## The Universal Conceptualization of Nursing from the Two Nursing Disciplinary Scientific Revolutions

Kan Koffi, RN; M. Sc. (Université de Montréal)

Président, Association Nationale des Infirmiers, Infirmières et Sages-Femmes de Côte d'Ivoire [Nurses & Midwives' National Association of Côte d'Ivoire]

(ANIIS-FCI)

Ph D Student, University of Ottawa, Canada

Contact information: koffikan2000@yahoo.fr

Article updated from *Podium Session 3*, October 9, 2015 Annual Conference of the

Society of Rogerian Scholars,

"Provocative Ideas and Innovations in Unitary Nursing Science",

Chicago IL. (USA) October 8-10, 2015.

### **Abstract**

After the *professional revolution* carried out by Florence Nightingale's (1859/1860) research works, Martha E. Rogers' (1970) works catalysed the *second nursing scientific revolution* (Kuhn, 1970). Synthesis from thematic analysis of Rogers' works and *nursing schools of thought* provides the *three taxonomic foundations* of nursing's *disciplinary paradigm* as a *normal science*. From this *axiomatic new worldview* (Rogers, 1970), the *philosophy of unitary human being* integral with the *pandimensional environment* provides the foundational *philosophy* of the whole *discipline of nursing*. From this *humanistic philosophy*, the *homeodynamic science* explains the *complex* and *dynamic changing nature* of this *unitary* and *whole being*. By the *homeodynamic art of caring*, the *homeodynamician* (the professional nurse or midwife) participates knowingly in the *dynamic* and *innovative change* of *human patterns* that portend human being's becoming. These *three* compelling *paradigmatic components* of the whole *discipline of nursing* describe *the ontosystem of the homeodynamic* which gives taxonomic meaning and significance to each conception available in nursing.

At the *methodological level* of the *ontosystem of the homeodynamic*, the wideness of the *philosophy of unitary human being* from which derives the *homeodynamic science* allows its *dialectic link* with *nursing schools of thought* and their subsequent *theories* and *conceptual models*. These *theories* and *conceptual models* provide the *tools* of all practical inquiries needed for *nursing practice*. This revolutionary *theorization* approach of *nursing praxis* achieves the *universal conceptualization of nursing*.

**Key words**: Martha E. Rogers, philosophy of unitary human being, homeodynamic science, nursing's universal conceptualization.

## The Universal Conceptualization of Nursing from the Two Nursing Disciplinary

### **Scientific Revolutions**

### Introduction

The long lasting effort of the nursing profession remains the understanding of the *constant interaction* between the unitary human being - the single humankind - (Diop, 1955; 1974; UNESCO, 1978) "and the pandimensional environment as an integrated unitary whole" (Koffi & Fawcett, 2016, p. 248; Rogers, 1970). "The integralness of people and environment that coordinate with a [pandimensional] universe of open systems, point to a new paradigm: the identity of nursing as a [normal] *science*" (Rogers, 1990/1994, p. 245): the homeodynamic (Koffi, Menin et Andoh, 2011; Koffi, 2015a; 2015b; 2016; Koffi & Fawcett, 2016). This new worldview leads to development of the homeodynamic paradigm (Koffi & Fawcett, 2016; Rogers, 1970).

The purpose of this paper is to present a discussion of a synthesis of nursing knowledge for *nursing's* 

universal conceptualization as a learned discipline based on the homeodynamic science (Koffi & Fawcett, 2016). From Martha E. Rogers (1970; 1988; 1992)' works linked with the six schools of thought in nursing (Kérouac, Pepin, Ducharme, Duquette et Major, 1994), this synthesis provides nursing's disciplinary matrix (see figure): the ontosystem of the homeodynamic (Koffi & Fawcett, 2016). This analytical synthesis describes nursing's own paradigmatic, scientific and disciplinary identity as a normal science (Kuhn, 1970): the homeodynamic (Koffi, 2015b, 2016; Koffi & Fawcett, 2016). This new paradigmatic identification of nursing' scientific value sustains professional education of nurses and midwives - the *homeodynamicians* - of all levels (Koffi et Leboeuf, 2007; Koffi, Delmas, N'Goran et Andoh, 2010) and scholarly doctoral education of nursing leaders claimed by Martha E. Rogers (1971/1994).

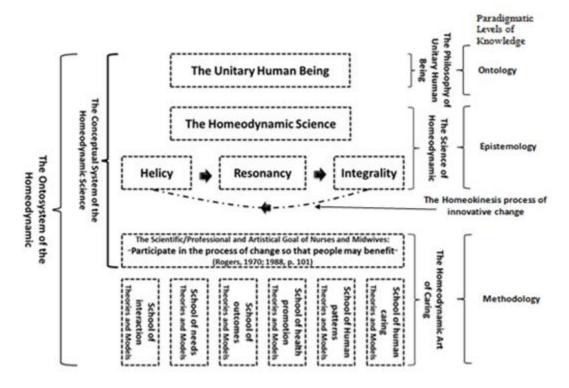


Figure: The Ontosystem of the Homeodynamic and the three paradigmatic levels of knowledge in nursing as a normal science © 2016 Koffi, Kan

The disciplinary matrix of nursing's paradigmatic and scientific meaning Following the first scientific revolution achieved in nursing by the works of Florence Nightingale (1859), this paradigmatic identification of nursing's scientific meaning is the result of the second nursing scientific revolution catalysed by Rogers' works (Koffi & Fawcett, 2016). From these two scientific revolutions in nursing, the ontosystem of the homeodynamic provides the three disciplinary components of nursing as a philosophy, a science, and a profession (Koffi et col, 2011; Koffi & Fawcett, 2016). This universal conceptualization clarifies nursing's disciplinary nature as a normal science, its humanistic scope

and *object*, and its *scientific value* (see figure).

Discussing "the ontology of the discipline", Pamela Reed (1997/2004) mentioned that Rogers' (1970) "vision extended the scholarship of early nursing theorists to thrust nursing forward to be recognized as both a scientific discipline as well as a professional practice" (p. 321). Reed (2004, p. 321) claimed however that it is time "to push back the frontier once again, [...] by proposing a new meaning of nursing". Expecting a wide flourishing of the *homeodynamic* science of unitary human being from the seed planted by Rogers (1970), Barrett (1994, p. 274) recalled that "Rogers charged nurses [and midwives] to go forward with further development of her legacy and proposed the future

demands new visions, flexibility, curiosity, imagination, courage, risk taking, compassion, and an excellent sense of humour". For the best understanding and utilization of nursing's scientific and disciplinary abstract system (Rogers, 1970) by nurses and midwives of all levels of education. I labeled "the ontosystem of the homeodynamic" (Koffi & Fawcett, 2016, p. 249) in a schematic representation (see figure) for a "new understanding [of the broadened and reconstructed view of the whole discipline of nursing]" (Reed, 2004, p. 326) as a *normal science* (Kuhn, 1970; Guba, 1990): the homeodynamic discipline (Koffi, 2015b; 2016; Koffi & Fawcett, 2016).

## Escaping ideological illusions, blinding paradigms, and vertical epistemologies

The human-environment interaction paradigm underpins the two scientific revolutions achieved by Florence *Nightingale* (1859/1860) and *Martha E*. **Rogers** (1970; 1988; 1992). This humanistic paradigm determines the central focus that guides the nursing disciplinary worldview: the homeodynamic paradigm (Koffi, 2015b; 2016; Koffi & Fawcett, 2016). However, in the search for nursing's disciplinary knowledge, "the direction we have taken ... has led us [in the last] times away from our [central focus]" (Newman, 2004, p. 114). Since the elaboration of nursing theories and conceptual models, nurses has been thinking and practicing from optional separate and vertical epistemologies. These separate and vertical worldviews of nursing's same disciplinary central phenomenon of *interest*, revealed numerous

epistemological anomalies (Kuhn, 1970) in *nursing* "*theory-based practice*" (Rogers, Doyle, Racolin & Walsh 1990/1994, p. 303). These limitations and inconsistencies illustrate what the anthropologist Cheick anta Diop (1974) and the philosopher Edgar Morin (1999, p. 1) called ideological "errors and illusions" or "blinding paradigms" (Morin, 1999, p. 8). Blinding paradigms are usually expressed in forms of idea centrism, egocentrism, ethnocentrism, sociocentrism and racism (Morin, 1999).

Edgar Morin (1999, p. 1) critically pointed out that as the previous, the current system of "education is blind to the realities of human knowledge, its systems, infirmities, difficulties, and its propensity to error and illusion". Morin (1999) suggested that the study of the nature of knowledge used in education should "prepare the mind to confront the constant threat of error and illusion that parasitize the human mind" (p. 1). In nursing, this requirement points out the necessity of teaching philosophy of science (Kuhn, 1970; Klemke, & al, 1988; Guba, 1990) in *nurses' doctoral* education programs. Rogers (1971/1994) underlined this need by indicating that "education for *nursing's* scholars and scientists requires that doctoral programs have as their core the critical and creative study of the [homeodynamic science]". The compelling disciplinary paradigm of the homeodynamic science guarantees a humanistic epistemology necessary for the *quality* of nursing's *professional* services to humankind (Rogers, 1970).

## Beyond nursing's scientific and disciplinary requirements

Beyond nursing's disciplinary requirements, the *philosophy of unitary* human being provides a background for a humanistic epistemology needed to pattern *humanistic relationship* among people around the world (Phillips, 1994a; 1994b). The current economic globalization era treated by coming back ideological illusions needs humanistic relationship for peaceful interactions between the diversity of human cultures. Referring to peace, Rogers (in (Rogers, & al, 1994) believes the homeodynamic paradigm provides a philosophical and scientific *frame of* reference for humanistic relationship among people in constant interaction with their environmental world.

Rogers (in Rogers et al, 1994, p. 301) claimed that "nurses [and midwives have something important to contribute to people [and indicated nurses and midwives] are going to have to deal with complexification". The *homeodynamic science* seeks "to make intelligible" (Rogers, 1970, p. 83; 1988/1994) the *complex interaction* of people and their pandimensional environment they live in. The unitary paradigm of the *homeodynamic science* - the humanistic science of interaction enables nurses and midwives around the world to understand the current complex evolutionary crises of humanity since the 20th century (Morin, 1999). Nurses and midwives are in right professional and social positions to advocate and empower people for humanistic *relationship* that may prevent growing clashes of cultural interactions happening all around the world since the 20<sup>th</sup> century and the entering of the 21<sup>st</sup> century (Morin, 1999; UNESCO, 1999).

# Humanistic advocacy to free people from ideological illusions in the 21<sup>st</sup> century

"People are our business. They are why we exist. The future is something we create" (Rogers, 1980/1994, p. 279).
"Nurses' long-established concern with people and the world they life in is a natural forerunner of an organized abstract system encompassing people and their environment" (Rogers, 1990/1994, p. 245). Since her original worldview, Martha E. Rogers (1970, p. 87) clearly stated that "nursing is a humanistic science" dedicated to "understanding human beings and the world in which they live" (Rogers, 1970, p. 111).

Concomitantly, since the publication of the book Seven Complex Lessons in Education for the Future, the French philosopher Edgar Morin (1999) adopted the *complex thought* embedded in Rogers' (1970) philosophy of unitary human being, as an anthropological epistemology. The complex thought promotes *humanistic behaviors* for sustainable interactions between all human societies in the new globalised world. For this aim, Morin (1999) claims the *human condition* as an essential subject - an *historical* and *philosophical* background - of all levels of education in any discipline. Recommending the teaching of the *human condition* to *new* generations, Edgar Morin (1999, p. 2) pointed out that "the planetary scale of the future of humankind is a key reality ignored in education". He suggested that the history of humankind's evolution on this planet should be scientifically taught from its beginnings "without obscuring the ravages of oppression and domination in the past and present, and how all parts of the world have become

interdependent. ... The complex configuration of planetary crisis [since] the 20<sup>th</sup> century should be elucidated to show all human beings now face the same life and death problems and share the same fate" (Morin, 1999, p. 2).

## Teaching the history of humankind and the human condition in nursing curricula

As Rogers (1992, p. 27) published a futuristic vision about "Nursing science and the space age", Edgar Morin (1999) underlined humankind's earth identity and its human condition that should be taught, from the past and present planetary era of humankind's evolution. Analysing the history of humankind through paleontological discoveries and studies, the famous scientist Cheikh Anta Diop (1955; 1974) demonstrated the *uniqueness* of *humankind's origin* (UNESCO, 1978).

Based on the discoveries of Cheikh Anta Diop (1955; 1974), the UNESCO Conference held in Cairo (Egypt) in 1974 has scientifically established that all people on the five continents of the terrestrial globe has the unique common ancestry born under the tropics in the region of Kenya in Africa (Diop, 1955; 1974; UNESCO, 1978). So, the *first human civilization* took birth from the *common primary* ancestries of humankind who were black people, because of the tropical birth place under the ultraviolet rays of the sun. The Conference Committee "decided to present the works in eight volumes, each containing some 750 pages, with illustrations, photographs, maps and line drawings" (UNESCO, 1978, p. 6).

The conclusions of the Conference scientifically demonstrated

and established that all *people* in the *world* and all *human cultures* have the same common origin from *one common ancestry* born in *Africa*, in the *region of Kenya* (See video:

https://www.youtube.com/watch?v=YU8 Nc8SJ12M). Some descendants of this common primary black ancestry left Africa to the rest of the world. These descendants who left the original continent for the *cold climate* on the over continents gave birth to white skin people by evolutionary adaptation during the glaciation period of 100 000 years (Diop, 1955; UNESCO, 1978). The evolutionary differentiation of human civilization gave birth to the different languages and cultures disseminated on the five continent of the world (Diop, 1955; 1974; UNESCO, 1978). Climatic adaption to tropical and cold regions explains the black and white skins of the same humankind in geographic different regions of the world (Diop, 1955; 1974; UNESCO, 1978).

All human cultures called today by some ideologists from the 16<sup>th</sup> century as races at the beginning of slavery trade, originate from the common black ancestry of humankind (Diop, 1955; 1974; UNESCO, 1978). From the common *original human civilization*, the *ancient Egyptians* who remained all *black people* because they stayed at the ancestral birth place on the original continent under the ultraviolet rays of the tropical climate, first developed *philosophy*, *religion*, *astronomy*, *science*, *mathematics*, etc. (Diop, 1955; 1974; UNESCO, 1978).

Martha E. Rogers (1970, p. 10) mentioned that "*ancient civilization* arose and prospered in the Nile River's valleys and irrigated the lands. For 2500

years, from 3000 B.C. to 525, Egypt had a single civilization of remarkable stability". *Egyptian pharaohs* who were all **black people** "produced the world's first known genius of historic times" (Rogers, 1970, p. 10; Diop, 1955; 1974; UNESCO 1978). "Imhotep Vizier to King Djoser in the third dynasty became celebrated as an astronomer, architect, writer, sage, and physician. He produced the vast monument we know today as the *Step Pyramid*. Egypt cult of the dead and her yet unsurpassed process of embalming furthered the extraordinary development of *medicine* and *surgery*" (Rogers, 1970, p. 10). All Greek first philosophers, scientists and mathematicians as Herodote, Strasbon, Thales, Pythagor, Democrite, Aristote, Euclide - they said it themselves - went to Egypt to learn with black Egyptian pharaohs who first developed all the knowledge used today in modem world (See video at:

https://www.youtube.com/watch?v=3nxt nP5Sjm4). In *modern nursing's history* Patricia Donahue (1996, p. 200) reported that Florence *Nightingale's* "*travel* took her to *Egypt*" while studying various institutions in her quest to become a nurse.

## Preventing ideological treats in nursing education in the 21<sup>st</sup> century

Evocating the past racial segregation era in the history of humanity, Martha E. Rogers (1994) recalls that in 1933 when she entered nursing school at Knoxville General Hospital, she had classes together with black nursing students. Rogers (1994, p. 14) indicated "they had to sit in the back of the room and couldn't talk", because they were considered inferior beings by the absurd ideological polygenetic theory prevailing

at that passed era (Diop, 1955; 1974; UNESCO, 1978). During that out of date racial segregation era, black nursing student were allowed to be educated and succeed studies.

Today in 2016, after slavery abolition, racist behavior banning by laws, and two presidential mandate of a black President in one North American country, some black students are steel facing segregationist behaviors from faculties in University of Ottawa in Canada. Black doctoral students are being discriminated within the oral evaluation session of comprehensive exam, while having had success in the writing session of the same exam/questions. And yet, since 1974 the UNESCO (1978) has scientifically established the falseness of racial intellectual differentiation, by clearly demonstrating that the color of *human* skin is just a result of geographic and climatic adaptation (Diop, 1954; 1974; UNESCO, 1978).

Before paleontology studies, when human anthropology have not kite evolved until the 1974 UNESCO's Cairo Conference, they were two theories that kept confronting one another about the origin of humankind (Diop, 1974). The *monogenetic* (or monocentric) theory was defending one source/origin of humankind. A second theory, the *polygenetic* (or *polycentric*) theory was defending that humankind finds different origins from the different continents of the world. This polygenetic (or polycentric) theory was defending inequality between supposed different races of humankind, to support the ideological and absurd trade of slavery (Diop, 1974). However, like Martha E. Rogers (1970, p. 55) qualified "the unidirectionality of life [as] an invariant

one-way trend", Cheikh Anta Diop (1955) on behalf of his *paleontological* studies, recalls in one of his latest video interviews - indicated above - that nature does not create the same being twice. So to date, the polygenic theory of humankind's origin cannot no longer defend and support racism and segregationist behaviors. Cumulating scientific evolutionary information made it clear that humankind has only one common origin in the region of Kenya on the *African continent* (Diop. 1955; 1974; UNESCO, 1978). On this basis of the discoveries discussed at the **1974 Conference** held on *The Peopling* of Ancient Egypt, Cheikh Anta Diop's (1955) publications catalysed the rewriting of the whole history of the World. Since that Conference. Cheikh Anta Diop (1955) has been recognized by the *UNESCO* (1978) as the *greatest* scientist of the 20th century.

As Edgar Morin (1999) recommended teaching the history of the human condition for a sustainable *future*, "Martha E. Rogers, the power of the name [as] "advocate, charisma, commitment, creator, visionary" (Phillips, 1994a, p. v), nursing's "20<sup>th</sup> century leader" (Fitzpatrick, 2014, 327) always underlined that nurses and midwives' central scientific and professional phenomena of concern are "people and their worlds" (Rogers, 1992/1994, p. 259). In this 21<sup>st</sup> century and beyond, it behoves to homeodynamicians (nurses & midwives) to hold their *professional* position to advocate for humanistic *relationship* among people for the betterment of humankind all around the world (Rogers, 1980/1994). The homeodynamic science provides them the expected basic *humanistic paradigm*  needed to contribute to design "socially oriented goals relevant to the future" (Rogers, 1970, p. 133) for the betterment of humankind. If nursing is a humanistic "science and an art" (Rogers, 1970, p. 121), its worldwide practice should be guided by a scientific and disciplinary compelling universal conceptualization (Rogers, 1970; 1981; 1983; 1985): the homeodynamic discipline (Koffi et col, 2011; Koffi, 2015a; Koffi & Fawcett, 2016).

#### **Conclusion**

The two nursing scientific revolutions reflected in Nightingale's and Rogers' works in the 19<sup>th</sup> and 20<sup>th</sup> centuries were discussed in an earlier paper (see Koffi & Fawcett, 2016). These two historical revolutionary research works of Nightingale (1859/1860) and Rogers (1970) are grounded in the same paradigm of human-environment interaction, identified as the homeodynamic paradigm. This scientific worldview fostered the understanding of the *mutual* and continuous interaction between the human being and the pandimensional environment (Nightingale, 1859; Rogers, 1970). From this humanistic paradigm, the philosophy of unitary human being established nursing's compelling disciplinary worldview from which derived the *homeodynamic science*. From this disciplinary worldview the homeodynamic paradigm organizes nursing's three taxonomic levels of knowledge as a philosophy, a science and a profession: the ontosystem of the homeodynamic (see figure). Through this disciplinary matrix (Rogers, 1970), by deductive and dialectic reasoning, the wideness of the philosophical scope and the disciplinary spectrum of the

homeodynamic science allow an alternative use of nursing schools of thought and their derived theories and conceptual models. This fuller readable picture of the whole discipline of nursing as a normal science determines the universal conceptualization which clarifies the quality of "nursing science-based practice" (Rogers & col, 1990/1994, p. 303; Alligood, 2014) for the betterment of stakeholders.

Related to the societal relevance of the homeodynamic paradigm, Rogers (1970, p. 87) indicated that "the knowledge encompassed by nursing science is not necessarily of meaning only to nurses". Beyond nursing's disciplinary purpose, the humanenvironment interaction paradigm enlightens the humanistic inquiries of humankind's complex cosmological venture (Rogers, 1971/1994). The philosophy of unitary human being which underpins the *complex thought*, provides a basic interdisciplinary *framework* for the international debate commanded by the UNESCO (1999; Morin, 1999) about the critical sustainable evolution of humankind integral with the pandimensional universe (Rogers, 1970; United Nations, 1992; Reeves, 2014).

For the fulfillment of nursing's disciplinary and societal mission through the dissemination of the *homeodynamic science* of unitary human being, the *Society of Rogerian Scholars* (SRS, 2010) might provide opened *scientific international forums*, by widening and decentralizing its annual conferences. Biennial or triennial international scientific meetings could be scheduled alternatively on the five continents. Such alternative continental hosting meetings could "provide [real worldwide]

educational forums on [the philosophy of unitary human being, the homeodynamic] science "(SRS, 2010, home page) and the homeodynamic art of caring: the universal conceptualization of the homeodynamic science and discipline.

### References

- Alligood, M. R. (2014). The Nature of Knowledge needed for nursing practice. In *Nursing Theory Utilization & Application*. Ed 5 (p. 2-12). St. Louis: Elsevier Mosby.
- Barrett, E. A. M. (2004). What is nursing science? In P.G, Reed., N. G. Shearer., & L. H. Nicoll (Eds.) *Perspectives on nursing theory* (Fourth edition, pp.. 627-640). Philadelphia: Lippincott Williams & Wilkins.
- Burns, N. & Grove, S. K. (1997). *The* practice of nursing research:
  Conduct, critique, and utilization (3<sup>rd</sup> ed.). Philadelphia: Saunders.
- Diop, C. A. (1955). *Nations Nègres et Cultures* [Ancient African nations and cultures]. Paris : Présence africaine.
- Diop, C. A. (1974). *Conférence d'Égyptologie du Caire* en 1974.
  Vidéo [Cairo Egyptology
  conference held in 1974, Video].
  https://www.youtube.com/watch?
  v=5B2MXx25CGc.
- Donahue, M. P. (1985). Nursing, the finest art: An illustrated history. St Louis: C. V. Mosby.
- Donahue, M. P. (1996). *Nursing, the finest art: An illustrated history* (2<sup>nd</sup> ed.). St Louis: Mosby-Year Book.
- Fawcett, J. (2003). The nurse theorist: 21<sup>st</sup> Century Updates Martha E. Rogers. *Nursing Science Quarterly*, 16, (1) 44-51.
- Fitzpatrick, J. J. (1994). Rogers' contribution to the development of nursing as a science, In V. M. Malinski & E. A. M. Barret (Ed.) *Martha E. Rogers: Her life and her work* (p. 322-329).

- Philadelphia : F. A. Davis Company.
- Guba, E. G. (1990). The alternative paradigm dialog, In E. G. Guba (Ed.) *The paradigm dialog* (pp. 17-27). London: Sage.
- Kérouac, S., Pepin, I., Ducharme, F., Duquette, A. & Major, F. (1994). *La pensée infirmière*. [Nursing thought]. Laval, Quebec, Canada: Editions études vivantes.
- Klemke, E. D., Hollinger, R., & Kline, A. D. (1988). *Introductory Reading in the Philosophy of Science*. Promeutteus Books ,New York.
- Koffi, K. (2016). From the

  Homeodynamic Science of
  Unitary Human Being, Route to
  the Universal Conceptualisation
  of Nursing Praxis. Paper
  presented at the 2016 Annual
  joint Conference of the Society of
  Rogerian Scholars and the
  International Association for
  Human Caring, Wyndham Hotel,
  Boston Massachusetts, USA.
- Koffi, K. (2015a). Distinguer la pratique des soins infirmiers de la pratique de la médecine : un impératif de la démarche qualité [Distinguishing nursing practice from practice of medicine: A requirement for quality process improvement]. In *Démarche qualité dans les services de soins de santé ; un défi en Afrique*, (p. 141-174). Paris : Les Editions Harmattan.
- Koffi, K. (2015b). What about the Science of Unitary Human Being, the Second Nursing Scientific Revolution. Paper presented at the 2015 Society of Rogerian Scholars Conference Provocative

- Ideas and Innovations in Unitary Nursing Science, Lewis University; Oak Brook Campus.
- Koffi, K., & Fawcett, J. (2016). The Two Nursing Disciplinary Scientific Revolutions: Florence Nightingale and Martha E. Rogers. *Nursing Science Quarterly*, 29 (3), 247-250.
- Koffi, K., Delmas, P., N'Goran, Y. A & Andoh, J. (2010). La recherche infirmière pour le développement de l'approche qualité totale en soins infirmiers. *Recherche en soins infirmiers*, (100), 115-123.
- Koffi, K., & Leboeuf, D. (2007). Les compétences infirmières en recherche scientifique, un standard universel. *Soins*, (717), 47-50.
- Koffi, K., Menin, M., & Andoh, A. T. (2011). Efficacité d'un programme d'intégration de la vaccination dans les soins (PIVS) sur la réduction de la fréquence des occasions de vaccination manquées en Côte d'Ivoire [The efficacy of integrating vaccination in primary health care program to prevent missed opportunities of vaccination in ...]. Recherche en soins infirmiers, 9 (106), 86-91.
- Kuhn, T. S. (1970). *The structure of scientific revolutions* (2<sup>nd</sup> ed., enlarged). Chicago: The University of Chicago Press. Originally published in 1962.
- Morin, E. (1999). Seven complex lessons in education for the futur. UNESCO.
- Newman, M. A. (2004). Nursing's theoretical evolution. In Pamela G. Reed; Nelma, G. Shearer & Leslie, H. Nicoll Ed.

- Perspectives on Nursing Theory, (p. 113-120). Philadelphia: Lippicut Williams & Wilkins.
- Nightingale, F. (1859). *Notes on nursing: What it is and what it is not*. London: Harrison.
- Phillips, J. R. (1994a). Foreword, In V. M. Malinski & E. A. M. Barret (Ed.) *Martha E. Rogers: Her life and her work* (pp. 107-113). Philadelphia: F. A. Davis Company.
- Phillips, J. R. (1994b). Rogers'
  Contribution to Science at Large,
  In V. M. Malinski & E. A. M.
  Barret (Ed.) *Martha E. Rogers: Her life and her work (p. 107-113)*. Philadelphia: F. A. Davis Company.
- Reed, P. G. (2004) Nursing: The ontology of the discipline, In Pamela G. Reed; Nelma, G. Shearer & Leslie, H. Nicoll Ed. *Perspectives on Nursing Theory*, (p. 321-327). Philadelphia: Williams & Wilkins; Originally published 1997.
- Reeves, H. (2014). Pour l'évolution de la notion d'humanisme. *Billet de Bonheur. Le Point.fr* Publié le 06/04/2014 à 11:12 Modifié le 06/04/2014 à 11:13.
- Rogers, M. E. (1970). An introduction to the theoretical basis of nursing, Philadelphia: F. A. Davis.
- Rogers, M. E. (1981). Science of unitary man: A paradigm for nursing. In G.E. Lasker (Ed.), Applied systems and cybernetics, 4, System Research in Health care, biocybernetics and ecology (pp.1719-1722). New York: Pergamon.
- Rogers, M. E. (1983). Science of unitary human beings: A paradigm for

- nursing. In I. W. Clements & F. B. Robert(Eds.), *Family health: A theoretical approach to nursing care* (p. 219-227). New York: Willey.
- Rogers, M. E. (1988). Nursing science and art: a prospective. *Nursing Science Quarterly 1* (3), 99-102.
- Rogers, M. E. (1994). Nursing: Science of Unitary, Irreducible, Human Beings: Update 1990. In V. M. Malinski & E. A. M. Barret (Eds.) *Martha E. Rogers: Her life and her work* (pp. 244-249). Philadelphia: F. A. Davis. Originally published in 1990.
- Rogers, M. E. (1994). Nursing science and the space age, In V. M. Malinski & E. A. M. Barret (Eds.) *Martha E. Rogers: Her Life and her Work (pp. 256-267)*. Philadelphia: F. A. Davis. Originally published in 1992.
- Rogers, M. E. (1994). Nursing science and art: A prospective. In V. M. Malinski & E. A. M. Barret (Eds.) *Martha E. Rogers: Her Life and her Work* (pp. 239-243). Philadelphia: F. A. Davis. Originally published in 1988.
- Rogers, M. E. (1994). Ph. D. in Nursing, In V. M. Malinski & E. A. M. Barret (Ed.) *Martha E. Rogers:* her life and her work (p. 97-102). Philadelphia: F. A. Davis Company. Originally published in 1971.
- Rogers, M. E., Doyle, M. B., Racolin, A. & Walsh, P. C. (1994). A conversation with Martha E. Rogers on nursing in Space, In V. M. Malinski & E. A. M. Barret (Ed.) *Martha E. Rogers: her life and her work* (p. 296-305). Philadelphia: F. A. Davis

- Company. Originally published in 1990.
- Society of Rogerian Scholars. (2010). http://www.societyofrogeriansch olars.org/.
- UNESCO. (1999). Préface du Directeur general de l'UNESCO. Dans Edgar Morin, Les sept saviors nécessaires à l'éducation du futur. UNESCO: Seuil.
- UNESCO. (1978). The Peopling of
  Ancient Egypt and the
  Deciphering of Meroitic Script.
  Proceedings of the symposium
  held in Cairo from 28 January to
  3 February, 1974. Paris:
  UNESCO.