Chapter XIV
Modeling Human Resources in the Emergent Organization

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ABSTRACT

This chapter asserts that a proper integration of HRIS within organizations entails extending the scope of HRM technologies to encompass modeling frameworks enabling the analysis and (re)design of HR behaviors. Furthermore, it argues that the process of emergence, which constitutes the cornerstone of contemporary sociological thought on organization, lies at the root of the usage of technologies capable of addressing the emergent nature of HR behaviors. This chapter describes and illustrates a bottom-up modeling framework that takes into account the problem of emergence and allows (1) an enhanced traceability of HR, (2) a situated, context-aware HR modeling, and (3) HR modeling from action repositories. The present framework is illustrated with a case study, where it is used to capture, model, and analyze work practices.

INTRODUCTION

An agenda for Human Resources Information Systems (HRIS) research is put forward by Magalhaes and Ruel (2008), who propose an integrative perspective for HRIS research, and stress that research in organizational and information systems cannot be separated. They argue that the integration of HRIS within organizations can be seen as an intricate web of many causes and
consequences and that HRIS cannot be studied separate from the organizational context where they are interwoven. This assertion has two main implications; (1) when researching HRIS from an integrated perspective, it is crucial that the researcher approaches the topic from an appropriate ontological point of view, and (2) the scope of Human Resource Management (HRM) should not only include applications to support traditional HRM functions, but also frameworks to capture, analyze, and eventually modify the behavior of human resources (HR). Such frameworks should be developed accordingly to the ontological position defined. Social emergence is the ontological point of view defended by those authors. Sawyer (2005: 213) explains that the emergence paradigm research “focuses on the micro-interactional mechanisms by which shared social phenomena emerge and on how those emergencies constrain those mechanisms”.

In this paper we discuss an issue, which is relevant to HRIS, i.e. the problem of modeling individual-level behavior in the context of broader organizational action. Hence, it is important that the problem under review is placed within an ontological framework of the organizational phenomenon. Ontology and methodology are two sides of the same coin, meaning that the methodology used to research a particular phenomenon will depend entirely on the ontological perspective that one holds. It is submitted, firstly, that the emergence of the organizational phenomenon depends to a large degree upon the alignment between the individual and the organization. Secondly, that such alignment cannot be taken for granted; rather, it requires conscious, systematic and continuous efforts. Thirdly, that the alignment of the individual and the organization can be facilitated by (1) the development of a semi-formal models of agent behaviour at different organizational levels and (2) methods and tools to build, update and analyze the representations based on those models.

Whereas current modeling efforts are mostly directed at organizational perspectives, little attention has been paid to individual or inter-personal perspectives. Several approaches to modeling organization strategy, processes and resources have been developed. However, models for individual or inter-personal levels are scarce and have typically, different purposes. Research is needed to address the modeling of individual and interpersonal behaviors and the definition of proper ways of linking these behaviors with perspectives of higher organizational levels. More specifically, research is needed to raise awareness and to illustrate the benefits of aligning individuals and the organization. The aims of such modeling are as follows:

- Enabling the organization to capture and visualize different concerns of individual behavior.
- Enabling individuals to understand the relationship of their daily actions with organizational resources and activities.
- Facilitating the analysis, discussion and (re)design of individual and inter-personal work.

Organizational modelings are of interest to HRIS due to the closeness of this category of information system and all organizational phenomenon. If organizations are defined essentially as groups of people working for a common goal, then it is clear that any information system dealing with human resources will tightly interwoven with the organization itself. There are many schools of thought in organizational modeling but in this paper we are particularly interested in a school of thought guided by the following principles: (1) agents have acting, deliberation, and learning capabilities, (2) agent exhibit multiple behaviors that depend of specific contexts of execution, and (3) such behaviors should be captured from agent actions and interactions.

The school of thought in organizational modelling which is followed in this paper considers organizational phenomena as being emergent in