

Chapter XXV

Cultural Historical Activity Theory

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ABSTRACT

This chapter reviews the origins, approaches and roles associated with the use of cultural historical activity theory (CHAT) in information systems (IS) research. The literature is reviewed and examples are discussed from IS and related fields of human-computer interaction (HCI), computer supported co-operative work (CSCW) and computer supported collaborative learning (CSCL), to illustrate the power of CHAT in IS research as well as its link to appropriate research methods. After explicating the value of its use, the chapter concludes by discussing theoretical and methodological implications of applications of CHAT in examining real-world problems in IS research.

INTRODUCTION

The mission of information systems (IS) research is to study the technological, human, social and organizational aspects of IS. The extant IS research literature shows that all aspects of any IS are shaped and in turn shape a highly complex and

constantly changing social context (e.g. Avgerou, 2001; Walsham, 1993). The nature of the object of study in IS research has thus led to the need for theoretical frameworks to provide a basis for research into complex and dynamic socio-technical contexts into which IS and IT enter.

Cultural historical activity theory (CHAT) has the potential to provide a robust meta-theoretical

framework for understanding and analyzing many areas of IS research and practice. The strengths of CHAT are grounded both in its long historical roots and extensive contemporary use. CHAT offers a philosophical and cross-disciplinary perspective for analyzing diverse human practices as development processes in which both individual and social levels are interlinked (Engeström, 1999b; Kuutti, 1996). With its recent emphasis on networks, interactions and boundary-crossings between activity systems, CHAT helps in exploring and understanding interactions in their social context, multiple contexts and cultures, and the dynamics and development of particular activities.

This chapter explores the descriptive, analytical and interpretive power of CHAT for IS research. We begin by introducing CHAT's philosophical and conceptual background. The concreteness of our own grasp of CHAT's theoretical ideas is grounded in our own intervention research within health care organizations. Applications of CHAT in IS research and the related fields of human-computer interaction (HCI), computer supported cooperative work (CSCW) and computer supported collaborative learning (CSCL) are discussed. Empirical examples of the research approaches, methods of data collection, and modes of analysis that are appropriate within a CHAT framework are also presented. The relations between CHAT's methodological endeavors and other theories are briefly discussed. We conclude with an outline of theoretical and methodological implications regarding the application of CHAT in examining real-world research problems in IS research.

CULTURAL HISTORICAL ACTIVITY THEORY (CHAT)

Cultural historical activity theory (CHAT) or Activity Theory as it is also known, traces its roots from the Soviet Union in the 1920s as part of the socio-historical school of Russian psychology.

Its basic foundations were laid by the insights of Russian psychologists Vygotsky, Leont'ev and Luria into the dynamics of thought and consciousness (e.g. Leont'ev, 1978; Luria, 1976; Vygotsky, 1978). Their arguments arose in response to the need to transcend prevailing understandings of psychology, child development and learning studies that were then dominated by behaviorism (Skinner) on one hand, and psychological theories that they regarded as individually oriented rather than socioculturally oriented on the other hand, including Piaget's developmental theory and psychoanalysis (Engeström, 1987). In doing so, they sought to go beyond the individual to the social. Engeström (2001), a leading contemporary theorist of CHAT, describes the theoretical tradition of CHAT as passing through three generations or phases: the first phase focused on mediated action, the second phase focused on the individual in collective activity, and the third phase which currently focuses on multiple, interacting activity systems and boundary-crossings between them. We provide a brief introduction to 'three generations of activity theory' in the following subsections.

First Generation Activity Theory: Mediated Action

The culturally mediated nature of human activity is one of the most important concepts of CHAT. Vygotsky (1978) introduced the elementary concept of *mediation*: the idea that humans' interactions with their environment cannot be direct but are instead always mediated through the use of tools and signs. Vygotsky particularly criticized the dominant psychological theory of behaviorism that attempted to explain consciousness or the development of the human mind by reducing 'mind' to a series of atomic components or structures associated primarily with the brain as 'stimulus – response' processes, a perspective that set the metaphor for early theories of communication as well as behaviorist psychology.

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