

Linking Socio-Cultural Theories of Learning with an Institutional Theory of Organizations: Implications for Theory, Practice, and Collaboration

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Background

This roundtable reflected the work of a research group in the Education Department of the University of California, Santa Cruz that is associated with the Center for Informal Learning and Schools (CILS). Our research group's general focus is the influence that social and political forces have on science learning and teaching. Specifically, we are interested in issues of equity and social justice in science education and therefore seek to understand how social norms and policy contribute to the unequal distribution of opportunities to learn science in both informal and formal settings.

In attempting to address these issues, we encountered a challenge that has long confronted educational research: bridging the gap between the experiences of individuals who engage in learning and teaching and the social structures that provide the context for learning and teaching. Indeed, there is a long history in the behavioral and social sciences of efforts to link the "micro" to the "macro."

Members of our research group faced this challenge from the perspectives of two different traditions in educational research. One: Some members bring a wealth of theoretical and empirical knowledge from the literature on how people learn. While this body of work acknowledges the influence of social context on learning, it provides limited conceptualizations and descriptions of that context. Engeström points out the relative danger of under-theorizing context where: "experience is described and analyzed as if consisting of relatively discrete and situated actions while the system of objectively given context of which those actions are a part is either treated as immutable given or barely described at all" (1993 p. 66). Two: Other members of our group contribute theoretical and empirical knowledge about the impact of reform policies on the structure of educational organizations. While recent contributions to this literature recognize the importance of linking school structure to student learning and the instructional practices of teachers, scholars have only begun to explore these relationships. As Elmore observes, "Indeed, the major theme of education policy seems, until recently, to have been the disconnect between policy and practice" (2003, p. 23).

A Theoretical Framework

In this roundtable, we proposed a theoretical framework that we believe holds promise for guiding research on how learning and teaching are influenced by social contexts in organizations whose structures are shaped by forces in their social and political environments. This framework combines two theoretical traditions: Cultural Historical Activity Theory (CHAT) and Institutional Theory (IT).

Cultural Historical Activity Theory emphasizes semiosis as the developmental outcome of communicative exchanges in collective, goal-oriented activity, where any outcome, in turn, transforms or mediates future activity and thus social structures enacted through activity. The process of *mediation* maintains a central and fundamental role in this framework, emphasizing a historic and ongoing, recursive (two-way transformative) relationship between human activity and the environment supporting that activity (Wertsch 1991; 1998 Cole, 1996; Wells, 1999; Metteinen, 1999; Daniels, 2001). Thus, CHAT emphasizes action (including mental action) as inherently situated in a cultural, institutional, and historical context, yet constitutive of that same context.

Institutional Theory extends CHAT by explaining how cultural, institutional and historical forces influence the structures of organizations that provide the context for learning. IT explains that institutions or cultural rules establish what goals and what means for attaining them are socially legitimate (Meyer & Rowan, 1977; Scott, 2001). These "rules" are enacted for the most part by three agents: the professions, the state, and the

media. Organizations adopt formal structures that mirror institutions in order to gain social legitimacy with stakeholders in their environments (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). The combination of CHAT and IT work well for understanding learning, teaching, and change processes in science education for two general reasons: 1) The two theoretical perspectives are *conceptually congruent*, and 2) They are *analytically complimentary*.

Conceptual Congruence

CHAT and IT, despite their distinct origins, are rooted in similar assumptions. One tradition stems from Vygotsky, a Russian psychologist who focused on children's psychological development in social interaction. The other stems from Mead, an American sociologist who explained that reality is socially constructed. Wertsch (1992) points out that, while these two scholars wrote during the same period but never interacted, they derived similar theories in which identities and meanings are socially constructed. CHAT and IT are both rooted in assumptions regarding the following four areas: 1) open systems, 2) social constructivism, 3) ideology, and 4) historical recursivity.

Both theories view the world in terms of **open systems**. IT posits that an organization's interchange with its environment is critical to its self-maintenance and viability (Scott, 2003). Systems, including organizations and communities, are dependent on "throughput" from the environment and look to the environment to seek out and adopt the most legitimate models of organization. Isomorphic forces that are coercive, mimetic, or normative operate in organizational fields and result in organizations that look alike and are very similar to each other (DiMaggio & Powell, 1983).

CHAT also treats human activity as situated within particular cultural and historical contexts. Activity cannot be considered outside of the setting in which it occurs. Theorists in the cultural-historical tradition have described learning activity as socially shared cognition (Rogoff & Lave, 1999), distributed expertise (Brown & Campione), joint productive activity (Tharp & Gallimore, 1988), or communities of practice (Wenger, 1998). No community, according to both perspectives, is isolated. Actors (including humans), communities, and organizations constantly interact with their environment. Thus, practices, actions, and structures are networked and co-constructed, and boundaries across organizations, communities, or environments are blurred and overlapping.

Both theories are **social constructivist** in their orientation. Meaning is co-constructed through an active and dynamic process between agents and environments. As humans, we use available resources to make sense of the world and thus reify those same phenomena that we consider to be sense-making resources. According to IT, social processes are reproduced over time, thus taking on meaning as systematic and seemingly "natural" patterns of social behavior. CHAT explains that social processes are created and transformed through processes of appropriation (Newman, Griffin, & Cole, 1989; Rogoff, 1990), discourse negotiation (Wells, 1999, Cazden, 2001), or participation and reification in community practices (Wenger, 1998). Although activities and meanings are subjectively realized, they result from the reproduction of social practices as social and historical constructs. For both theories, dialectical processes are in play: "agency is 'partially determined, partially determining' " (Lave, 1988, as quoted in Cole, 1995) such that subjects, objects, and activities serve mediating roles (Engeström, 1999). Social constructivism leaves open the possibilities for positive, substantive social change and transformation.

The theories also share a focus on **ideology**, thus the notion that human activity is always infused with value. Communities and organizations are defined by common practices (Wenger, 1998, Rogoff, 2003), which enact normative, regulative, and cultural cognitive goals (Scott, c2001). IT explains that the "rules of the game" that organize our communities and activities are never neutral but enact dominant social values, which have been "institutionalized" over time (North, 1994). Even ideas such as rationality, self-interest, and efficiency are ideological constructions that are nearly invisibly embedded in the structures we develop (Rowan & Miskel, 1999). CHAT, too, explains that all activities are mediated by social and cultural forces, including rules and the division of labor of communities and the artifacts that carry and transmit these forces (Engeström, 1987; others). The practices of communities provide resources that enable and limit the activities of individuals within that community (Wenger, 1998).

Finally, both IT and CHAT highlight the **historical recursivity** of human activity. History is a critical analytic factor, which is enacted in current activity, structure, and meanings. For institutional theorists, organizations enact historical premises through their policies and structures, which preserve legitimated goals and values through time. Two such scholars, Berger and Luckmann, have noted, "it is impossible to understand an institution adequately without an understanding of the historical process in which it was produced" (1957). Institutions are expressed in ongoing human activity, and thus develop slowly over time.

Rather than looking to the immediate context of social organization, then, IT looks at changes over long periods of time to understand organizational behavior. Similarly, cultural historical activity theorists assume that the history of interaction mediates current interaction. In other words, the human environment is deeply connected to prior generations through the tools, etc. we use (Durkheim, 1947; Leontiev, 1932; Vygotsky, 1978; Engeström, 1987). As Vygotsky explains, “The historical study of behavior is not an auxiliary aspect of theoretical study, but rather forms its very base” (1978, p 64-5).

Analytic Complementarity

These theories, while conceptually congruent, emphasize unique levels of analysis and thus are analytically complementary. While CHAT focuses on the “individual in dialogue or the object oriented activity system” (Daniels, 2005 p. 1), IT works to understand societally structured institutional environments that shape both the formal and informal structures of organizations. As a result, each theory brings a distinct focus to examining various levels of the social system that constructs the contexts where daily activity occurs. Each theory provides a variety of conceptual tools that allow an analysis that spans the divide between the macro social forces and the micro interactional forces that make up the action of individuals and groups. This is particularly important for the study of education, where, in industrial and post-industrial societies, formal organizations are the site for many educative functions.

The conceptual framework provided by CHAT is noteworthy for the explanatory power it brings to understandings of learning, practice, and interaction at a micro level. Learning results from the appropriation of social patterns in interaction and is always enacting the social/cultural contexts in operation. However, as is often the case, studies of learning, and especially learning in the context of organizations like schools and museums, often neglect the social structures, and normative forces that constrain and afford the context in which learning occurs. IT provides tools, not only to help look for these often-taken-for-granted structures, but to understand their origination in history, their stability, and broader implications in the explanation of and potential for change in the learning practices found in formal organizations. Thus, a theory about organizations could inform the conceptualization of the contexts in which activity systems lie.

Research Questions

The theoretical framework that combines CHAT and IT guides our attention towards particular features of organizations as contexts for learning, which raise potentially important questions about learning and the social contexts in which learning occurs. Two questions concern the appropriateness of drawing distinctions between “informal” and “formal” in characterizing both learning and its organizational settings. CHAT posits a general conceptualization of learning that emphasizes socio/cultural nature of learning by locating it in activity systems. It does not distinguish between informal and formal types of learning, raising the question of the basis for making such a distinction. IT is one perspective in the interdisciplinary field of organization theory, which is applied to the study of formal organizations. Both museums and schools clearly fall within the parameters of what constitutes a formal organization, raising the question of the basis for distinguishing “formal” learning settings, or schools, from “informal” learning settings, which include museums, science centers, aquaria and botanical gardens.

The CHAT/IT theoretical framework also suggests several sets of questions regarding schools and so-called “informal” settings for science learning and their relationships. Several come to mind. What do the institutional histories of organizations, such as schools and museums, reveal about how institutions, or cultural rules, shape these organizations’ formal and informal structures? What do institutional histories reveal about the resistance of organizations to change and innovation? What do institutional histories reveal about sources of change and innovation in education, generally, and science education, specifically? How do the formal and informal structures of educational organizations influence activity systems, or contexts for learning and teaching? What do the institutional histories and structures of schools and other educational organizations, such as science museums, reveal about existing relations and suggest about potential relations? How can research credibly document relations and influences between macro-, meso- and micro-social levels of analysis?

What Do We Know and Not Know?

CHAT has informed a large and growing body of research on learning in social/cultural context in schools. While research on learning in so-called “informal” settings is a newer field of inquiry, scholars—including

CILS faculty, postdoctoral fellows, and doctoral students—are contributing to this body of research, generally, and to research from a CHAT perspective, specifically. Despite these advancements, research has only begun to investigate the social/cultural system revealed by the CHAT/IT theoretical framework. Consequently, the research questions that we raised have not been answered. Our intention is to employ the Exploratorium, a prominent science center, as the principal site for exploring linkages between the institutional environment, organizational structures, and learning contexts as well as relationships between this “informal” site and schools.

A related issue that arose during the BAI roundtable concerned the relevance of the CHAT/IT framework and the research it would spawn for the work of practitioners in science museums and centers. It was not apparent to practitioners who participated in this roundtable how analyses of macro-level phenomena, such as the impact of the institutional environment on the structures of educational organizations, would inform their work. This is an important issue that must be addressed by our research team. One approach will be to include practitioners from our research sites in both conceptualizing studies and assessing the implications of their findings for the work in which they are involved.