

# Complexity and Emergent Care

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## Abstract

Postmodernity arises with the paradigm of Complexity Sciences (CC) with support for theories, models, and practices of holistic care. They break with prevalent postulates. Open to innovative theoretical development, experimentation, and research, they reconstruct knowledge with universalistic cognitive omnipresence. Founded on quantum physics, qualitative mathematics and computer science, Galena's scientific knowledge and theories are under review, although you close your eyes to certain findings. Nursing has the opportunity to overcome the linear limits imposed by the evident scientific rational structure, circumscribed to materiality, sheltered by the hegemonic medical model (MMH).

**Keywords:** Nursing; Resurgence; Holism; Alternative therapies; Benefits; Policies

## Introduction

"Doctors are men who prescribe medicines they know little about, cure diseases they know less about, in human beings they know nothing about." Voltaire.

The West founds scientific knowledge by separating universal realities. Promulgated by Isaac Newton, René Descartes, Francis Bacon, Augusto Comte, it annihilates the fundamentalism present in Indian, Taoist, ancestral Australian and indigenous Latin American philosophies. Detach the mind from the body and the mind from the spirit.

The human body is a machine controlled by the heart; the brain, its organizational foundation and its functionality is dictated by genetics. Reduce the human being to organs, cells and molecules; in terms of physics, chemistry and mathematics; to the action of enzymes and hormones.

If the imbalance appears, the physical cause is sought with the subsequent prescription of drugs to cure. However, how many people does Medicine effectively cure with its drugs, chemotherapy and radiotherapy? This Newtonian scheme of matter, causality, anomaly is documented by Roa [1].

Quantum physics claims the vital importance of the spirit, of the mind in the health-disease process and of the energy fields, a holistic position that has not yet fully penetrated the door of the ancient educational system. I review its inclusion from the academic literature circulating on the Internet.

## Crisis of the Allopathic Model

"In the same way that we concluded that we could not entrust the goals of national defense to the military-industrial complex, we are beginning to understand the inconvenience of entrusting scientific medicine to the medical-industrial complex." E. Golub

The technologized diagnosis and pharmacological treatment of diseases is the foundation of medical education and research. These respond to economic and legal structures that seek to sustain the current health system.

The disease is conceived as a distinctive clinical entity: it has its own pathophysiology, natural history, accepted treatment, and a code in the International Classification of Diseases.

Nursing academic training has been necessarily destined to sustain this model, together with the pharmaceutical one, adapting its exercise

to the job position expected by the systems, subordinating its true potential for a long time.

Menéndez [2] describes Medicine in terms of "... biologism, individualism, ahistoricity, associability, commercialism, pragmatic efficacy, asymmetry, authoritarianism, subordinate and passive participation of the patient, exclusion of consumer knowledge, legal legitimation, formalized professionalization, identification with scientific rationality, inductive tendencies to medical consumption".

Historically, the model has presented binding sub-models of the health - disease - medical care process [3,4]. According to León [5], the World Health Organization, in its publication entitled Traditional medicines and health care coverage, stated that "the so-called official medicine fails to meet its objectives of reducing morbidity and mortality".

The care models normalize health practices that, in the West and in Latin America, follow the Anglo-Saxon scheme with disciplinary hierarchies symbolizing power. Knowledge and levels of prevention are organized vertically, disregarding popular practices. They involve philosophies about the person, rights, citizen participation, Deontology and relationships with the professionals of the health team.

These guiding models permeate the epistemology of concepts that underlie nursing theory and practice, to the point of having imitated the scientific method, transferred to the clinical [6], to the epidemiological [7] and the Nursing Care Process (PAE, processes's nurse attention in Argentina) [8].

Thus, the "doxa" is not only opposed to the natural "episteme" but the apparent rationality, belittled certain knowledge classified as esoteric, religious, mythological and witch, some of them, today proven by the CC.

Nurses, marked by the scientific method, act with ignorance about its limitations, epistemological conceptions, ideological interests that sustain it and the ethical clash with the Hippocratic and Maimonidist position.

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It can be said that better nursing care is seeing the light. New scientific evidence reaffirms the integrative vision, incorporating it in the PAE.

Nursing could have started its application early, if social conditions have allowed it to faithfully follow its theory and act with clinical independence.

## Complexity Sciences

Life and health do not comply with the linearity, hierarchy and bureaucratization of the medical structure, administrative inspiration for Nursing. Health care is multi-faceted. Its study must be approached from different angles, linking heterogeneous entities.

In the midst of the “scientific revolution” [9], it is desirable for a reorganization of structures, tasks and knowledge to emerge, tending towards efficiency with bureaucratic savings.

Based on quantum physics, non-linear mathematics and computer science, they seek transdisciplinarity with knowledge transfer. Mayntz [10] criticizes the classic division between hard and soft sciences: “scientific disciplines, no matter how much they pretend to be configured as cleanly delimited group units, hardly achieve closed systems from a cognitive point of view. On the contrary, the evolutionary history of science is full of cross-border crossings and reciprocal enrichments”.

Scientifically, Nursing is interdisciplinary [11], holistically conceiving the man, the environment and care. Theories and models of care converge in the argument of the Perennial Philosophy. Human beings are constituted by the so-called Great Chain of Being: we are matter, body, mind, soul and spirit [12]. It is natural that it incorporates the findings of quantum physics, among others, which specifies that matter is energy, overcoming and dissociating itself from the impositions of blind conventional medicine.

Caring is the key to the health-disease process so as not to reach this condition that means loss of energy. On the other hand, “spontaneous healings, psychic phenomena, amazing displays of strength and endurance, the ability to walk on the embers of a fire without burning oneself, the ability of acupuncture to reduce pain by channeling chi to body length and many other paranormal phenomena challenge Newtonian biology” [13].

## Quantum Medicine

Quantum physics investigates unfathomable aspects from the perspective of Newton's physical world, for example, the power of thought on the body and its health, giving rise to quantum Medicine (Med. Qn), integrative or transdisciplinary.

With Einsteinian logic, he uses the concept of quantum unit to describe dynamic properties of subatomic particles and the interactions between matter and radiation, entering the world of the invisible and of energy.

Ontologically, it takes into account the behavior and properties of these subatomic entities and their causal ways of establishing relationships that do not obey rigidity. Its assumptions are uncertainty, non-identity and the lack of a specific location, implying the emergence of a new type of scientificity [14].

Med. Qn considers the relationship that each person has with their environment, since everything in the universe is related to a vibratory energy network through energy packages - called Quantum-and that act in a resonance called coherence.

This explains “deeply with the sense of beginning to understand how a disharmony in our being, which sometimes manifests as a disease, is no longer a mere” accident “or” chance “[15]. Consciousness, thoughts and conscious and unconscious feelings regulate mental, emotional and physical activity, without forgetting the vibrations that surround us, contributing or diminishing vitality.

The loss of coherence or entropy-term of thermodynamics, indicates the degree of molecular disorder-causes the disease to arise in a tissue, organ or system. A supply of subtle or quantum energy restores harmony: homeopathic medicine, flower essence, gems, crystals, chromotherapy, acupuncture, massage therapy and any therapy that involves the transfer of electromagnetic fields, as vibrations with direct effect on the body. They establish a new order in the person, from a reorientation manifested at the cellular, molecular and atomic levels.

The WHO [16] recognized that the so-called Traditional or Complementary Medicine (TCM/MAC) “is an important and often underestimated part of health care” and that there is “currently a need to develop a coherent and comprehensive approach to health care. of health, that facilitates to the governments, the sanitary professionals and, especially, to the users of the services of health, the access to the TCM in a safe, respectful, affordable and effective way”. Integrative Medicine is used in a wide spectrum of diseases, especially chronic ones.

## Political Repercussions

The WHO 2002-2005 strategy is resumed for the 2014-2023 period, urging: 1) the integration of TM and MAC; 2) promoting safety, efficacy and quality; 3) increase availability and affordability with an emphasis on the poorest populations, and 4) encourage robust therapeutic use by consumers and providers.

Governments aware of their benefits work to integrate them into health services [17]. The Latin American Parliament approved the Framework Law on MAC for Latin America and the Caribbean, regulating practice, teaching and research [18].

It recommends incorporating acupuncture, homeopathy, chiropractic and medicinal herbalism into the National Health Systems. The underlying principle of complementarity allows for various alternatives, highlighting the interactive connection between emotion and cognition [19]. According to the National Center For Complementary and Alternative Medicine (NCCAM), therapies are grouped into 5 categories:

1. Homeopathic and Naturopathic Medicine, Traditional Chinese Medicine and Ayurveda.
2. Body-mind interventions: meditation, music therapy, dance therapy, color therapy, aromatherapy, etc.
3. Biological (found in nature): herbalism, herbal medicine, diet, food supplements and functional foods.
4. Manipulation of the body: chiropractic and osteopathy, etc.
5. Energy therapies: Qi gong/Qigong or Chi Kung, Reiki, electromagnetic fields, among others [20].

With the CC “medical administration is analyzed interdisciplinary” seriously considering the convergence of ethical, social, material, economic and human factors [21] adding the contributions of the MAC.

Its advantages are: humanization in the therapeutic treatment,

reduction of costs in medicines and in the use of highly complex services [22], minimal adverse effects, significant application for the public and easy access [23].

There are medical experiences of allopathic-homeopathic complementarity [24]. In Nursing they are related to Eastern philosophies, applied to individual care in various situations of the broad spectrum of health-disease. They are numerous in European territory, in contrast to Latin America. They are applied in various specialties and at different levels of health care [25-29].

Its use in APS to preserve it is notorious. Nursing is a decisive human resource for saving public health spending and for providing a humanized service due to the value it places on human life [30-32]. Health faced with an integral vision incorporates the concept of well-being, distancing the veterinary perspective on human bodies, with awareness of the spiritual dimension, reflected in the PAE [33-35].

### Disciplinary Implications

The American Nurses Association (ANA) recognized Holistic Nursing as a specialty in November 2006. In 2007, the ANA published a book together with the American Holistic Nursees Association (AHNA) standardizing objectives, practice, implementation in services and evaluation [36]. It provides information to holistic nurses, other healthcare professionals, employers, third party funders, policy makers, and the public regarding the unique vision of knowledge, standards of practice, and expected performance of the holistic nurse.

Nursing, faithful to the Hippocratic tradition, insists on the relationship between body, soul, environment, such as oriental medicines. For 25 centuries, Chinese, Tibetan and Ayurvedic Medicines prevent and heal through the integral approach of the person. They use a comprehensive diagnostic procedure and a personalized therapeutic intervention, which includes indications aimed at modifying lifestyles.

They recognize the endogenous preventive and self-healing capacities of the human being, such as the stimulation of oxytocin, justified in the concept *naturae medicatrix* (nature is what heals), preserved in naturopathic doctors. These philosophies consider the body's innate healing abilities.

Spirituality is "the discipline that frames: philosophy, religion and science and tries to harmonize it" (op.cit, Montes de Oca-Rosas. Pinedo Velázquez [37] inquired about the benefits of illicit pilgrimages in sick people with the purpose of "recognizing the weight that their beliefs have for a certain patient, quantifying in some way the experience of well-being that they produce and relating those emotions to their state health "because" faith has an energetic effect on believers that gives them strength to fight a health problem."

Fractal health includes this dimension [38] and the academic literary corpus shows a growing interest in religiosity, spirituality and its preservative incidence [39-42]. Health is conceived with the notions of self-esteem, optimism, happiness, well-being and personal development.

### Academic Implications

Professional training is holistic from its roots related to Ecofeminism. "In this sense, the theories that have been created and disseminated in Nursing science have based their principles, concepts and definitions on a comprehensive, multidimensional and complex model, which is derived from a holistic approach to care"[43]. Holism stands out in the philosophies of Martha Rogers, Jean Watson, Betty Neuman, Paterson and Zderad [44,45].

The fundamentalism contemplates the spiritual dimension with the principles of bioenergetics or thermodynamics. In general, "nurses as a group of health professionals are the ones who most request training in this area, their closeness to patients allows them to apply more easily complementary procedures authorized and supervised by medical personnel"[46].

The Nursing Interventions Classification (NIC) includes MACs [47]. Certain universities dispense them as part of the Medicine and Nursing curriculum [48-50]. There are many examples of research carried out on the subject [51-56]. Included in academic spaces for undergraduate and postgraduate training, they directly influence subsequent intervention [57-63].

### Conclusion

"Nursing has lost its soul for serving medicine, technology and evidence-based practice, which are certainly needed; But without the human dimension, this can be destructive. It is essential to preserve the human essence and reposition care within our systems" (health) Jean Watson.

The pedagogical reductionism imposed by medical biology is overcome by the advance and the invitation of the CC to leave the linear and material programming, which persist in the academic educational system.

This review triggers the discussion about the representations, value, knowledge, skills and attitudes assigned to MACs in the nursing curriculum, in teachers, students and practicing nurses. He confirmed his university integration and in the attention of health services (public and private sphere) in different sociocultural contexts.

Its effective introduction into undergraduate and postgraduate training would allow the provision of services with security, legally regulated, facilitating teaching, research and transfer, while protecting the public.

MACs are perfectly located in the PHC model defined by WHO in 1978 in the Declaration of Alma-Ata as "essential health care made available to all individuals and families in a community, by means that are acceptable to them, with their full participation and at a cost that the community and the country can bear", which are well accepted by world citizens.

Economic investments to provide health should be concentrated in PHC. It's smart to waste resources in lower-performing areas with expensive technology. The epidemiological model arrives late in a person's life because he or she is already sick. It is not adapted to the needs of the population that wants to maintain well-being.

The CC and the MAC are coherent with the Philosophy, the intellectual corpus, the values and the virtues of the nurses and they must be present in the ECP, achieving holistic care and caregivers, respectful of the rights of the patients. Let us remember what Virginia Henderson expressed: "if nurses do not do what they should do, less prepared people will do it".

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