An Entropic Approach to Technology Enable Learning and Social Computing

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Abstract. Understanding one's own behavior is challenging in itself; understanding a group of different individuals and the many relationships between these individuals is even more complex. Imagine the amazing complexity of a large system made up of thousands of individuals and hundreds of groups, with countless relationships between those individuals and groups. However, despite this difficulty, organizations must be managed. Indeed, ultimately the organization's work is done by people, individually or collectively, alone or in combination with technology. Therefore, organizational behavior management is the central task of management work – it involves understanding the behavior patterns of individuals, groups, and organizations, predicting what behavioral reactions will be elicited by various managerial actions and finally applying this understanding. Undeniably, society's work is often done by organizations, and the role of management is to make organizations do that work. Without it, our entire society would quickly stop operating. Not only would the products you have come to know and love swiftly to evaporate from store shelves; food itself would suddenly become scarce, having drastic effects on huge numbers of people. To this end, the term *Technology-Enhanced Learning* is used to support workers' learning about technology; the gap between what is understood to be satisfactory and the current level of knowledge of the workforce is addressed by a *Logic-programming-based Social Computing Framework* entitled *An Entropic Approach to Knowledge Representation and Reasoning*, which relies on computational structures built on *Artificial Neural Networks* and *Cases -based Thinking*, as well as predictions and/or assessments, to empower the level of knowledge of the employees, here in technology, later in other areas.

Keywords. Entropy, Technology Enable Learning, Social Computing, Artificial Neural Networks, Case-based Reasoning, Computational Sustainability.

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