Chapter 5
Knowledge Dynamics

ABSTRACT

In the chapter about cognitive knowledge, the author introduced the dyad of explicit-tacit knowledge developed by Ikujiro Nonaka and his colleagues. This dyad represents the conceptual framework of the dynamic theory of organizational knowledge creation. The breakthrough of this theory is the SECI model, which consists of four knowledge conversion processes: socialization (from tacit knowledge to tacit knowledge), externalization (from tacit knowledge to explicit knowledge), combination (from explicit knowledge to explicit knowledge), and internalization (from explicit knowledge to tacit knowledge). All of these knowledge conversion processes may happen in Ba, a dynamic context where interactions between people take place. The purpose of this chapter is to present the main concepts and ideas of the dynamic theory of organizational knowledge creation developed by Nonaka and his colleagues, a theory that represents a major contribution to the development of knowledge management.

INTRODUCTION

We recall from the chapter about Cognitive knowledge that for Plato, knowledge was a result of reasoning and not of perception. We cannot trust our senses since they don’t have the capacity to reach the truth. “We perceive hard and soft through touch, but it is the mind that judges that they exist and that they are contrary. Only the mind can reach existence, and we cannot reach truth if we do not reach existence” (Russel, 1972, pp. 152-153). Plato considered knowledge “as eternal and accessible through philosophical training and thinking” (Styhre, 2003, p. 55). Thus, knowledge is conceived as a static, eternal, and universal entity. For instance, there are many cats we see around us, but if we think at the word “cat”, it does not mean something which is related to a particular cat, “but some kind of universal cattiness. This is not born when a particular cat is born, and does not die when it dies. In fact, it has no position in space or time; it is eternal” (Russel, 1972, p. 121).

Aristotle, the best known student of Plato, had a different view on knowledge than his master. Knowledge could embrace one of the following “states of the soul” (Aristotle, 1999, pp. 87-90): episteme, which reflects scientific knowledge; techne, which reflects craft knowledge, and phronesis, which reflects practical reason and prudence knowledge. The other two states of the soul are understanding and wisdom. Scientific knowledge is everlasting and indestructible. “Hence, what is
known scientifically is by necessity. Hence it is everlasting; for the things that are by unqualified necessity are all everlasting, and everlasting things are ingenerable and indestructible” (Aristotle, 1999, p. 88). Craft knowledge is concerned with production, that is with creating things that do not exist yet. That means that each producer should have practical knowledge and principles of building products. “Every craft is concerned with coming to be, and the exercise of the craft is the study of how something that admits of being and not being comes to be, something whose principle is in the producer and not in the product” (Aristotle, 1999, p. 88). Phronesis or prudence knowledge is concerned with action and practical reason, which constitutes the most important source of individual knowledge. It is about experience and knowledge gained through direct action, since “prudence is a state grasping the truth, involving reason, concerned with action about things that are good or bad for a human being. For production has its end in something other than itself, but action does not, since its end is acting well itself” (Aristotle, 1999, p. 89). Thus, Aristotle conceives knowledge as being represented by three different states of the soul, states that reflect basically people’s existence, action and production. Although Aristotle’s perspective on knowledge is more complex than that of Plato, and achievable from direct experience and practical work of production, I have to underline its static nature. As Russell (1972, p. 169) remarks, Aristotle “has also the Greek love of static perfection and preference for contemplation rather than action. His doctrine of the soul illustrates this aspect of his philosophy”.

For Gilbert Ryle there are two basic ways of knowing: knowing how, and knowing that. Knowing how refers to skills people develop for performing different actions, while knowing that refers to the principles or knowledge people acquire through theoretical learning. It is one thing to learn about cooking a certain cake – knowing that, and another thing to cook it – knowing how. In a similar way we may learn about swimming all theoretical stuff, but we learn actually to swim by entering into the swimming pool and practicing swimming. “To be intelligent is not merely to satisfy criteria, but to apply them; to regulate one’s actions and not merely to be well-regulated” (Ryle, 2000, p. 28). Knowing that is similar to the Aristotle’s episteme, while knowing how can be compare with the result of compressing techne and pronesis together. However, for Ryle knowledge is not anymore a static entity, since it can be restructured and improved by an iterative action. “A person’s performance is described as careful or skillful, if in his operations he is ready to detect and correct lapses, to repeat and improve upon successes, to profit from the examples of others and so forth” (Ryle, 2000, p. 29). The two forms of knowing may synchronize in performing practical activities since always there is a need “to do a bit of theory and then to do a bit of practice” (Ryle, 2000, p. 29). These ideas came as a new perspective in 1949 when Ryle published his book The concept of mind, by comparison with the Cartesian perspective on cognitive knowledge, which considered knowledge only rational knowledge. Reflecting on these two forms of knowledge resulting from knowing how and knowing that, Michael Polanyi introduced a new perspective of human knowledge by defining tacit knowing: “Such is the functional relation between the two terms of tacit knowing: we know the first term only by relying on our awareness of it for attending to the second” (Polanyi, 1983, p. 10). Developing further the nature and role of tacit knowing in knowledge creation, Polanyi considers that perception should be interpreted as an instance of tacit knowing, due to our bodily experience: “Our body is the ultimate instrument of all our external knowledge, whether intellectual or practical. In all our waking moments we are relying on our awareness of contacts of our body with things outside for attending to these things” (Polanyi, 1983, pp. 15-16). However, all of this bodily experience transformed into tacit knowledge.
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