1 Introduction

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The *LCHC Newsletter* articles that are contained in this volume are important benchmarks in the history of a discussion of context, culture, and development. The central theme of this discussion can be posed as a question: How shall we develop a psychology that takes as its starting point the actions of people participating in routine cultural contexts? This question engenders a second: What kind of methodology does the study of human behavior in context entail?

In retrospect it is possible to identify the late 1970s and early 1980s as a time when many students of human development began to express the need for a new unit of psychological analysis, one which attributed to that elusive concept, context, a central role in the constitution of human nature. Several publications at the time gave voice to this convergence.

In her article on cognitive development in the 1978 *Annual Review of Psychology*, Rochel Gelman reviewed the emerging evidence that changes in the way Piagetian concepts were investigated – changes in context – produced apparently dramatic changes in the cognitive competence preschoolers display. Uri Brofenbrenner's classic monograph, *The Ecology of Human Development*, appeared the following year, providing a workable heuristic for contextually oriented developmental psychologists. Up to that time, the research group associated with LCHC had concentrated its efforts in the area of cross-cultural research, arguing for what we called a "cultural-contexts" approach to development. As Gelman noted, our demonstrations of a critical role of experimental procedures in children's expression of cognitive competence had

implications for cross-age, within-society research. New approaches to research and theorizing about human development were called for. Answering that call seemed no easy matter.

Especially important to work presented in this volume was the appearance, in 1978, of Vygotsky's *Mind in Society*. Although not explicitly contextualist in its world view, *Mind in Society* provided a way to link American ideas about context and the heterogeneity of mind across settings with Russian ideas about the historical nature and social origins of higher psychological function and a deep appreciation for the centrality of cultural mediation in the constitution of human psychological processes. At present, as a result of intense interaction among psychologists, anthropologists, linguists, sociologists, and mixes of scholars from other disciplines, new "interdisciplines" are popping up and in some cases becoming institutionalized. Cognitive Science and Communication are two such hybrids. Cultural Psychology is a third.

Although the idea of Cultural Psychology is older than the discipline of Psychology itself (Cole, 1990), the idea reemerged in the late 1970s as one expression of context as a central constituent of human mind. Douglas Price-Williams, who gained prominence for his cross-cultural research, defined Cultural Psychology as "that branch of inquiry that delves into the contextual behavior of psychological processes" (Price-Williams, Gordon, and Ramirez, 1979, p. 14). Suggestions were made by a number of psychologists, some emphasizing the intimate relation between context and meaning, others the equally intimate relations between context and emotion, and all concerned with the study of development. (See Bruner, 1990; Shweder, 1990; and Valsiner, 1995, for summaries.)

Whatever one's entry point into the study of culture and development, a commitment to a unit of analysis that includes individuals and their sociocultural milieu immediately entails a series of major methodological problems to anyone who would seek to embody the resulting theoretical notions in empirical practice. To begin with, such an enterprise cannot proceed entirely on the basis of experimental methods, nor can it draw theoretically only on psychology. It must be multimethod and interdisciplinary.

Interdisciplinarity is a fashionable buzzword that evokes warm feelings in right-thinking scholars, but it is a whole lot easier said than done.

Disciplines are paradigms, ways of seeing and interpreting the world. To mix disciplines is to ensure that the way data are collected and interpreted is certain to offend as many members of a research group as there are disciplines represented. What an interdiscipline such as Cultural Psychology calls for is its own methodology, its own "disciplined" way of linking theory and evidence.

Despite their diversity, the authors of the articles contained in this volume are distinguished by the ways in which their work combines insights from the cultural historical psychological tradition of Vygotsky, Luria, and Leont'ev, the American Pragmatist tradition as exemplified by scholars such as Dewey and Mead, and the work of sociocultural anthropologists and sociologists. The resulting discussion, therefore, is a blend of American cultural anthropological approaches and Russian historical approaches infused with ideas from other disciplines and other national traditions including a number of participants from European countries and Japan.

Evidence for the contemporary relevance of these articles comes from examining the questions that arise when we juxtapose the ideas of James Wertsch, Jean Lave, Barbara Rogoff, and A. N. Leont'ev, all of whom are important to the development of Cultural Psychology.

Jim Wertsch and his colleagues carry forward the tradition of Vygotsky by starting with the idea of mediation of behavior through signs and other cultural artifacts. This starting point is enhanced and enriched with Bakhtin's notions of social language, speech genre, and voice (Wertsch, 1991, 1994, 1995; Wertsch, del Rio, and Alvarez, 1995). Wertsch and his colleagues choose mediated action as the proper unit of psychological analysis. Starting in this manner requires them to find a way to go beyond mediated action to specify the "something" ("the context") with respect to which that mediated action becomes meaningful. Wertsch (1995, pp. 71–72) turns to Burke's (1962) pentad of literary analysis (act, scene, agent, agency, and purpose).

Another important example of cultural–contextual theorizing is the situated learning (or legitimate peripheral participation) approach promoted by Jean Lave and her colleagues (Lave, 1988; Lave and Wenger, 1991). The central concepts and unit of analysis in this line of inquiry are practice, community of practice, and participation. While acknowledging the importance of mediational means, this unit is decidedly broader than individual action. Moreover, practical object-oriented

work is investigated on a par with interaction and sign-mediated communication.

Barbara Rogoff's current thinking complements the perspectives of Wertsch and Lave. For Rogoff, development is participation in sociocultural activity. Activities are made up of the active and dynamic contributions of individuals, their social partners, historical traditions and materials, and their (mutual) transformations. Any activity, according to Rogoff, must include the analysis of three forms of change: Change in the child's participation (personal plane), changes in the relationships between participants (interpersonal plane), and historical changes in technologies and institutions (community plane). Even a cursory consideration of Rogoff's ideas makes clear the methodological challenge of her position, and by implication, all of the varieties of cultural–contextual approaches of which hers is one prominent variant. Experimental psychology, discourse analysis, ethnography, and microsociology (to name a few) are all involved.

A fourth direction in recent cultural–psychological research represented in this volume is the theory of activity, initiated by Leont'ev (1978, 1981). Activity is here seen as a collective, systemic formation that has a complex mediational structure. Activities are not short-lived events or actions that have a temporally clear-cut beginning and end. They are systems that produce events and actions and evolve over lengthy periods of sociohistorical time. The subject and the object are mediated by artifacts, including symbols and representations of various kinds. The activity system incessantly reconstructs itself through actions and discourse. As a consequence, activity theory calls for historical analysis of the collective activity system, a point also made by Rogoff.

Recent work in activity theory (Engeström, 1987) emphasizes that activity systems contain a variety of different viewpoints or "voices," as well as layers of historically accumulated artifacts, rules, and patterns of division of labor. This multivoiced and multilayered nature of activity systems is both a resource for collective achievement and a source of compartmentalization and conflict. Contradictions are the engine of change and development in an activity system as well as a source of conflict and stress.

Although each of these perspectives extends the new understanding of culture, context, and cognitive development that began to emerge in the late 1970s, each of them also poses acute questions of how to convert

methodological and theoretical programs into doable projects. For example, while a variety of scholars such as Wertsch are drawing upon Burke and his use of the dramatic metaphor, there is as yet no generally agreed upon way to embody Burke's ideas in a way that cognitive psychologists would find acceptable as a source of empirical data.

Psychologists who wish to build upon Lave's work face similar methodological problems. The theory of legitimate peripheral participation investigates learning and development primarily as movement from the periphery occupied by novices to the center inhabited by experienced masters of the given practice. But it is position in the group, not properties of individuals qua individuals, that are of concern. Are psychologists to give up on the analysis of individuals altogether and abandon psychology's traditional mission? On the other hand, if researchers want to attribute aspects of action to individuals as well as supra-individual units, how can they do so given the intimate dialectical constitution of action which situated action theorists take as primary? How does one mix historical analysis with experimental analysis or discourse analysis? What role does experimentation play in the tool kit of methods? What role should ethnography or discourse analysis play when experiments are also used?

These and many allied questions are taken up in the articles presented below. While there are no definitive answers to the many questions entailed by allegiance to a cultural psychology, there is a good deal of accumulated experience, detailed maps of blind alleys, and perhaps some wisdom that can be appropriated to deal with the tasks at hand.

The problem of context

Since the *Quarterly Newsletter of the Laboratory of Comparative Human Cognition* began with the question of context, it is fitting to start this collection of articles by addressing this seminal concept.

The work by members of the research group that evolved into LCHC began with cross-cultural research on cognitive development in Liberia. The basic impulse in that research was to take the doings of people in their everyday lives (of which tests and schools are one class of doings) as the starting point of psychological analysis. "Context" functioned as an omnibus category that allowed the analyst to point to factors outside of the psychological task itself as contributors to performance. In the

logic of that early work, context could be considered a "stimulus variable," a "proximal cultural medium," that could be related to performance as dependent variable. Over time, however, it became clear that it is inadequate to conceive of context merely as a preset environment that influences behavior. The two articles included in the section on context both represent clear and persuasive arguments for thinking about context in more complicated ways than we did in the late 1970s, as many psychologists are wont to do today. Fred Erickson and Jeff Schultz articulate the idea that contexts are not given, they are mutually constituted, constantly shifting, situation definitions that are accomplished through the interactional work of the participants. Erickson and Schultz begin by reviewing relevant research from sociolinguistics. They then present a five-stage strategy for the study of context through an analysis of the changing organization of face-to-face interaction using videotapes of strips of interaction as their basic source of data.

Charles Frake (1977) discusses contexts as cultural frames of interpretation. He modifies the idea of culture as a script for the production of social occasions, recasting cultural scripts as sets of principles for constructing (perhaps co-constructing is a better term) social events. He emphasizes the crucial point that culture is more than a fixed set of interpretive frames that people acquire; rather, it is a set of resources for creating culture and cognition. Frake's formulation provides one promising starting point for those seeking to use the dramatic metaphor as a heuristic for working out a contextual, activity-based psychology.

Experiments as contexts

Given the starting point of LCHC in the experimental study of culture, mind, and development, it should come as no surprise that a great many of the articles published during its early years addressed the problematic nature of experiments as instruments for reaching conclusions about culture and cognitive development.

One of the few concepts used by psychologists to address the issue of experiments as contexts is the idea of ecological validity, normally thought of as the extent to which the conclusions drawn from experimental and test methods are applicable outside of the procedure itself

and the extent to which they are representative of psychological functioning in everyday life. The article by Cole and his colleagues (1978) traces out some of the history of discussion of ecological validity, pointing out that despite rhetorical gestures toward satisfying this criterion in cognitive research, the problem is more difficult than psychologists have ordinarily thought.

The difficulties of using experimental studies as if they were context-free indices of cognitive processing are the topic of Jean Lave's (1980) article. Lave's concern is to undo the asymmetrical analytic power accorded to experiments as revealed by the question, "Does this experimental result generalize to everyday life?" In its place she proposes a more symmetrical question: "Is there any hope we may learn from contrasting performances in contrasting situations?" She gives an affirmative answer to this question, drawing upon the first results of the work she and her colleagues conducted on arithmetic practices in supermarkets and weight watcher clubs (see Lave, 1988; or Lave and Wenger, 1991, for accounts of the later evolution of these ideas).

A major concern of researchers at LCHC has been to bring critical analyses to bear on claims of ethnic or racial cognitive inferiority based upon performances in cognitive psychological tasks. A. F. Franklin's (1978) study of word recall memory is representative of one genre of critical methods. Franklin notes the use by Arthur Jensen of category clustering in free recall to make claims that African-Americans are deficient in higher-level, transformative remembering. Franklin draws upon extant research to argue that the African-American students are placed at a disadvantage because of their relative lack of familiarity with the categorical structure of word lists created on the basis of Anglo norms. He demonstrates how manipulation of list contents can reverse the direction of deficits, taking the deficit out of his subjects' heads and placing it in differences in everyday language which previous researchers had ignored.

Despite the difficulties, not only members of LCHC but many developmental researchers began to create methods for the study of cognitive development in a variety of settings. Judy DeLoache and Ann Brown's (1979) study of young children's ability to remember the location of objects using a delayed response will come as no surprise to anyone who has been a parent, but it came as a distinct surprise to psychologists who had been drawing conclusions for years about preschoolers' deficient

memories. In subsequent years, research such as this has led to a radical reevaluation of early cognitive development in which the crucial role of context in performance is widely recognized (see Cole and Cole, 1993, Chapter 9, for a recent summary).

Sayeki (1981) argues persuasively that the human body provides a rich source of intellectual resources that can be brought to bear for the solutions of intellectual problems. His emphasis on an embodied point of view as a fundamental aspect of thinking and ways in which it can be harnessed to aid problem solving is an important early contribution to the current discussion on the situated nature of culturally mediated thought processes.

The article entitled "Paradigms and Prejudice" authored by a group at LCHC (1983) takes up another aspect of the way that research on ethnic group differences is practiced in the United States. The provocation for writing this article was a request for assistance from an African-American colleague. Her grant application for studying a feature of language acquisition was rejected when two reviewers argued that such research should first be conducted on middle-class Anglo children to establish the appropriate normal profile against which data from African-American children could be analyzed. Unfortunately, the difficulties to which this article is addressed remain relevant to the present day.

Exploring cultural historical theories

At the time that LCHC came into being in the early 1970s, the focus of its efforts was largely methodological. Insofar as a theoretical position could be said to characterize the work, that theory was derived largely from American psychological, sociological, and anthropological sources. The first article representing Russian ideas was by L. A. Abramyan (1977), a student of Luria's. Its point was interpreted in the context of questions about developing experimental methods.

In the late 1970s, as noted earlier, there were marked changes. The articles in this section provide a snapshot account of several different lines of theory that take cultural mediation and the historically contingent nature of human thought as their starting points. Norris Minick

(1986) traces changes in the ideas of Vygotsky and his colleagues in the late 1920s and 1930s. According to Minick, it is possible to see a shift from a focus on social interaction as the locus of mind to a concern for including the sociocultural context, or activity, of which the interaction is a part as an essential constituent of mind.

Erik Axel's (1992) narrative picks up, so to speak, where Minick's ends. He traces the development of the activity theory proposed by Vygotsky's student and colleague, A. N. Leont'ev. Axel also considers the way in which various features of Leont'ev's approach can be improved upon by taking into account the Critical Psychology tradition that came to prominence in Germany and other European countries in the 1970s.

David Bakhurst (1988) explores the ideas of another, less well known, contributor to the cultural–historical, activity-centered approaches that flowered in the 1960s and 1970s, the Soviet philosopher Evald Ilyenkov. Bakhurst presents Ilyenkov's ideas as an important resource for making the transition from Cartesian theories of mind to a nondualistic, cultural-mediational, communitarian theory. It is sometimes thought by American social scientists that commitment to cultural–historical approaches derives exclusively from the work of Russian scholars. In fact, however, the key notion of cultural historical approaches that human beings engage in a species-specific form of mediated action through the appropriation of the resources bequeathed by prior generations has adherents in many countries.

Ernest Boesch, whose (1993) work draws upon Piagetian ideas, presents a vivid account of cultural–historical thinking in his discussion of the kinds of evidence that one must bring together in a fully realized cultural mediational approach to culture and cognition. The material and the ideal, the historical and the contemporary, the individual and the social, are all simultaneously present in his finely wrought thought experiment.

Alfred Lang's (1993) major inspirations for developing a cultural mediational theory of cognition are derived largely from German and American sources, not Russian ones. It is elaboration and wedding of ideas from Kurt Lewin and C. S. Peirce that motivates his discussion of how to develop a non-Cartesian, ecological approach to thinking about culture and mind.

Historical analysis

A basic tenet of cultural–historical approaches to cognition is that mental functioning in the present emerges from the interplay of different developmental domains including cultural history, ontogeny, and microgenesis. Actual historical analysis or the use of historical materials as an object of study has been rare among scholars interested in culture, context, and development. The papers in this section represent two quite different attempts to carry cognitive psychological analysis beyond the study of individual ontogeny to make history a usable resource for psychologists.

Ageliki Nicolopoulou (1989) draws upon the work of the German psychologist Peter Damerow and his colleagues, who analyzed a large corpus of texts taken from the ancient Middle Eastern city of Uruk in what is currently called Iraq. A major goal of Damerow's work has been to see if it is possible to determine when and if the material representation of cognitive structure influences the process of cognitive development. Nicolopoulou concludes that the availability of new media for representing number may enter directly into the process of epigenesis by promoting the crystallization of arithmetic operations in a form that opens up new developmental horizons.

James Wertsch's (1987) contribution addresses the issue of collective memory as it is conceived within the theoretical tradition of Vygotsky and Leont'ev. Wertsch believes that while Vygotsky's analysis was strong in illuminating the dynamics of higher psychological function in dyads, it needs to be supplemented by approaches that link to the activity settings in which people function if it is to become a comprehensive theory of mind in society. Wertsch suggests that one way to deal concretely with questions of the cultural–historical conditioning of mental processes is to focus on the mediational means involved, which carry with them histories of which they were a part. As he puts it, what is available in particular people's tool kits depends in a central way on their sociohistorical and cultural situation.

Focusing on language as a tool, Wertsch examines the writings of sociologists such as Robert Bellah and his colleagues, pointing out how certain language genres are privileged over others, entering into the creation of communities of memory where constitutive narratives are central into the creation of both one's social world and the ability to com-