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## **Chapter IV**

# **Systems Thinking and Knowledge Management**

## **4.1 Introduction**

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In order to understand knowledge management (KM), reference has been made to the insufficient nature of knowledge seen as either a purely technical or purely social phenomenon. This has led to an argument for a sociotechnical view of KM, which in this chapter is further developed to consider KM in more depth, and to try to answer the question: What kind of system is a knowledge management system?

We begin by looking at organisations and their management, initially setting KM in a historical frame. Systems thinking, and its relationship to KM, is then reviewed, followed by a more in-depth analysis of social systems philosophy and theory, and the domain of epistemology. All of this points to a theoretical grounding for KM in the philosophy and theory of Kant and Habermas; in order to further develop this theme, social theory, and particularly critical social

theory, is discussed. The outcome is an argument for KM to be grounded in critical social theory, and more specifically in Habermas' theories of communicative action. A framework for the application of these ideas within KM investigations is presented.

## 4.2 Organisations and Their Management

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Our study of organisation theory begins with Frederick Taylor's scientific management (Taylor, 1947), initially formulated at the turn of the nineteenth to the twentieth century. Major subsequent developments have been administrative management theory (Fayol, 1949), where the management process is defined (to forecast and plan, to organise, to command, to coordinate and control), and bureaucracy theory (see Gerth & Mills, 1970).

Taylor's work may be loosely classified as time and motion or work study, and this, as well as the other theories noted above, adhere to the rational model, which views organisations mechanistically, seeing the attainment of maximum efficiency as achievable by putting together the parts in an effective way under the control of management. Hierarchy, authority, and rational decision-making are fundamental to this.

In the 1920s, largely as a result of the Hawthorne experiments, the human relations model began to gain ground, based on social structures of people at work and motivation. This model pointed to democratic, employee-centred management. More recent developments have seen the growth of the systems model of organisations, where they are viewed systemically as open systems responding to environmental changes and maintaining a steady state (Selznick, 1948; Katz & Kahn, 1978). This systems approach links well with empirical research in sociotechnical systems (Pasmore & Sherwood, 1978), and contingency theory (Lawrence & Lorsch, 1969).

Broadly, the systems model recommends that if an organisation is not functioning properly, the sub-systems should be examined to see that they are meeting organisational needs, and the organisation examined to see that it is well adjusted to its environment. These tasks are charged to a management sub-system.

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