Chapter 5.2
Global Implications of E-Commerce Tool and Artefact Creation

Deborah Bunker
SISTM, University of New South Wales, Australia

INTRODUCTION

It is argued that Electronic Commerce (EC) platforms can be seen as artefacts—tools that are made, used, inherited and studied within a cultural context. This context encompasses economic, historical, technical, and social values and assumptions that are focused on particular ideas and definitions (relating to the example of B2C activities and processes contained within Electronic Grocery Systems (EGS)). The issue we should face as makers, users, inheritors, and scholars of these tools, however, is that the tool context and inherent in-built values on which this context is based, particularly relating to matters of effective use of EC tools in a B2C marketplace, may not be in evidence across all cultures. This would make the successful use of EC, in a global sense, a difficult and complex undertaking.

BACKGROUND

Understanding the process and role of tool creation and use in relation to the information technology and systems (ITS) discipline/paradigm (and EC in particular) is fundamental to understanding the cultural bias inherent in the process. The definitions used in this chapter are those generally used by the research community in the area of technology transfer (TT) (Robinson, 1988). These definitions are loaded with such terms as "artefacts," "technology," and "tools." If we accept that ITS is a tool-focused discipline, then we must look at the context of the creation of those tools in order to better understand how they can be used more appropriately and effectively in different cultural contexts.

Bunker and Dean (1996) discuss Kuhn's (1970) theory that suggests that the underlying structure of a discipline arises from a set of assumptions

generally accepted by practitioners, teachers, and disciplinary constituents. Techniques and tools defined by the discipline are created from a common understanding. They may be part of an evolutionary creation process or equally be created through a "paradigm shift"; however, they do become indicative of the generally held underlying assumptions of the discipline. Schein (1984) suggests a three-stage ascent from basic assumptions to the artefacts and creations that drive the evolution of paradigms. If we look at the tools in current use by a discipline, generally accepted underlying assumptions may be deduced.

The model of a discipline is in four parts (see Figure 1). By extending the idea of tools as the visible sign of paradigmatic assumptions that underpin a discipline, we find that four entities play a role: the tool Maker, the tool User, the Scholar, and the Inheritor of the discipline. The tools that reflect the ITS discipline are created and used in a multitude of contexts. What are the implications for the discipline and the diffusion and use of these tools?

ITS Tools in Context

Young (1971) in his *An Introduction to the Study of Man* defines tools in the following ways: tool making assumes skills and ways of life that are transmitted by interpersonal communication and tradition rather than genetics; tool making involves foresight as to the use of the tool; tools are made by a technique that is learned from others and involves symbolic communication (language); tools are made according to an evolutionary convention (gradual) and are made and used in a cultural context. For example, the ITS literature is full of stories about ITS failure (Sauer, 1993). Are these really stories about the lack of contextual acceptance of these tools within organisations or target cultures?

Figure 1. Disciplinary model (Bunker & Dean, 1996)