

# CLIENT-ENVIRONMENT INTERACTION: CONTEXT FOR NURSING CARE

Jo Ann Neff and Sharon Summers

Person, environment, and health have been described as the essential constructs of the discipline of nursing - constructs that should guide both the phenomena selected for investigation as well as the diagnostic and therapeutic modalities employed in practice. A central feature of the role of the nurse is the management of the person-environment interface to improve and maintain the health of clients. Success in facilitating adaptive responses in health and illness depends upon understanding important contextual and dispositional factors that may influence human response.

The notion that human response is a function of both the person and the environment is not a new one. It dates back historically to the writings of Kantor (1924) and Lewin (1935) in the early twentieth century. These scientists established the foundation for further person-environment theories by Angyal (1941), Murray (1938), Murphy (1947), and Sullivan (1953). Of these early theorists, Kurt Lewin's work has had the most significant impact. His construct of the field or life space consisted of a sphere of existing facts surrounding the individual that could be divided into two classes: those facts that describe the person and those describing the environment. It was the relationship of all these facts that was thought to determine a person's response at any given time.

A major challenge for knowledge development in relation to the person-environment interaction is a fundamental philosophical view upon which science rests. All traditional forms of knowing rest on an idea about objectivity, where truth is thought to exist apart from, or outside of, the person who knows. A fundamental idea about reality from which traditional science

E. Jo Ann Neff, R.N., Ph.D. is Associate Professor in the Faculty of Nursing, at the University of Calgary, Alberta. Sharon Summers, R.N., Ph.D. is Associate Professor in the School of Nursing at the University of Kansas Medical, in Kansas City, Kansas.

developed was Cartesian dualism (1960), in which the rational mind and the "out there" reality of truth are viewed as separate.

The Cartesian view of separation of mind and body in the human person has proven to be ideal for supporting a technological model of health as well as physicians who are unable to recognize the part that environmental and social factors play in disease processes and human responses to illness experiences.

### *The quantum challenge*

Developments in twentieth-century physics have questioned and transcended nearly every assumption of the Cartesian model. It is not that the mechanistic view of the universe is wrong, but that, as Thomas Kuhn (1972) suggests, as a dominant paradigm it has long since expanded to the limits of its methodologies and become no longer useful. Both the theory of relativity and the discoveries of quantum physics lead us towards an organic ecological view of reality which has much in common with the teachings of mystics throughout the ages. Einstein poked holes in the classical view of reality with his theory of relativity; he showed that mass and energy are one and space and time are inseparable, forming a four-dimensional continuum.

The new physics has also demonstrated that there is no way in which we can pull reality (or the human body) into its parts, study the parts and expect to know it. This is because reality is like a complicated tapestry of relationships between the complex parts of a unified whole. And woven deeply into this tapestry is something Descartes never imagined - the consciousness of the human observer studying it. So much is this now shown to be true that any "object or patient" the scientist observes can only be understood by taking into account the state of the observers' consciousness and expectations. In turn, the observer is not only needed to record the characteristics of the phenomena, but may actually help determine many of these characteristics.

We will never again be able to speak about the universe without speaking about ourselves. Matter is no longer static, made up of passive building blocks. It is made up of active bundles of energy continuously involved in dynamic processes. What scientists now observe is a continuous dance of

energy in which consciousness, far from being the result of material existence, plays a primary creative role and should be valued.

The Cartesian paradigm with which we and our ancestors have lived for generations depicts humans as biological machines driven by instinctual impulses - which are fundamentally destructive in nature and which need to be kept in check. The human has been seen as a creature driven by a "survival of the fittest" will. This old world-view has also encouraged us to look upon life as an ultimately futile process - an accidental occurrence within an endless struggle against death.

If order is not a static state against which we must struggle to live but instead a dynamic process of energy exchange between the living body and the world outside, and if consciousness plays an important part in both the creation of living organisms and the carrying out of living processes, the new view of man emerging from such findings is of a completely different order.

### *Order out of chaos*

British biologist Rupert Sheldrake (1981) believes that living organisms are not simply complex biological machines. He has demonstrated that life cannot be reduced to a series of chemical reactions and has presented evidence that the form, development and behaviour of living organisms are shaped through "morphological fields." These formative energy fields appear to be the result of the actions of past members of the same species, via direct connections that span both time and space. As such, alterations in the consciousness or the behaviour of a few of a species appear able to change the behaviour of great numbers almost simultaneously. An excellent example of this is the anecdote reported by Lyall Watson (1979) in his book *Lifetides*. It is known as the "hundredth monkey phenomenon". Watson tells of how a female monkey living on the island of Koshima began washing raw sweet potatoes to remove the sand and grit. This behaviour was not only picked up by monkeys living close to her; it also suddenly appeared in monkeys on neighbouring islands until the number of animals using it reached a few dozen. Watson's findings have far-reaching implications not only for biology but also for nursing and psychology. If he is right, then much could be changed - from mentally induced healing of a sick body to heightening mental and spiritual awareness on a broad scale and through the creation of a kind of "morphic resonance" that makes such events possible. Meanwhile

Nobel laureate chemist Ilya Prigogine (1984) has even altered the meaning of the word "order". He has discovered the presence of so-called dissipative structures in chemical reactions and found that a new principle underlies them - a principle of "order through fluctuation". These dissipative structures also appear to be self-organizing and responsible for keeping life energy dynamically intact.

### ***Holographics and beyond***

David Bohm, a protege of Einstein in both quantum physics and the relativity theory, has made his own revision of the mechanistic world-view in the form of what is called his "holonomic theory of the universe". In his book, *Wholeness: The Implicate Order*, Bohm (1980) shows that the stuff we observe in this world when we are in our ordinary state of consciousness is but one side of reality - the explicate or unfolded order. Behind it lies another in the form of a generative matrix which is called the implicate, or enfolded order. This implicate order cannot be observed, except perhaps in exceptional states of consciousness such as deep meditation. Yet this implicate order, like Sheldrake's morphogenic fields, appear to be formative in nature. And there are now many forward thinking scientists who believe that gaining access to it through non-ordinary states of consciousness may make possible dramatic leaps in man's evolutionary progress. One day we may actually become conscious masters of our own destiny if we can learn to connect with it and allow it to unfold freely. One highly respected neurosurgeon who is numbered amongst them is Karl Pribram at Stanford University in California. Pribram (1982) has developed a new model of the brain that in many ways lends support to Bohm's theory of holomovement. Pribram has shown that as well as processing information and experience digitally, the brain also processes in a parallel manner that is holographic in nature. This means that specific memory does not have a location but is scattered throughout the brain. Pribram has also speculated that the real world may itself be holographic, and that there may be a matrix within the brain that doesn't objectify unless we do something to it. His work indicates that we may be the creators of the world we see before us: that is, each of us, may mathematically construct outer reality by interpreting from a dimension such as Bohm's implicate order, which transcends time and space. Our brains may well be holograms interpreting a holographic universe so that what happens within also happens without. Most important of all, Pribram believes that far from being the passive product of random evolution strug-

gling for survival, we, as human beings, have access to the primary realm of reality which determines our health and evolution.

### ***The health connection***

Fundamentally, what all of these paradigm shifts mean, in terms of health care for the future, is two things. First, because consciousness plays such an integral role in the creation of reality, individual responsibility for health is likely to be increasingly emphasized and healing approaches that make use of such techniques as autogenic training, hypnosis and meditation will be used more and more as tools for gaining access to the primary realm of reality that creates illness or wellness. Secondly, the new visions of reality create an absolute necessity, even for the individual who is willing to work hard personally to achieve a high level of wellbeing and energy, to recognize that none of us can remain healthy in isolation.

### ***Imperative for Nursing***

In the past, the majority of nursing investigations have studied selected person or environment variables in a static manner, often without attention to multi-directional and multi-causal elements, let alone the processes by which they may interact. This mode is changing as we understand the dangers in oversimplifying human response by assuming the existence of global rather than situation-specific effects, or by assuming no synergistic interface between person and environment.

The dominant paradigm we have used to guide our knowing has been useful in giving us a partial understanding of the client's environment. For example, we understand how bone tissue mends, how endocrines influence cardiovascular function and how human breast milk nourishes. But the model does not exhaust what we need to know to give nursing care. It does not tell nurses how to comfort a child whose fracture is due to an automobile accident that killed his mother, or how to revitalize a once-healthy self-concept that has been abruptly changed by facial burns, or what quality of life means to the chronically ill. These are complex human experiences moderated by an interactive environment-client relationship that nurses should know about. Too rarely is the interactive aspect of the individual and the environment addressed in the literature (Andercason, 1985; Nikiferuk, 1985; Porter et al., 1985). Too often nurses depict the environment as a local



circumscribed parameter in which the client acts. Often the family and the community are seen as the boundaries of the environment.

As well, the effect of the environment upon clients in public and private institutions should be of monumental concern to nurses. There are many client environments that cry out for the intervention of nurses: the often deplorable state of nursing homes, custodial rather than developmental child care facilities, poor housing and its contributions to illnesses and disabilities. Nurses deal with human responses to social disorder and deprivations. The environment is too often perceived in epidemiological terms; that is, as demographic data. A broader interpretation of the environment is needed that considers political, legislative, social and economic spheres that give rise to individuals' responses of malnutrition, noncompliance, alienation, hostility, joblessness, poverty and widespread social unrest. Where is the knowledge base of how the profession deals with the totality of the environment, the global influences that affect every aspect of clients' lives - the air they breathe, the water and food they ingest, their living arrangements, the politics, policies, crime, legislation and economics that determine quality of life, affect longevity and establish or impede wellness? Nightingale (1860, 1882, 1893) delineated the nurse's responsibility to protect a client's environment. Perhaps a rereading of her monumental works would set us upon a productive path for knowledge development.

## REFERENCES

- Andercason, M.E. (1985). Making a safe environment by design. *Journal of Gerontological Nursing*, 11(6), 18-22.
- Angyal, A. (1941). *Foundations for a science of personality*. Cambridge: Harvard University Press.
- Bohm, D. (1980). *Wholeness and the implicate order*. London: Routledge and Kegan Paul.
- Descartes, R. (1960). *Meditations on first philosophy*. Indianapolis: The Liberal Arts Press.
- Kantor, J. (1924). *Principles of psychology (Vol. 1)*. Bloomington, IL: Principia Press.
- Kuhn, T.S. (1962). *The structure of scientific revolutions*. Chicago: Chicago University Press.
- Lewin, K. (1935). *A dynamic theory of personality*. New York: McGraw Hill.
- Murray, H. (1938). *Exploration in personality*. New York: Oxford University Press.
- Murphy, G. (1947). *Personality: A biosocial approach to origins and structure*. New York: Harper.
- Nightingale, F. (1882). Nurses, training of. In L.R. Seymer (Ed.), *Selected writings of Florence Nightingale* (pp. 320-334). New York: Macmillan.
- Nightingale, F. (1860). *Notes on nursing: What it is and what it is not*. New York: Appleton.
- Nightingale, F. (1893). Sick nursing and health nursing. In I.H. Robb et al. (Eds.), *Nursing of the sick*. New York: McGraw-Hill. (1949 reprint.)
- Nikiferuk, M.J. (1985). Environmental hypersensitivity: Living in a hostile world. *Canadian Nurse*, 81(5), 42-46.
- Porter, R. et al. (1985). Environment. The healing difference. *Nursing Management*, 16(6), 19-24.
- Pribram, K. (1982). *Languages of the brain: Experimental paradoxes and principles in neuropsychology*. New York: Brandon House.
- Prigogine, I. (1984). *Order out of chaos: Man's new dialogue with nature*. New York: Bantam Books.
- Schilder, P. (1964). *The image and appearance of the human body*, Science Editions, New York: John Wiley & Sons, Inc.
- Sheldrake, R. (1981). *A new science of life: The hypothesis of formative causation*.
- Sullivan, H.S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Watson, L. (1979). *Lifetides*. London: Hodder and Stoughton.