

Art And Technology: Revealing Human Caring In Nursing

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Abstract : Contemporary and futurist views of nursing and health care are immersed in technological developments, impacting the clear illuminations of human health and well-being. While art and technology appear to be distinct fields, they are also uniquely related. Art and technology reveal what seemingly is true through artistic expressions and through impressions reached through technological achievements. In nursing, both art and technology are means that nurses can know persons more fully as persons. The aim of this discussion paper is to illuminate the concepts of art, technology, human caring, and nursing practice. Furthermore, this treatise addresses the value of the arts and technologies as processes through which the practice of Nursing can function. Both provide greater certainty to nursing practice, grounded in empirical data, e.g. the recognition of human anatomical parts through artful representations, and to communicate human function, and composition. Healthcare technologies, e.g. imaging instruments, and laboratory procedures provide data which essentially communicate the composition and function of as reflected in the data representations. This is the relatedness of art and technology encompassing human caring in the practice of nursing.

Index Terms : Art, aesthetics, technology, healthcare, nursing, human

1. INTRODUCTION

There is a strong link between art, technology and human caring. Entrenched in this link is the interrelationship between the expected objectification of technologies, and the subjectivities envisaged in human caring as revealed through art. It is critical to nursing and health care that the world of human caring is studied through a variety of lenses including disciplinary and "extra-disciplinary" viewpoints. Today, contemporary and futurist views of nursing and health care are immersed in colossal technological developments often blurring illuminations of the value of knowing persons as caring within the human health care world. Art is an essential component of human life. Self-expression through language, music, and imagery is an essential part of being human (Thistle, 2012). In understanding and appreciating art, Aristotle posits the fourfold causes to objectify. These are *causa materialis*, *causa formalis*, *causa finalis*, and *causa efficiens*. When these causes are exploited to the fullest, these bring forth the essence of its construction to be known. Therefore, a thing (i.e. art), according to Aristotle is best understood by looking at its end, purpose, or goal (Burton, 2017). In his book, *The Question Concerning Technology*, the German philosopher Martin Heidegger (1977) accentuated technology as the means to an end, in which technology is realized as not instrumental and having no time. Any form of technology connotes its quintessential form from the moment it is designed. In nursing, technology becomes aggressive and provocative in its functions in order to illuminate thereby alleviating human conditions.

1.1. Art and Technology Within Nursing

Art and technology appear to be distinct concepts especially within the discipline of nursing. Nurses understand that in a nursing care process situation, art and technology seem to co-exist in that through art and its expressions, nurses can know persons more fully as person. The theory of Technological Competency as Caring in Nursing (Locsin, 2005, 2016, 2017) grounds this expression.

However, how does art and technology manifest the person as whole and complete in the moment? Through technologies in human health care, that which is hidden or concealed can be revealed. For example, the arterial blood pressure is an abstract term that remains concealed until it is revealed by measuring the diastolic and systolic blood pressures using the sphygmomanometer. Only then is the arterial blood pressure known as real. Similarly, hidden within the abdomen are the gastrointestinal tracts. These structures can only be supposed as existing, perhaps as reference to food digestion and eventually discarded as byproducts. What happens with food must be the function of some structures within the abdomen. However, how do we know what it is, and that it is until it is revealed? These organs remain hidden in the abdomen and remains so until a break in the skin and muscles follows in dissections. Such was how da Vinci and Michelangelo have so clearly delineated the hidden structures of the human anatomy. Artful representations of something hidden meet the definition of art, ably communicating what which it has revealed and recognized through a specific terminology. How can art and technology reveal and explain human caring concepts in nursing and its practice?

2 PURPOSE

The aim of this paper is to illuminate the concepts of art, technology, human caring, and nursing practice. Furthermore, the paper addresses the value of the arts and technologies of human caring in the practice processes of Nursing.

3 BACKGROUND OF NURSING

Happiness is the supreme good and the goal of life, as Aristotle claimed. In the movie, *The Greatest Showman* (2017), P.T. Barnum explains that the noblest art is that of making others happy. In healthcare, nurses, have ultimate ends focusing on four-dimensional aspects of human care –

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preventive, curative, rehabilitative, and palliative. "Preventive care focuses on preventing disease and illness and promoting overall general health and well-being. Curative care involves treatment intended to alleviate the symptoms or cure a current medical condition. In rehabilitative care, nurses assist patients with temporary and long-term disabilities or chronic Palliative care involves the care for patients who are at the end of life due to an incurable medical condition" (www.healthsciencedegree.com, n.d.) Nursing continues to emphasize the process of knowing persons as viewing human beings as biological in nature and are comprised of organ systems such as circulatory systems, cardiac systems, etc. This view perpetuates the understanding of nursing as founded on knowledge of human beings as composite parts, that knowing persons as human beings is knowing their composite parts and subsequent nursing functionalities is geared towards completing them in order to make wholes again. Such a view makes nurses think that a human being with legs like the Paralympics star Oscar Pistorius of South Africa, or the former Mrs. Paul McCartney with an artificial leg as unqualified persons. In attempting to further understand the realities and truths of who and what are human beings, and how the processes of Nursing facilitate knowing persons when grounded in the positivist/empiricist philosophical perspective, technologies of health care oftentimes provide the liely opportunities to process knowing persons from moment to moment, and their realities and truths of being persons. The traditional and popular nursing is generally predicated on knowing the person as object using sensory data - allowing the nurse to know human beings as composite parts. Instead of perpetuating this viewpoint, contemporary and future nursing ought to provide occasions for nurses, practitioner, administrators, educators and nurse researchers to "think nursing" in their teaching-learning activities and in their research, and that nursing has a substantive body of knowledge focused on persons as participants in their care, rather than as objects of care (Locsin, 2005). Nursing is a science and an art, and as an art, nursing expresses the humanness in practice. How is the art and science of nursing understood from a disciplinary and professional practice view? Conceptions of nursing as art have extended debates about their purpose, existence and role, particularly in appreciating the substantive aspect of nursing. Nursing as a fine art, the practice of nursing arts as skills and knowledge, and the expression of nursing as artistic and aesthetic ways are popular versions of these conceptual framing. Arguably the view that our practice of nursing, although grounded in the empiricist views, focus more on the natural sciences such as anatomy and physiology, aspects of the parts are artfully represented as artwork to communicate to others what are internal organs and the systematic process of circulation.. In the artful expression of knowing persons as caring and as participants in their care rather than as objects of our care, clarifying this role becomes significant. This debate includes referencing philosophies of science from a history of science view of logical positivism, to the aesthetics of knowing and understanding the other within a postmodernist and human science views. Furthermore, this discussion paper aims to demonstrate that nursing art cannot be separated from nursing science and that the appreciation of nursing as art and science is appropriate, critically-linked, contemporary and innovative. Like other health care professions such as medicine that is learned from the view of persons as composite parts (e.g., as

illustrated by the art of da Vinci - the visualization of the anatomical parts through dissection), Nursing has also focused on knowing of persons through sensory data by using technologies of health care. However, contemporary and futurist views of nursing as grounded in a human science perspective require have explored the contemporary all-encompassing nursing as a revitalized and refocused study of appreciating persons as persons, who are more than and different from the sum of their parts. Nursing practice is appreciated as the process of knowing persons as caring - who are participants in their care rather than as objects of our care.

4 PHILOSOPHICAL VIEWPOINTS

Positivism is a philosophical view that declares authentic knowledge as scientific knowledge, if such knowledge only comes from a positive affirmation of facts through a rigorous scientific method. Logical positivism is best known for the verifiability criterion of meaning, or verificationism. In one of its earlier and stronger formulations, this meaning proposes "cognitively meaningful" only if there is a finite procedure for conclusively determining whether it is true or false. An intended consequence of this view, for most logical positivists, is that metaphysical, theological, and ethical statements fall short of this criterion, and so are not cognitively meaningful. Empiricism is a theory of knowledge emphasizing the role of experience, especially sensory perceptive experience in the formation of ideas, while discounting the notion of innate ideas. In this philosophy of science, those aspects of scientific knowledge that are closely related to experience, especially as formed through deliberate experimental arrangements is a fundamental requirement of the scientific method, that all hypotheses and theories must be tested against observations of the natural world, rather than resting solely on a priori reasoning, intuition, or revelation. Hence, science is considered to be methodologically empirical in nature. Human science, however is a term that describes the investigation of human life and activities by a rational, systematic and verifiable methodology, acknowledging the validity of both data derived by impartial observation of sensory experience (objective phenomena) and data derived by means of impartial observation of psychological experience (subjective phenomena). Stuckey & Nobel (2010) explored the relationship between engagement with the creative arts and health outcomes. Accordingly, while there is evidence that art-based interventions are effective in reducing adverse physiological and psychological outcomes, the extent to which these interventions enhance health status is largely unknown (Stuckey & Nobel, 2010).

5 UNDERSTANDING ART

The word art is derived from Greek words "ars" and "techné" meaning a skilled activity and as the course of words such as artifact or technique. Art, as cited by Martinique (2016) has been described by philosopher Richard Wollheim as 'one of the most elusive of the traditional problems of human culture'. Plato, for instance, criticized art for failing to depict the eternal ideal realities he referred to as "forms" or "ideas". Plato said that art is "mimesis" or "imitation". On the other hand, Aristotle traces art back to the love of imitation and recognizing likenesses which characterizes humans (Martinique, 2016). To Aristotle, art is not copying. Art, as defined, is the power of performing certain actions as acquired

by experience, study, or observation. Martinique (2016) explained that to Tolstoy, 'Art is a human activity, consisting in this, that one person consciously, by certain external signs, conveys to others feelings he has experienced, and other people are affected by these feelings and live them over in themselves'. It is composed or created with conscious artistry. However, artwork, on the other hand, is the making of artistic objects. An artwork requires some amount of artistic capacity to bring about meaningful or pleasing craft. In nursing, Chinn (1994) declared that "art is not something that stands in opposition to science: it is part of science – indeed, it is part of all human experience. Art expresses what words usually fail to express. Art brings wholeness to human consciousness" (p. 20). Art arises from the immediate embodied grasp of the situation, the tools or instruments with which the artist works, and the intuitive knowing of what is to be created in the act. Original art/act arises from a non-discursive, aesthetic knowing that is unique to the moment (Chinn, 1994, p. 24-25).

6 ARTS AND NURSING EDUCATION

Nursing education and arts are intertwined. In fact, nursing education as a social science necessitates appreciation of the arts. In the Philippines, appreciation of the arts, under the humanities, is an important new course being offered as part of the new general education courses starting school year 2018 - 2019. Arts and humanities, according to Moorman & Hensel (2016), are essential tools in building clinical reasoning and cultural sensitivity in nursing education when they conducted visual thinking strategies as art-based teaching methodology in nursing education. Arts, when integrated in nursing courses, can ensue more impactful learning outcomes. Reading (Moorman & Hensel, 2016) influences discernment and ethical respect for others. Notably, arts can be a tool in teaching observational skills and attention to details among nursing students. Canterbury Christ Church University offers course called Holistic Health Promotion Course that examines how nurses can use arts to enhance the healthcare experience for both staff and patients. In this way, mental health and well-being are promoted (Robinson, 2007). This learning experience broadens the participants' perceptions of mental, emotional and spiritual health promotion. The course, as specified by Robinson (2007), is offered among nursing students in their final year in Adult and Child Nursing. Nurse educators employ several effective means to ensure that learning takes place among nursing students. This attests to the various teaching strategies and creative methodologies that are applied whenever they teach their course contents. They value arts as a tool in delivering instruction. It is instituted in the traditional brick classroom instructional methods. To be able to expand knowledge in nursing education, Wikstrom (2011) reviewed articles on studies in which paintings complemented by a pedagogical structure allowed students to observe situations relevant to nursing. Visual art in nursing education (Wikstrom, 2011) can add a new dimension to student's experiences. To prepare nursing students in the actual professional work environment is a collaborative effort of all stakeholders in the educational system. When nursing students are prepared and adequately trained, it would be easier for them to practice both the art and science of nursing practice. The pedagogical approaches provide foundation to the ways nursing students are being molded as future active human capital in the field of nursing. The art of teaching known as pedagogy, utilizes various

techniques to enhance student learning such as the arts. Arts-based learning approach nurtures cognitive and emotional learning (Nguyen, Miranda, & Donald, 2016) suggesting that arts-based teaching-learning approaches revitalize student learning and should be integrated into the curricula. Through the arts, deep inquiry and different learning styles are facilitated (Nguyen, Miranda, & Donald (2016). When immersed in artistic activities, nursing students are not only taught creative thinking but also, reflective thinking. Creative thinking is well-established when ideas are translated into tangible outcomes such as artworks. Critical thinking is enhanced through over meticulousness in finding and enhancing art details such as use of perfect color combinations. Similarly, reflective thinking provides the nursing students a deep contemplation and understanding of things and situations translated through the arts. Not only nursing students can benefit from arts and other creative works. The nursing staff can also benefit from various forms of art-related activities hence the development of programs to suit to their specific needs. The use of aesthetic learning interventions can be embedded in such development program for staff. Turton et al. (2018) explained that aesthetic learning interventions are helpful on palliative care and end-of-life staff development programs. Evaluating contextual factors to identify the link between the experience of the program and impact on the health care professionals to contribute in the improvements in palliative care was recommended. In foster care of young people, Loughheed and Coholic (2018) described the development of a 10-week arts-based mindfulness group program for youth aging out of foster care. Arts-based approach was utilized. Convergent facets of the group including its strengths-based approach, social understanding of resilience, and holistic approach to facilitating mindfulness were identified.

7 APPLICATIONS OF ART IN HEALTHCARE

Children are fascinated with various forms of arts. Play therapy, for instance, utilizes forms of expressive art, such as hand painting and other creative modalities to express and or communicate their experiences. Play is indeed a universal language of children. It is regarded as both diagnostic and therapeutic. In a study conducted at a Swedish hospital, Britt-Maj Wikström (2005) in explaining the findings discussed that expressive arts utilized in play therapy are media for communication particularly among hospitalized children. It was revealed that children can easily express fear, longing, and powerlessness through play. Furthermore, it was posited that children must be helped to express their feelings when hospitalized – this being most efficiently exhibited through the arts (Britt-Maj Wikström, 2005). Arts, therefore, are effective devices to facilitate care among children because then they are immersed in the arts, they become actively engaged in their care. Robinson et al. (2018) investigated whether parent's anxiety decreased after coloring while their child in surgery using a block randomized clinical trial. Pre-drawn art templates were used in coloring of parents for 30 minutes in the pediatric surgical waiting area. Similarly, persons in chronic pain, were found to be benefited from the therapeutic effects of the arts. Many research studies have provided evidence that art as a distraction mechanism reduces pain among patients post-surgery (Locsin, 1981), of patients with cancer and not only hospitalized children. Janicke (2015) employed a grounded theory study to uncover significant

concepts in the artistic statements of patients with chronic diseases through posted artworks. For example, graphic illustrations by drawing was used as a tool in assessing pain. The choice of colors used also revealed and further explored significant meanings. Spiritual distress was also revealed through graphic illustrations. Emerging concepts from the study became the bases of artistic nursing interventions. Effective communication of pain, meaningful distraction, alleviation of spiritual distress, and creation of artistic product can be achieved through arts. With the emerging concerns and issues on mental health nowadays, Jensen and Bonde (2018) reviewed several studies related to participation in arts activities and clinical arts interventions and found out whether these were beneficial for people with mental health and physical health problems. It was suggested that participatory arts activities and clinical arts interventions be instituted in health and social settings as non-medical interventions to promote public health and well-being. In recent years, acute hospitals must meet the increasingly complex needs of older people who experience multiple comorbidities (Ford, 2018). In the care of older persons, art-based interventions can positively influence health outcomes. Ford (2018) found out that continued focus on person-centeredness and openness to creativity demonstrated positive impacts for patients, families, staff and the ward environment. She explained that arts contribute much for older persons as these can influence patient-centered care and outcomes.

8 CONCLUSION

Several studies have been done which provided empirical evidence of valuing the arts and technologies revealing human caring in nursing. Some examples of this revelations were illustrated particularly on how the arts (in any forms) can alleviate human sufferings and leverage human conditions as a whole. The integration of arts in the care of human persons has been proven to positively influence various aspects of human care, from the time clients become susceptible to various medical conditions, often up to the time that they fully recover from illnesses and eventually restore their pre-crisis level of functioning. The psychological impact of the arts is powerful, increasing the likelihood of accelerating recovery among young and adult clients. However, this conjecture needs further investigation and understanding. While studies exist proving how the arts work to attain, maintain, or sustain health among clients, there is a dearth of studies as to how the arts affect the biophysiologic measures as well as the extent to which the arts work towards promotive, preventive, curative, rehabilitative and palliative care. Similarly, it is also fundamental to explore how technology can complement with the arts to be included as non-conventional interventions of quality human caring. To expound on these aspects is highly recommended.

ACKNOWLEDGMENTS

The authors wish to thank all those who have helped them complete this conceptual paper.

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