Chapter 4

Knowledge as Quantum Leap: A Resource of Innovative Factors to Manage Unpredictability

Irene Maria Gironacci
Reply SPA, Italy

ABSTRACT

A key role of every government is to control the scientific and social progress managing the knowledge and learning process with efficiency and efficacy towards a factual wellness of people. The purpose of this chapter is to describe a basic strategy paradigm of management in global capitalism of knowledge, with web economy, globalization, dematerialization of value. In this global worldmaking, an Indonesia-Italy research team proposes a new knowledge science paradigm to change the way we are behaving in educational didactic, scientific mindset, business management in the twenty-first century: nature knowledge theory (NKT). As new basic science, it is the outcome of advanced study beyond knowledge management.

INTRODUCTION

Global world-making, based on web economy, globalization, dematerialization of value, focuses on sharing generative ideas through networking and effective communities of practice. Value points are flexibility, speed adaptation, response to supply and demand through enterprise systems (supply chains and strategic alliances) and product diversification. But the current complexity of reality, in which phenomena, people, and contexts are characterized by a high variety, variability, and indeterminacy, must be reduced or governed to transform problems into solutions.

From an economic point of view, reproducibility generates advantage because knowledge can be re-used and the outcome of a work can be standardized, producing

DOI: 10.4018/978-1-5225-3906-3.ch004
very large economies of scale. To date, management increases the area of re-use of knowledge to verify its validity and efficiency and to multiply its value. It requires strong investments in ad hoc solutions and practical knowledge.

The purpose of this chapter is to provide a definition of “Knowledge Management”, via an analysis of the literature on main approaches of it, and the close relationship between scientific thought, knowledge and life cycle of the industry.

Between others, this analysis will describe the innovative scientific contribution of Md Santo, founder of an Indonesia-Italy research team, dedicated since 2010 to the advanced study of beyond Knowledge Management (BKM). The theory comprehends several sectors of research, such as Technical system, Engineering system, Socio-system derived from Communication technology, Information technology, Work Flow algorithm. Its referred paradigm is the complexity theory, which interprets the unpredictable interactions and relationships between agents in biological, social and cultural environments, rights to which they belong (Holland, 1992). Complexity theory has the purpose to generate an “order in the chaos” of complex and dynamic information, sources of information, and emerging intertwined interactions between agents (Schütz, 1995).

THE HISTORICAL MILESTONES

The first modernity has proposed an interpretation of knowledge reproduced in a “mechanical way”, in an abstraction process, by separating knowledge from its reference to specific objects, people and contexts of the real world in any context of application (from science to technology, calculus, business, market, law and so on), and by creating impersonal automatism, with engineering methods and techniques. Varieties, variability, and uncertainty were not considered objective.

This vision was according to the spirit of Enlightenment period. The intellectuals believed that they could build a world illuminated by reason, attributing validity to scientific “truths” against the “beliefs” derived from authority, religion, and tradition. The statement was: it is true what can be demonstrated and reproduced objectively, independent of subjective evaluations, in all places and times.

The only way was the experimental method, focused on the cause-effect relationship. The invariability of the law has meaning if causes and effects are considered as abstract phenomena, with no reference to specific contexts and people. “Abstraction” becomes the premise for reproducible and therefore invariant/demonstrable phenomena.

The economy of the first modernity was based on this abstract concept of the certain knowledge engine, that worked fine for a while because of the industrial