Chapter 5
Theorizing Virtuality in Enterprise Social Systems

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ABSTRACT

This chapter has built on research on today's modern organizations to lay the foundations for a comprehensive and systematic theorization of enterprise social systems. Theorizing virtuality marks a fundamental transformation in space-time parameters in communications. This is especially so in the context of rapid current advancements in IT such as cloud computing, as well as numerous other technological fronts. Current IT trends show that increased spatio-temporal plasticity heightens the effectiveness and the efficiency of modern enterprise social systems. In particular, subject-oriented asynchronous communications experience greater inferred plasticity and event-oriented synchronous communications experience greater referred plasticity. Finally, enterprise social systems vary in their degree of virtuality based on the perspective of the relevant stakeholder group considered.

INTRODUCTION

Due to fast evolving information techonologies (IT), organizations are always faced with a rapid chaning environment that requires flexible and dynamic responses to frequently changing business needs. Many organizations have responded by adopting decentralized, team-based, and distributed structures thanks to the communications through IT today. Advances in communication technologies have enabled organizations to acquire and retain such distributed structures by supporting coordination among people working from different locations (Ahuja, Carley 1998). Yet, IT implementations in cloud computing platform provide another dimension in enterprise social systems.

Since the early 2000, Web 2.0 has emphasized relationships using the Web technologies. With this social restructuring, companies are reaping the benefits of Web 2.0 as Enterprise 2.0 (McAfee, 2006). Enterprise social systems will use the communication benefits from Web 2.0 by emphasizing relation-

ship management in the Enterprise's internal social networking. As Web 2.0 and Enterprise 2.0 in this context are now absorbed by the advancement of cloud computing (Wided Guedria, 2014), it is imperative to investigate what drives this virtualized environment in the form of cloud computing platform.

Ontologically, Cloud Computing has been empowered by the advancements in networking, providing three service models; Software as a Service (SaaS), Platform as a service (PaaS), and Infrastructure as a Service (IaaS). With the implementations in organizations' IT, cloud computing can builds an "emptying of organization" by separating the content and process of organizations. Cloud Computing today has many predecessors. Heavy use of relational database management systems made Business Process Reengineering (BPR) practically possible in the early 1990s, indicating the separation of data from its organizational practice. In the late 1990s, use of many process integration tools, such as ERP and EAI, achieved the separation of process from business organizations. A major concern is how to manage human agents. The Internet creates e-business markets as well as the e-management of organizational resources remotely, emphasizing relationship management.

Back in the 1990's companies like SAP AG, Oracle, Baan, PeopleSoft and J. D. Edwards created multi-billion dollar businesses with ERP technology that automated and connected what had once been disparate parts of corporations – human resources, manufacturing processes, inventory supply and financial planning. These companies rode the wave of the corporate BPR (business process re-engineering) trend that gained steam in the middle of the decade. Along the way, the ERP industry began to be saturated and experience its growth struggle due to its focus on internalization. The main reasons for this were the Internet revolution and the surprising speed with which e-business began to change the way business was done, i.e., externalization of enterprise. Almost immediately, businesses had started to become Web centric. In the 90's ERP was too inward looking and not global centric (internalization of enterprise integration). However, this does not mean that the internal efficiencies that can be achieved by ERP systems are no longer crucial. Many practitioners claimed that a well-implemented ERP system is more critical today than it has ever been because it provides a solid start to an externalization of enterprise.

Enterprise integration has been a great focus in the 1990s with its internalization slogan. With the big boom of e-business, companies now have moved their directions to the Internet, thus focusing on externalization. E-business revolutionized the market both in customers and business partners. Naturally, it leads business organizations to a global focus and to manage their own resources, creating the concept of Enterprise Social Systems.

Figure 1 summarizes the history of organization structure with the development of information systems (IS) and information communication technologies (ICT). It is obvious that advanced information technologies these days drive the structure of organizations. Modern organization structure formed in the 1920s with the demolition of feudalism. Along with systematic management from the military, the bureaucratic organization structure dominated through the middle of the 1900s. With help from IS, business process reengineering was adopted, which revolutionized the traditional business concept, introducing flat organizations. With ICT and a global network (internet), almost every part of an organization is interconnected, regardless of its location and time, transforming into network organizations, and now Enterprise Social Systems these days. A major difference between network organizations and Enterprise Social Systems is the use of information technologies in terms of relationships among resources. Enterprise Social Systems, interestingly, create unique images of business, freeing limitations on human activities, but maintaining the same or higher levels of relationship management. As Figure 1 shows, collaborative systems and current web technologies are the main justifications for Enterprise Social Systems today.

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