journal homepage: http://kont.zsf.jcu.cz
DOI: 10.32725/kont.2022.016

KONTAKT / Journal of nursing and social sciences related to health and illness

Editorial

Stop the waves or learn to surf? – Adopting a complexity perspective as a nurse educator

Martin Salzmann-Erikson

University of Gävle, Faculty of Health and Occupational Studies, Department of Caring Science, Gävle, Sweden

I am fascinated by how the world is constantly projecting itself, *emerging*, through change. The world spontaneously surprises us with the most unexpected phenomena and forces us to adapt. Unexpected events are not restricted to the large scale; we also see them in everyday life. All these unexpected outcomes are caused by sensitive dependence on initial conditions. The British philosopher, Henri Bergson, description of the world, as flowing, appeals to me: *"It means that movement, change, becoming, is everything that there is. There is nothing else; everything is movement, is change"* (Carr, 1911, pp. 28–29).

Seeing the world in terms of complexity as a nurse educator

Things around us can be extremely complicated. For example, we often refer to "rocket science" as an "extreme" case of something that is complicated. However, with enough facts about a space rocket, the rocket can be built, repaired, disassembled, and reassembled in a logical manner – because it is based on a linear construction: the parts exist in a cause-effect relationship. In opposition to complicated systems, there are complex ones: humans and relationships, which are non-linear processes. These are non-linear because it is not possible to go back to a previous state. We cannot unsay things or undo them.

Complex systems are open and living, meaning that they are constantly affected by their surroundings. In complex systems, such as a university, there are many smaller systems (sub-systems), for example, departments, boards, teaching staff, and work groups. When I, as a nurse teacher, meet with students in a seminar, we form a smaller system; but at the same time, we are also part of a larger system. In one respect, a specific group of students in a particular seminar are exclusive but also enclosed within the larger systems, because there are rules and a framework that guide the activity. In a seminar, there are learning objectives, a schedule, literature, and a grading system. However, these are not static, because they exist in relation to a larger context. In this respect, ontology forces me to continuously think about pedagogical issues, because the world is so complex – at different times, at different levels and in different contexts. In accordance with complexity thinking, I hold that concepts are always contextualized and always exist in relation to something [else]. What appeals to me about complexity thinking is the assumption that the world is too multifaceted to be explained only using the causality of positivism and the linear principles of reductionism; the pedagogical or didactical concepts cannot be avoided. Looking through this lens, knowledge and learning are not binary. While complexity science in nursing programs has been, at least, mentioned (Olsson et al., 2020), how complexity science may support nurse educators is even less studied. Learning takes place through a process, and the individual acquires new information in relation to something. This leads us into the next section, which concerns the importance of complexity and *adaptive* systems in nurse education.

Co-evolving with students as complex adaptive systems

Complexity science is based on the view that systems inherently strive toward non-static states – systems wobble, change, and evolve. In contrast to pure systemic thinking, the complexity perspective draws attention to the processes in a system that drive the system toward a non-equilibrium relationship (Stoehrel, 2010; Walby, 2007). Because systems always exist in relation to both smaller and larger systems, systems are affected by these other systems' (unpredictable) inputs. I am a system. The individual student is a system. The seminar is a system. All these systems have the potential to affect each other by adding information. So what are the implications of these ideas for nurse educators? As teachers, we see that, while advancing through the nursing program, students adapt to the academic culture – sometimes we use a fancy term and say that they are undergoing *a socialization process*. Hence, through my complexity lens, I can see that nursing students – are evolving *systems*.

A seminar group is a concrete example of a system that we can easily comprehend and refer to. In one seminar, students are instructed to learn about people's lived experience of mental illness through collecting data from blogs – and then present these insights in a seminar (Salzmann-Erikson et al., 2017). Due to the students' presentations of their inquiries

* **Corresponding author:** Martin Salzmann-Erikson, University of Gävle, Faculty of Health and Occupational Studies, Department of Caring Science, 80176 Gävle, Sweden; e-mail: martin.salzmann@hig.se
http://doi.org/10.32725/kont.2022.016

Submitted: 2022-03-14 • Accepted: 2022-04-28 • Prepublished online: 2022-05-17
KONTAKT 24/2: 107–108 • EISSN 1804-7122 • ISSN 1212-4117

and discussions, the lever of uncertainty is high, taking unexpected turns that cannot be fully predicted. In this sense, I use the strengths of complexity in the learning process, encouraging fluctuations, unpredicted events, and forcing the system into non-equilibrium. This contributes to the emergence of processes – contradictions, doubts, or 'aha' experiences – which creates new processes among the students and in me. In the seminar group, which is seen as a system, we develop our understanding (of living with a specific diagnosis), change our perspectives, evolve, and *co-evolve* (Ramalingam et al., 2008). Change is vital in processes, because the twists and turns it causes contribute to the growth and development of a system. However, changes do not necessarily entail an improvement in conditions (Manson, 2001). Similarly, shuffling a well-mixed deck of cards once again does not improve or worsen the conditions for the player; it only changes them. But in my role as a teacher, unlike the card deck analogy, looking through a complexity lens creates opportunities for me to influence students in a direction that enables a deeper understanding of the subject. When we add *change* into systems, they are no longer merely complex systems, but *complex adaptive systems* (Ramalingam et al., 2008). In complex adaptive systems, human relationships are always interrelated with their surroundings, and therefore also prone not only to adapting, but also to evolving and co-evolving.

Because the conditions of human relationships can never be controlled, a nurse educator must be able to see what "comes out", the emergence. The process of emergence is not random, but rather a manifestation of patterns of non-linear relationships and processes. With the complexity thinking *in me*, I am motivated to keep an open mind when I encounter students, because I never know where it will lead – everything, especially life, flows, sways and vibrates!

Lastly, the position as a nurse educator may be perceived as meaningful, repetitive, stressful, or challenging. I have experienced all of these feelings in different phases of my career. However, articulating my ontological stance has allowed me to evolve. In publishing my views, I hope that this article may serve as useful input for other nurse educators, and encourage them to reflect on their worldview, setting their minds in motion. In accordance with the worldview of complexity, which states that reality is flowing, I would like to close the article with a saying, alluded to in the title: "You can't stop the waves, but you can learn to surf."

References

1. Carr HW (1911). Henri Bergson: the Philosophy of Change. London: TC and EC Jack, 91 p.
2. Manson SM (2001). Simplifying complexity: A review of complexity theory. Geoforum 32(3): 405–414. DOI: 10.1016/S0016-7185(00)00035-X.
3. Olsson A, Thunborg C, Björkman A, Blom A, Sjöberg F, Salzmann-Erikson M (2020). A scoping review of complexity science in nursing. J Adv Nurs 76(8): 1961–1976. DOI: 10.1111/jan.14382.
4. Ramalingam B, Jones H, Reba T, Young J (2008). Exploring the science of complexity: Ideas and implications for development and humanitarian efforts. Working Paper 285, Overseas Development Institute, 89 p. London.
5. Salzmann-Erikson M, Bjuhr M, Mårtensson G (2017). Developing, Implementing, and Evaluating the Educational Module Students Active Learning via Internet Observations (SALIO) in Undergraduate Nursing Education. Perspect Psychiatr Care 53(2): 104–110. DOI: 10.1111/ppc.12143.
6. Stoehrel V (2010). Komplexitetsteorins betydelse för vår uppfattning av verkligheten. Res Cogitans 1(7): 230–251.
7. Walby S (2007). Complexity theory, systems theory, and multiple intersecting social inequalities. Philos Soc Sci 37(4): 449–470. DOI: 10.1177/0048393107307663.