and value the client to be an independent self-caring individual while the other may believe and value the client to be a dependent person relying on the nurse to meet or help him or her meet basic needs.

### **Working terms**

- Phenomenon
- Concept
- Construct
- Proposition

### *Phenomenon*

A phenomenon (plural: phenomena) is a thing, event or activity that we perceive through our senses. I include in this the sixth

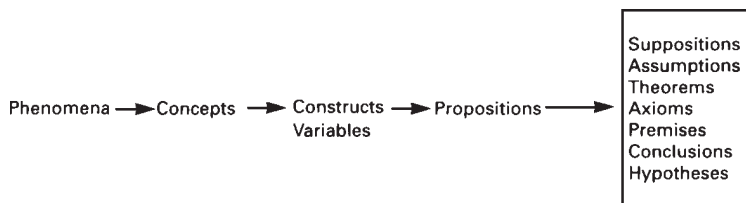


Figure 1.1 Representation of relationship between theoretical 'working terms'

sense of intuition or 'gut reaction'. You could say that phenomena represent the subject-matter of a discipline. It has been stated: 'when experience and sensory and intuitive data become coherent as a whole, and prior to any attachment of meaning, we have a phenomenon' (Meleis, 1991: 201). For instance, prior to surgery you may perceive a patient being restless in bed, you note that she is biting her nails, she is sighing, your hand on her brow tells you she is perspiring and clammy. As another example, you may note that elderly male patients on certain medications wander out of their bedroom between 3a.m. and 5a.m. and, when asked, do not know who they are or where they are. Other nurses you ask have also noted this behaviour. Prior to putting a name to either of these occurrences, you are noting a phenomenon. A phenomenon remains a phenomenon as long as no cognitive or inferential interpretation is attached to it.

Nurses must attend to those phenomena that are of central importance to nursing. We must guard against teaching and researching issues and basing our practice around phenomena which are of more interest to another discipline than they are to nursing. On occasions this happens, and authors like Meleis (1991) have urged nursing to get back to the substantive issues which hold relevance for nursing.

### *Concept*

Meleis defines a concept as 'a label used to describe a phenomenon or a group of phenomena' (1991: 12). Therefore, when we put a name to a phenomenon we are identifying

## 8 *The trouble with terminology*

*concepts*. In the first example above you may label the phenomenon ‘anxiety’, while the second may be labelled ‘early morning drug-related confusion’.

As a mental image, a concept is a view of reality tinted with the observer’s perception, experience and philosophical bent. You should remember that the same phenomenon may be given a different conceptual label by two different nurses. Therefore, a concept is a tool and not a real entity – it merely facilitates observation of a real phenomenon. It refers to the properties of a phenomenon; the concept is not the phenomenon itself, rather it is a name one gives to a phenomenon. Concepts give meaning for filing purposes, enabling us to categorise, interpret and structure the phenomenon. Concepts are also the building blocks of theory, they convey the ideas within the theory. To Fawcett and Downs (1992) the concepts of a theory are its special vocabulary.

### *Construct*

If the phenomena are very abstract and the resultant concept is not directly observable or measurable it is often referred to as a ‘construct’ (e.g., self-esteem). A construct is sometimes confused with the term ‘concept’. But, according to Chinn and Kramer (1995), ‘a construct is a type of highly complex concept whose reality base can only be inferred’ (1995: 212). Therefore, if you could imagine a continuum of concepts from concrete (thermometer) to abstract (caring, compassion), constructs would be placed at the abstract end. You must remember that all constructs are concepts, but not all concepts are constructs.

Duldt and Griffin (1985) illustrate the continuum of abstraction of concepts in the following way. They identified a ‘cow’ as a very concrete conceptualisation and proceed through the following more abstract levels of conceptualisation: ‘cow’ – ‘Bessie’ – ‘livestock’ – ‘farm asset’ – ‘asset’ – ‘wealth’. Two things are happening as the concepts become more abstract; more of the characteristics of the concept ‘cow’ are being omitted and the ability to directly observe and measure the concept is becoming more difficult.

Constructs may be made measurable by identifying

'variables'. Powers and Knapp (1995: 166) define variable as 'an operationalisation of a construct'. For example, if 'civil status' is perceived as a construct, it could be made measurable by breaking it into the variables 'single' and 'widowed', 'divorced', 'married', etc.

### *Proposition*

Different concepts, constructs and variables can be linked by statements of relationships. Such linking statements are called 'propositions'. Therefore, propositions are 'tentative statements about reality and its nature. They describe relationships between events, situations or actions' (Meleis, 1991: 205). The different types of proposition which go to make up theory will be discussed in greater depth in Chapter 3.

In the literature there are different types of prepositional statement. These include:

- Assumption
- Supposition
- Premise
- Axiom
- Postulate
- Conclusion
- Hypothesis
- Theorem

*An assumption* is 'a notion that is widely accepted to be true' (George, 1985: 339). Assumptions are important parts of theories. In essence, they are taken-for-granted statements which may not have been proved or undergone empirical testing. 'Man is a bio-psycho-social being' is an assumption.

*A supposition* is another prepositional term which means the same as assumption. According to Chinn and Kramer (1995), suppositions are taken to be true for the sake of argument. We tend to accept the supposition that the environment is forever changing.

*A premise* is a relationship statement 'used in deductive logic as a basis for forming a conclusion' (Chinn and Kramer, 1995: 217).

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This term will be explained further in Chapter 2, when deductive reasoning is discussed.

*Axioms and postulates* are similar to premises and form the major components within deductive logic. According to Marriner-Tomey (1994a: 4), an axiom is ‘a statement from which other statements of a theory may be logically derived’.

A *conclusion* is also a propositional statement and is the end result of deductive reasoning. An example of deductive reasoning would be:

All staff on ward X are in the multidisciplinary team	1st premise (axiom/postulate)
Mary is a member of staff on ward X	2nd premise (axiom/postulate)
Therefore Mary is in the multidisciplinary team.	Conclusion (or theorem)

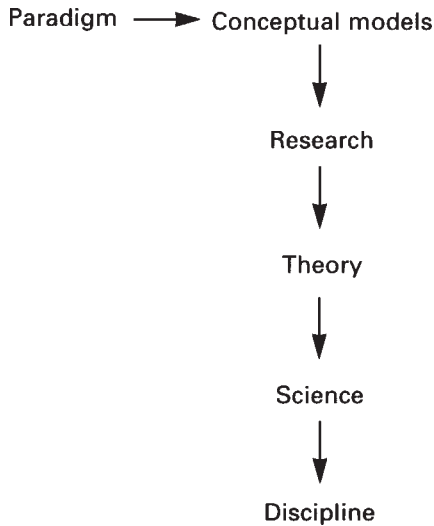
A *hypothesis* is also a proposition and has been defined by Chinn and Kramer (1995: 214) as ‘a tentative statement which suggests some sort of relationship between two or more variables in a theory and can be tested through using research methods’. Therefore, hypotheses are statements of relationship between concepts stated in empirically testable terms.

A *theorem* is, again, the product of deductive reasoning. However, this term is most often encountered in mathematics and physics.

Like pieces in a puzzle, the foregoing terms form the infrastructure for theory development from practice. For example, suppose you continually observe that, after bowel surgery, male patients go to the toilet very frequently (phenomenon). You name this phenomenon ‘post-op. urinary frequency’ (concept). You develop a hunch that lower bowel surgery affects bladder capacity (proposition as a premiss). Over a two-month period you decide to test whether all males who undergo bowel surgery in your hospital state that they pass urine more frequently than normal (proposition as a hypothesis). By testing this hypothesis

through a research study you may contribute to a theory which will provide new knowledge for the future care of such patients.

### **Middle terms**



*Figure 1.2* Representation of relationship between theoretical 'middle terms'

Under the global terms and made up of relationships between the working terms are what may be referred to as 'middle terms'. These include:

- Model
- Theory
- Paradigm
- Discipline
- Research
- Science

Theories and models have much in common: they tend to be composed of concepts and propositions that are systematically constructed. Therefore, it is not surprising that there is much confusion and discussion among nurse scholars as to the difference between these two terms. The arguments surrounding this confusion will be explored in detail below.

### *Model*

Some of the simplest definitions of a model describe it as, 'a representation of reality' (McFarlane, 1986a), or a simplified way of organising a complex phenomenon (Stockwell, 1985). Other authors have elaborated on both these descriptions. Fawcett (1992) states that a model is a set of concepts and the assumptions that integrate them into a meaningful configuration. Rambo (1984) believes that a model is a way of representing a situation in logical terms in order to show the structure of the original idea or object.

A model train is a representation of a real train in the same way that an architect's model office block represents the proposed building. It gives the viewer an indication of what the real thing is like. A model of psychiatric nursing should provide a representation of one way of viewing psychiatric nursing.

A model has also been described as 'a mental or diagrammatic representation of care which is systematically constructed and which assists practitioners in organising their thinking about what they do, and in the transfer of their thinking into practice for the benefit of the client and the profession' (McKenna, 1994b: 16). Models, therefore, are conceptual tools or devices that can be used by an individual to understand and place complex phenomena into perspective. However, while conceptual models are supposed to simplify complex issues, many nurses perceive nursing models as doing the opposite – a common criticism of models being that they overcomplicate nursing practice (McKenna, 1994b).

Models take various forms: Chapman (1985) used three dimensions to describe them. Those models that are presented in a one-dimensional format take the form of verbal statements or