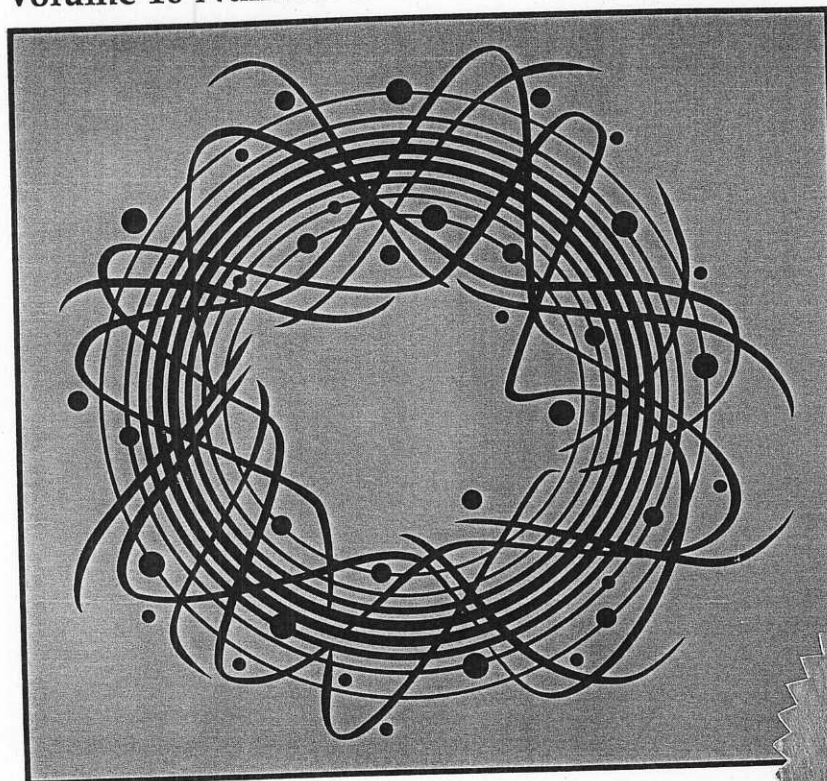


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What Is Nursing Science? An International Dialogue

AUSTRALIA

John Daly, RN; PhD
University of Western Sydney, Macarthur
Sydney, Australia

Nursing science is an identifiable, discrete body of knowledge comprising paradigms, frameworks, and theories. It has both substantive and syntactical structure including product and process dimensions. This structure is vested in nursing's totality and simultaneity paradigms. These competing paradigms posit mutually exclusive perspectives on the human-universe interrelationship, health, and the central phenomenon of nursing. The substantive structure of each paradigm is the nursing knowledge or content which has evolved through development of specific theoretical perspectives. Syntactical structure in each paradigm includes a specific belief system, worldview, or ontology, which has implications for epistemology and related methodologies which guide nursing research and practice processes.

Nursing science is in development; it will continue to evolve. Its evolution will be facilitated through extension of inquiry into nursing research and practice methods which are driven by nursing's paradigms and theories.

CANADA

Gail J. Mitchell, RN; PhD
Sunnybrook Health Science Centre;
University of Toronto, Ontario, Canada

Nursing science represents clusters of precisely selected beliefs and values that are crafted into distinct theoretical structures. Theoretical structures exist for the purpose of giving direction and meaning to practice and research activities. The beliefs and values of any theory specify the views of the human-health process and of the reality that relates to nursing actions in practice and

research. Values enliven the beliefs of a theory and embody them through actions, words, and movements. The beliefs and values together provide the structure for the ways nurses relate with persons receiving care. Embedded in all theoretical structures are views about how to be with others, when to be with others, how to think of others, and what to expect of self and others in the nurse-person process. The views, represented in extant nursing theories, are nursing science.

Nursing theories can be learned through committed study, but to understand a theory's contribution to humankind it must be experienced as a way of being with others. It is within the nurse-person process, or the researcher-participant process, that theory can be judged as meaningful, or not, depending on its coherence and the structured opportunities it presents. The structures of nursing science are like scripts, in that nurses who choose a particular theory create new expressions of the original work in the everydayness of practice and research. Theories give the story line and direct actions and words in such a way that a coherent pattern emerges. But the story itself has a life beyond the original theory. In some models, like Parse's theory of human becoming, the persons receiving nursing care are integral to the story line as families' meanings and personal details are explicated to expand nursing's knowledge base and understanding about unitary experiences of health.

Nursing science is nourishment for the nurse-person process. It is the unique substance that defines nursing's contribution to humankind. Nursing science clarifies responsibilities, expectations, opportunities and accountabilities for nurses who believe that the focus of the discipline is the unitary-human-health process as lived, as experienced by unique persons. If there is to be a future of nursing as a discipline, nursing science must be at the core of all professional activities.

FINLAND

Tuulikki Toikkanen, RN; MScN
Lahti Polytechnic
Lahti College of Health Professions
Hoitajankatu, Lahti, Finland

The aim of nursing science is to enhance understanding of the human being as well as health. In nursing science, we are aiming at discovering the Other, at confessing the Other, and at maintaining the Other. Human beings and life are always much more than anyone can ever know. The goal of nursing is the quality of life from the perspective of the human being. In nursing science, we are dwelling on questions emerging from human life which are illuminating meanings in relation to the human-universe process.

Research in nursing is extending knowledge of the unknown, and the ethical and esthetic path of nursing care. The unknown is always present in nursing practice as well as in nursing science. Questions are never answered entirely, and the discovered answers have to be examined over and over again. Nurse scientists need courage to encounter the Other and the unknown. Nursing is both science and art.

GREAT BRITAIN

Brian Millar, RGN; DN
University of Wales
Heath Park
Cardiff, Wales, Great Britain

Nursing science is essential to the future of professional nursing practice in order to save it from its tendencies toward instrumentalism and relativism, just as nursing practice is essential to save nursing science from its abstraction and potential dogmatism.

The structure of scientific knowledge, the role of the sciences, and the appropriate context for the pursuit of scientific inquiry in nursing has long been a matter for reflection and debate both within and outside the discipline. As a nurse engaged in this reflection, new issues continually come to the fore, since reflection on nursing science is also reflection on ourselves as a profession and our status as a scientific discipline. The implications of my personal reflection on the question of what is nursing science lead me to suggest that *nursing science is that body of knowledge developed from questions raised by nurses and investigated by them, concerning the relationship of human-health-environment.*

The prospect of a genuinely comprehensive nursing science is an alluring notion. But what I want most is *not* to suggest there is a final solution, nor a final sci-

ence. We may yet discover that nursing science is nothing more than the quest itself; that the only constant is our search for knowledge; that being, as Hegel said, is simply the process of its own becoming.

ITALY

Renzo Zanotti, RN; PhD
University of Padua
Padua, Italy

The science of nursing is an emergent new product in the universe of human knowledge. As a science it requires the application of rigorous, distinct procedures and methods to observe, classify, and relate the processes by which persons change their health status. The body of nursing knowledge is enhanced by use of these methods. Nursing science responds to compassionate concern for maintaining and promoting health, preventing illness, and caring for and rehabilitating the sick and disabled. The goal of nursing science is to test new interpretations and to explore different explanations, under general laws, about phenomena referring to caring, well-being, and autonomy of persons as harmonious entities. Thus, nursing science can provide conscious and consistent criticism to popular explanatory myths, and it challenges many traditional scientific truths.

JAPAN

Teruko Takahashi, RN; PhD
The Jikei University
Tokyo, Japan

Nursing science is a unique human science which focuses on phenomena related to human health. Health is not the opposite of illness but is the meaning of the situation to the person. Unlike natural sciences such as medicine, nursing science focuses on the quality of life for each person. Therefore, nursing science does not investigate health phenomena based on causality. Health as lived experience is investigated from the point of view of healthcare consumers.

Nursing science as a human science will become more developed and elaborated through unique research methods during the 21st century. With the elaboration of nursing science, nursing practice will become more sophisticated by focusing on the consumer and his/her family. As a result, professional nurses will become more proud of nursing.

SWEDEN

Ania M. L. Willman, RN; PhD
Malmö College of Health and Caring Sciences
Malmö, Sweden

In Sweden, research within the field of nursing, and also patient-oriented research undertaken by other disciplines, has been categorized as "omvårdnadsforskning" and "omvårdnadsvetenskap." These can be translated as "nursing research" and "nursing science" but may also be translated as "caring research" and "caring science." "Omvårdnad" is the principal subject in nursing education in Sweden today and can be translated both as "nursing" and as "caring."

Nursing as a science is a body of knowledge. Theories derive from this organized body of abstract knowledge (Rogers, 1970/1991). Nursing as a science has both a practical and a theoretical aspect. The aim to foster human health is the practical aspect. This is an ethical aim because health is viewed as something good. To reach this goal research is a necessity, and this is the theoretical aspect of nursing science which concerns health and caring.

Nurses and nurse-researchers have a responsibility to act and introduce a debate concerning the concept of health. This will contribute to the discipline of nursing and will result not in healthcare reforms but in a healthcare revolution, or, to quote Kuhn (1970), "a shift in paradigm." Therefore, nursing science as a body of abstract knowledge is a force for a healthcare revolution.

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UNITED STATES OF AMERICA

Elizabeth Ann Manhart Barrett, RN; PhD; FAAN
Hunter College of the City University of New York

Nursing science is the substantive, abstract knowledge describing nursing's unique phenomenon of concern, the integral nature of unitary human beings and their environments. The creation of this knowledge occurs through synthesis as well as qualitative and quantitative modes of inquiry.

Nursing science has its roots in nursing's prescientific era and in new scientific worldviews. Yet, nursing as a basic science does not derive from other sciences. Rather, nursing science is the extant knowledge of unitary, irreducible human beings and their unique environments. In this science unitary human beings are dif-

ferent from the sum of their parts, where knowledge of parts does not illuminate an understanding of people or of their integralness with their environments.

Nursing science is a whole that is continuously changing through knowledge generation and research. The distinct nature of this knowledge has significant implications for nursing practice and in its contribution to the larger community of science. Nursing science-based practice is the imaginative and creative use of nursing knowledge to promote the health and well-being of all people.

Nursing science portends possibilities for new understandings of previously unimagined potentials of human beings and their unlimited capacity for innovative manifestations in their ongoing dance with the changing diverse universe. Nursing science of the future will include exploration of the attributes of a nonlinear universe. The instantaneous awareness of thoughts throughout the planet and beyond may render usual forms of communication obsolete. Will this call for new ways of understanding the flow of energy, where future intergalactic citizens of the universe will manifest different ways of becoming? This increasingly diverse human awareness will give the citizens of the universe the power of unimaginable choices for intentional knowing participation in change. It is from scholars' continuous process of creating nursing science that the vision for nursing's future contributions to science and humankind will emerge.

(These ideas reflect the evolving views of Martha E. Rogers during the last 25 years of her career. See V. Malinski & E. A. M. Barrett, Eds., 1994, *Martha E. Rogers: Her Life and Her Work*, Philadelphia: F.A. Davis.)

William K. Cody, RN; PhD
University of North Carolina at Charlotte, NC

In the United States of America, in 1996, the standing of nursing as a discipline and as a science is one of both strength and vulnerability, advancement and stagnation, and richness and poverty. For this author, nursing science is the theory base of the discipline of nursing, along with the processes through which it is sustained. The discipline encompasses all that nursing is and all that nurses do, overlaps with other disciplines, and is more than the theory and research base. The discipline of nursing requires knowledge and methods other than nursing science, *but nursing science is the essence of nursing as a scholarly discipline*; without it there would be no *nursing*, only care.

As a *discipline*, nursing's *strength* is in our large numbers, relatively high employment rates, a positive

public regard compared to many disciplines, and the relative job security that the human requirement for health-care ensures. Nursing's *vulnerability* resides in the discipline's difficulties in clarifying nursing's *unique* contribution to healthcare. If this is not done well and done soon, nursing as a unique discipline will not survive.

As a *science*, nursing's *strength* is the growing theory and research base rooted in philosophies unique to nursing, increasingly delineating the contours of a distinct realm of knowledge within the human lifeworld and increasingly supported by substantive research. In these frameworks lies the hope of clarifying nursing's unique contribution to healthcare in an important way and thus further enhancing nursing as a scholarly discipline. Nursing *science's vulnerability* resides in the relative scarcity of nursing theory-based works in the literature, where non-nursing paradigms and frameworks are prevalent, and in practice, where the leadership to provide clarity, strength of conviction, inventiveness, and the quiet power to confront and persuade the opposition is rare.

As a *discipline*, nursing's *advancement* is manifest in the proliferation of master's-level specialties and doctoral programs, greater professional respect and comfortable salaries for most nurses, and a gradual awakening, in the mainstream, to the fact that nursing knowledge has emerged as a distinct field of knowledge. Nursing's *stagnation* is seen in the poor quality of many educational programs—taught by persons with minimal preparation in nursing science, and by the continued identification of nursing with medicine. The predominant model of nursing *as a discipline* remains that of a discipline which merely applies knowledge from other disciplines in service, and neither has nor generates knowledge unique to its concerns.

As a *science*, nursing's *advancement* is manifest in the growing body of knowledge that is structured around the extant theories of nursing and the research that tests, expands, and enhances these. The advance-

ment of nursing science is also evident in the development and expansion of frameworks in nursing that stand at the cutting edge of philosophies and theories related to health and healthcare, challenging obsolete worldviews and providing insight for practice in the new millennium. The *stagnation* of nursing science is manifest in the continued reliance on applied-science literature, including most textbooks, to guide "nursing" practice, and in the utter dominance of non-nursing theories in funded research programs, especially those funded by the U.S. government, among which true nursing research is virtually unknown.

As a *discipline*, nursing's *richness* is manifest in our diversity. Nursing spans races, cultures, genders, numerous specialties and several educational levels, as well as the innumerable belief systems among our members. Nursing's *poverty* is seen in the lack of respect and enthusiasm for new ideas, in the tendency to follow along in healthcare rather than to lead, and the unfulfilling nature of many of the routinized, biomedical tasks that make up much of nurses' workdays.

As a *science*, nursing's *richness* is manifest in the availability of cutting-edge philosophies and theories to provide guidance for practice, a growing cadre of nurses educated in nursing as a basic, human science, and a growing body of literature describing nursing theory-based practice—the evolution and present standing of the art. The *poverty* of nursing *science* is seen in very real terms in the lack of funding for studies unique to nursing's theory base, in the scarcity of venues in which practice guided by nursing science is a reality, and in the fact that vast numbers of nurses continue to emerge from entry-level programs with *only* an applied-science knowledge base for nursing.

Will American nursing's strengths, advancements, and richness enable us to survive our vulnerability, to transcend our stagnation, and to overcome our poverty? It is you, the reader, who will make the difference, as we together cocreate what nursing is yet to become.