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**LCHC: A PROGRAM OF RESEARCH AND TRAINING
IN CULTURAL PSYCHOLOGY**

A Twelve Year Program of Research
and Training in Cultural Psychology

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Cultural Psychology

Note: This is the first draft of a progress report that I have been preparing. I am distributing it to selected people with a long history of interest in LCHC. I have not been able to get feedback on this effort, in its written form. I am grateful to all of you who wrote for being there. Excuse the glitches. Your corrections, additions and counterarguments are heartily encouraged.

MICHAEL COLE
(January 18, 1984)

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LCHC: A PROGRAM OF RESEARCH AND TRAINING IN CULTURAL PSYCHOLOGY

The Carnegie Corporation made its first grant to us in 1972. Then as today, there was widespread doubt about the meaning of psychological test performance, especially the significance of psychological ability testing for educational practice. It was just three years since Arthur Jensen had shocked the nation into doubt about the power of education to close the gap in educational achievement between America's ethnic minorities and the Anglo, largely middle class, majority. A rising tide of biological determinism was chilling efforts at educational reform. Tests were at the forefront of public concern because they are highly visible manifestations of our social selection system and the instruments with which questions about biological and social contributions to cognition were decided. But behind the argument on testing lay basic questions of schooling and society.

Our prior research in Africa (published in 1971 under the title of *The Cultural Context of Learning and Thinking*) had led us to doubt the validity of tests as *general* measures of intellectual capacity. More importantly, we had begun the long process of developing an approach to the study of psychological test performance that would allow us to make principled statements about culture's contributions to cognitive development. Our approach, although rooted in experimental psychology, assumed that experiments model cultural practices, thereby committing us to employ ethnographic and linguistic techniques, in addition to experiments, as a part of our overall approach.

Phase 1: The Cross-cultural Background

It would require too much space to summarize adequately the series of studies that my colleagues and I had conducted or were conducting in 1972. But I can state conclusions relevant to the Corporation's concerns that I believe we had been addressing.

The Importance of Content in Constituting Cognition

The initial puzzle centered on schooling, particularly the extreme difficulty that Kpelle (Liberian) children experience with school mathematics. We confirmed these difficulties in a series of controlled studies. However, we also discovered that if we took our observations from farming practices centering on amounts of rice, rather than problems set by the school curriculum, not only did we find a coherent system of measurement appropriately coded in the language; we could find circumstances in which non-literate Kpelle outperformed Yale college students. Similar observations by others led us to emphasize the importance of culture in organizing dense practice in areas of life central to survival. Subsequently, a number of studies have emphasized that differences in cognitive content account for many cases of apparent differences in cognitive processes. In recent years, this issue has emerged as an important starting point for a reevaluation of developmental differences in cognition in American and European-based theories and research.

The Importance of Context

Content and context are related, but by no means identical. The same "content" (kernels of corn, for example) can enter into many different contexts. In a series of studies among Mayan peasants in rural Yucatan, we attempted to show how change in content from "abstract" shapes to "concrete" kernels of corn could induce a content-based shift in cognitive processing. Peasants who had taught *us* the local category system for corn were unable to construct these same categories when we used corn kernels in a conceptual sorting experiment. Kpelle adults who adroitly manipulated reference in legal disputes to suit their own advantage were hapless

communicators when asked to select highly codable, familiar sticks from arrays designed to assess their referential communication ability. A more sophisticated notion of content, one which seemed to be captured by the idea of context, seemed necessary.

The Non-Transparency of Experimental Tasks

Unexpected variations in performance associated with content and context made us very sensitive to the fact that *all* experimental procedures embody normative content and require interpretation on the part of the subject that constitutes the context of observation. A good many of our early studies began with procedures only slightly modified on the basis of local conditions and proceeded to search for systematic variations in performance that would allow us to link the density of cultural practice to the particular form of experimental procedure we used to map that cultural practice onto our experimental procedures, and thus to inferences about psychological processes.

For example, Kpelle children's difficulties in science classes had led to speculation that Kpelle culture fails to provide practice in rules of inference. Using an apparently simple apparatus designed to study the development of inferential ability in American children, we tested Kpelle children and adults with varying degrees of educational experience. The difficulties experienced by Kpelle adults were severe, a result that might lead us to infer real incapacities of reasoning.

Changes in the procedures that substituted match boxes, keys, locks, and other common objects for aspects of the standard apparatus, while keeping the logical rules identical, removed all difficulties, even for very small children. When these same manipulations were carried out with American children, the same result obtained; even very young children, who had been judged incapable of such inference, were found capable under slightly altered, but logically equivalent, circumstances.

Sample Publications

Cole, M., Gay, J., Glick, J. A., & Sharp, D. W. (1971). *The cultural context of learning and thinking*. New York: Basic Books.

Implications for the Carnegie

Whatever the explicit goals of the Corporation, the basic logic they seemed to be supporting through their interest in this work was roughly the following:

If a culturally sensitive methodology could be devised to demonstrate intellectual competence among Liberian rice farmers where standard procedures characterized them as incompetent, might not a similar approach help to explain the sources of poor cognitive performance among U.S. ethnic minorities and provide clues that would help educators improve their school achievement? This question offered a specific kind of hope. If a substantial amount of cognitive variability could be associated with cultural causes, and some of those causes could be pinpointed, school programs might be modified to unleash misdirected intellectual resources. At the same time, a more representative group of Americans would have access to institutions of higher learning bringing needed diversity into the top echelons of public policy and education. If this was not Carnegie's interest, it is at least how we construed that interest.

Stated so baldly, this line of endeavor might seem a little far fetched. It is certainly a heavy bell to hang around the neck of a very young and shaky goat. But it also turned out to be an extremely fruitful way to organize research that pushed toward a cultural theory of mind, or so we would like to convince the reader.

Phase 2: Setting up the Research Program, 1972-1974

At the time the first grant was awarded, LCHC was still involved in international, cross-cultural research. On the one hand, a grant from the Office of Education permitted our unusual opportunity to apply research principles originally evolved in Liberia, West Africa, to a systematic study of the cognitive consequences of education in the Yucatan, where schooling was variable, but extensive. Second, a really rare opportunity to study literacy independent of schooling presented itself in Liberia. Carnegie provided funds to initiate this second project, but it turned out to be a gigantic undertaking that required separate funding. Support from the Ford Foundation permitted the work to go forward to completion.

The Cognitive and Social Consequences of Schooling

From the very outset, our work was carried out in the context of international efforts to improve education in economically under-developed countries. While strongly believing in the importance of economic and political self-determination, we also became skeptical of the sources and apparent generality of the effects produced by schooling. On the one hand, our results suggested that a good deal of research in the United States in which age and schooling are highly correlated were reflecting specific practice in school, not general developmental functions. On the other hand, we could not readily accept conclusions to the effect that cognitive development was generally arrested by the absence of schooling. Rather, it appeared possible that the same principles which applied to non-literates applied to literate schooled people as well; their development was context and content dependent. The cognitive tasks which we used mirrored the structure of their experience in school so their development only *appeared* more general and extensive because so many of the cognitive tasks that we assumed to be general indices arose historically in connection with literacy and the demands of schooling.

These conclusions received a mixed reception from our colleagues. On the one hand, our emphasis on constructing cognitive tasks around native materials and our caution about inferring cognitive incompetence from poor performance were accepted as a useful antidote to overgeneralization and a safeguard against ethnocentric comparisons. On the other hand, we had failed to produce general positive statements about culture-cognition relations much more novel than "practice makes perfect." All agreed that we needed a theory of situations to go with our observations of situational variability; as a general undertaking this approach appeared impractical. This issue continues to occupy us to the present time. In later sections we will describe where this work has taken us.

Sample Publications

- Sharp, D. W., Cole, M., & Lave, C. (1979). Education and cognitive development: The evidence from experimental research. *Monographs of the Society for Research in Child Development*, 44(1-2, Serial No. 178).
- Scribner, S., & Cole, M. (1973). Cognitive consequences of formal and informal education. *Science*, 182, 553-559.

The Cognitive Consequences of Literacy

A basic claim of the early cross-cultural work was the existence of a close fit between the range of contexts in a culture within which particular kinds of practice were provided on the one hand and the generality of cognitive consequences on the other. While the totally general case may be virtually impossible to demonstrate, we succeeded in applying these ideas to the case of literacy among the VaL Remarkable for having invented their own syllabic writing system, the Vai also engage in literate practices in English and Arabic. Each writing system is associated with particular areas of life (Vai is used for personal affairs including family businesses, Arabic for religious purposes, English for dealing with the government and national commercial interests). Our research showed that each kind of literacy produced script/activity specific cognitive

consequences, which mapped very nicely on to the associated areas of cultural practice. These practices were, in turn, constrained by the larger socio-political situations. Implications of this work will be discussed below.

Sample Publications

Scribner, S., & Cole, M. (1978). Literacy without schooling: Testing for intellectual effects. *Harvard Educational Review*, 48(4), 448-461.

Moving the Strategy Home

These cross-cultural studies were extremely productive. But it was domestic problems that were the focus of our concern, and it is around domestic research that LCHC's major efforts have revolved ever since.

The major challenge was clear; to bring the power of our cross-cultural research strategy into New York City. The major obstacles were also clear:

- J) Strong resistance by minorities to white researchers in their communities [see attached letters from Sister Hamilton, P. Wilcox, and reply).
- 2) Institutional and social barriers to psychological research outside of specific institutional settings.
- 3) The absence of a usable theory of embedded culture to provide guidance in making observations and isolating plausible variables to relate to explicit displays of cognitive performance.

We will pause to summarize each of these barriers because they were essential in shaping our work over the past decade.

The Problem of Cultural Domination

One of the key assumptions of our work was that in order to understand how culture influences mind, it is necessary to investigate those areas of experience where cultures provide people with dense practice. This meant that we had to look at people's everyday experiences in contexts of importance to them.

In Liberia or Mexico we were very clearly outsiders. In general we were understood by native peoples to have some kind of government backing associated with schooling and community development. If the chief of the village or the mayor of a town told people to make the visitors welcome, by and large they did so. This compliance was in part born of hospitality and curiosity, but it was backed by the authority of the government; to refuse a request from that source requires one to think twice. Besides, we generally brought the money associated with the presence of Americans in the poor countries of the world.

Having access in this sense was a great benefit to the work, but it came at a high cost. We could go with people to work and sit around asking questions or posing various puzzles; but we were inalterably foreign. We needed expert help from people who knew how things worked *from the inside* to keep us from blundering into trivia. Our most effective helpers were high school and college students, young people (mostly men) who had one foot in the world of Western schooling, but retained a native's knowledge of how things work outside of

school. As time went by, we came to understand that our helpers were often marginal people. Only rarely did we find someone who had advanced into relatively select circles of indigenous knowledge as well as the culture of the school. Nonetheless, we had entry and we worked out ways to teach what we were doing in exchange for what we learned.

In making the transition to New York City in 1971 a whole new set of problems had to be faced. First and foremost was the issue of Black-white collaboration. When I first decided to attempt comparative research within the United States to see if it was possible to generalize our Liberian experience, I contacted Black psychologists living in New York City. I met at Medgar Evers College, a heavily minority college within the City University, with A. J. Franklin (then a dean), Rae Banks and John Dill. The question we discussed was whether there was any way in which Black and white researchers could collaborate on research relating cultural variables to cognitive development. Everyone was doubtful. But they read the new book on cultural contexts and kept on talking, not just to me but to their colleagues.

In the spring of 1973 I received two letters and some reading material from Black community organizations that had been organized to control the activities of white researchers working in their communities. Copies of these materials are appended. These documents are worth reading both as evidence of the degree of organization of the Black community at the time and for the acuity of the basic critique justifying the writer's assertive stance. It is also important to recognize that each group is willing to consider the possibility of collaboration under some conditions. Sister Hamilton from the Boston Black United Front ends by offering to assist us "in doing what few if any white researchers have ever been able to do; be responsible for research that is necessary, relevant and useful in combating the oppressive forces of racist forces of racism in America." Preston Wilcox of Afram Associates wasn't so kind. He had me classed as a "colonizer," a person who comes in to take resources from the Black community and who will rewrite history in order to make *his* entry into the Black community the source of its virtues. This characterization and Wilcox's other categories remain a very useful social typology, one which we encountered repeatedly in later years. In my reply I emphasized both my willingness to talk and my eagerness to work out a genuine cooperative arrangement.

This exchange shows the importance of the cross-cultural research as a vehicle for cooperation. It was really the case that I was not focused on the Black community in the way other researchers have generally been, and I viewed the contributions of black scholars working in the community as essential to the enterprise. Using Wilcox's terminology, I argued that I was a "technician," not a "colonizer." I knew how to do certain kinds of research. I could not do it alone. But I could do it in cooperation with people who, like myself, had specialized knowledge that was one part of the solution to a *common* problem.

My Black colleagues wanted to formulate a Black psychology, rooted in their historical experience, to help them deal with their predicament in America and the world. I wanted to formulate principles of a *cultural* psychology, of which Black psychology, as Black psychologists defined it, might turn out to be one example. I would trade my expertise as an Anglo and a mathematical cross-cultural psychologist for their knowledge as Blacks and psychologists. Over time, and to some degree, my argument prevailed. For how long and to what degree the reader may decide in reading the remainder of this report.

Institutional Barriers

Yet to be explored, even if we could obtain the cooperation of minority group scholars, was the institutional feasibility of the work we were proposing. Not long after we undertook this enterprise, the outgoing editor of "Child Development" commented on the paucity of psychological research about development between a few months and a few years of age. Children seemed to disappear from psychologists' view once they were no longer turning up frequently at well baby examinations and before they entered daycare or school...unless there was something the matter. Much the same problem existed with respect to older children as well as adults when

it came to research on how they did their cognitive processing outside of highly constrained test situations administered in some context of institutional authority (schools, hospitals, the armed services). While waiting for various individuals and groups to decide if we could be trusted enough to work with, we began to explore these social and institutional barriers on the study of cognition in a variety of contexts.

The Absence of an Accepted Scientific Framework

The third major obstacle facing our work, even if we obtained the kinds of collaboration and access that we thought that we needed, was the absence of an accepted scientific framework within which to carry out the research as a *positive program*. That is, we could be critical of existing testing and existing test procedures as much as we liked, but what positive program of action did our critique entail?

Our program of research had to face in two directions at once: it had to overcome the incoherences arising from the fact that we constantly violated the accepted division of labor between disciplines. As one commentator phrased it for one area of conflict, "anthropology studies cognitive content, psychology studies cognitive process;" we insisted on their interpenetration. While inter-disciplinary work is fashionable in some quarters, it is always open to the criticism that it is un-disciplined. We also had to provide practical alternatives to existing educational practices based on existing disciplinary bodies of evidence.

Accomplishments: 1971-1974

Balancing authority. My most pressing task was to build a group which could work together in a genuinely comparative framework. This group had to include professionals who were a part of the embedded cultural groups with which we wanted to work. Believing as we did that situational variability was a critically needed feature of our work, we also needed contact with people who could help us to invent ways of working outside of schools and institutional settings. A great deal of effort in the first two years went into creating the minimum necessary conditions for carrying out that work.

We managed to create a research group that was approximately 50% Black by providing full time support to two rather senior researchers. Instead of a single project, our laboratory entered its second phase made up of four sub-projects, two headed by Black psychologists, two by white ones. These projects can be listed as follows:

- 1) Studies of the ecology of learning in school and non-school settings - A. J. Franklin, Principal Investigator. (Ford Foundation)
- 2) Ethnic group differences in the functions of language - William S. Hall, Principal Investigator. (Carnegie)
- 3) The intellectual consequences of literacy - Sylvia Scribner, Co-Principal Investigator. (Carnegie-Ford)
- 4) Subcultural differences and the development of cognitive skills - Michael Cole, Principal Investigator. (Carnegie, NIMH, Office of Education)

These projects all related to the themes that guided our initial Carnegie proposal, but responsibility for major sub-divisions of the work had been decentralized. These sub-divisions were gathered administratively in a newly formed administrative unit, the Laboratory of Comparative Human Cognition. They gathered

substantively in research seminars, overlapping projects, and joint publications.

To gain expertise beyond our own skills in language and non-experimental approaches, we allied ourselves with scholars in other parts of New York City; the network of people with whom we were actively working included linguists, sociologists and anthropologists, as well as the people in the William Estes and George Miller laboratories, cognitively oriented social scientists like ourselves with different foci.

From the beginning, we combined research training with the actual conduct of our research. In the process of putting together the research group, we supported minority group graduate students from various parts of New York City, whose own institutions could not, or did not, offer the training they felt they needed. This training function was supported by Rockefeller University and the Ford Foundation.

Getting to work. Partly as a result of our increasing ethnic representativeness, community barriers to systematic research with children from minority group backgrounds lessened so that we were in a position to apply the work we had been doing in a much more systematic way. Bill Hall began to collect data on language socialization in homes and the community in such diverse locations as the lower east side of Manhattan and Westchester county. Rudimentary relationships with headstart consortia in Harlem were expanded to meet the increased capacities of our larger research group. Our long-standing working relationship with the school district where Rockefeller University is located expanded to include a very mixed district on Long Island and a district that is almost exclusively Black in Manhattan.

We had evolved to the point where we had a research group including several senior investigators working on an interrelated set of problems. At the most abstract level, our task was to specify the cognitive consequences of growing up in different cultural environments. This task required us to carry out cognitive research within a common theoretical framework that included such society-level constructs as "class," "ethnic group," and "education." We also had to deal with the specific ways in which these background variables affect individuals in different social settings; thus we work on problems of language socialization, the properties of formal and informal educational settings, and the consequences of specific kinds of job related activities. As a way of displaying the way in which different activities of the research group were thought to be related, we constructed a schematic Table, which is divided into three parts: macro-social variables, micro-social contexts, and cognitive tasks (see Table 1).

The macro-social variables were involved directly in our work in Liberia and William Hall's study of social class and ethnic groups variations in language socialization. The micro-social contexts were the focus of much of my own research as described briefly above: variations in the experimental situation (classroom vs. supermarket) or dialect or language of presentation, manipulation of specific materials, or children's involvement in the activity. Finally, we conducted experiments on verbal learning, logic, and memory to display the activities that people actually engaged in when confronted with standardized cognitive tasks. We designed several new ways of going about the analysis of testing children's memory or problem solving activities designed to "get underneath" test scores to actual processes.

In the next phase we planned to specify the way in which major social dimensions shape the kinds of micro-social contexts within which people's everyday activities are organized and then the way in which the organization of everyday activities shapes the kind and distribution of cognitive skills that people use. This emphasis on studying several levels of the determinants of activity *simultaneously* became one hallmark of our work.

Our own and others' analyses of the cognitive demands of educational settings that schools make very specific demands for memory activities that people are unlikely to meet in everyday life. Not only are children presented masses of information to be tested at a later time, the child often is presented this material in a way that requires him/her to organize the material around a principle or topic. The school task' differs in significant

Table 1
Overall Conceptualization of
Research
1974-1978

Domains of Concern

<i>Variables & Tasks</i>	Social Class Work Settings Education	Language content & usage Interactional contexts Specific job-related tasks	Memory Logic Language
<i>Sample</i> <i>Research</i> <i>Activities</i>	Hall's lang. socializ. proj. Vai literacy Maya education Scribner & Cole (1973) Sharp & Cole (1974) Cole & Scribner (1975) Cole (1975)	Classroom/ supermarket lang. Games & experiments Vocabulary & memory Hall, Reder & Cole (1975) Cole & Scribner (1974) Hall & Freedle (1973)	Discrim. trans. studies Syllogistic reasoning Classification & memory Cole (1973) Scribner & Cole (1972) Franklin & Fulani (1975) Scribner (1974)

ways from remembering in everyday life (we believe), where remembering is most often a byproduct of *doing*. However, work tasks certainly vary in the extent to which remembering is an explicit part of the job: the checkout girl at the A&P and the taxi-cab driver both have to remember things, but remembering, as an isolated activity, is rarely engaged in for either job; taxi-cab drivers don't sit home studying maps, nor do checkout girls study long lists of products, prices and shelf displays.

Similar considerations apply when we think about what children must do to get along on a day to day basis. They have to remember all the time, but seldom is remembering isolated from doing.

Experimental studies of memory were only then beginning to make this distinction in a systematic way. Following Russian researchers, several psychologists in the U.S. were beginning to study instrumental memory. But we felt the range of settings in this research was systematically underplaying important factors related to out of school (long term) knowledge.

In our work abroad, we had been able to look directly at large changes in macro-social variables that might affect the diversity of people's experience that required memorizing an explicit activity. This variation motivated part of our concern in the study of literacy and education.

We conducted several research studies with Black and white children in Manhattan comparing recall of lists made up with their own items, their own norms, or "standard" norms. These preceding results were technically "culture contingent" because they do not assume equivalence of the materials that go into the experiment. Instead, we generated materials from each group and perhaps each individual. They bear on the issue of ethnic differences in recall by showing their locus to be in vocabulary, not memory.

The same principles were applied to quite different domains of intellectual activity. A principle focus of Sylvia Scribner's work in this area was in age and ethnic group differences in "logical reasoning." Dr. Scribner devised analytic procedures which disarmed the notion that wrong answers on logic questions reflect "logical deficits." Her procedures were analogous to those for isolating the true locus of differences in "conceptual memory."

However, this research, by and large, still represented situationally constrained model activities characteristic of formal schooling, we had still not succeeded in modeling the community settings of everyday activity. When we tried to work with experts by conducting cognitive research in OFF TRACK betting parlors, we could not get past the suspicions of both patrons and police to arrange a serious effort. Nor could we see little children after school or at home except by creating extraordinary arrangements. Our attempt to set up a "store-front" laboratory in Harlem failed to connect in any substantial way with the community. Just as important in view of the standing critique of white research in Black communities was the fact that responsibility for the research remained in white hands; somehow we needed to distribute control and resources while continuing to work in collaboration.

Sample Publications

- Cole, M. (1973). A developmental study of factors influencing discrimination transfer. *Journal of Experimental Child Psychology*, 16, 126-147.
- Cole, M. (1974). Toward an experimental anthropology of thinking. *Anthropology and Education Quarterly*, 5, 7-12.
- Cole, M. (1975). Culture, cognition and I.Q. testing. *The National Elementary Principal*, 54, 49-52.
- Cole, M., & Ciborowski, T. (1973). A developmental and cross-cultural study of the influences of rule structure and problem composition on the learning of conceptual classifications. *Journal of Experimental Child Psychology*, 15, 193-215.
- Cole, M., & Scribner, S. (1974). *Culture and thought*. New York: John Wiley & Co.
- Cole, M., & Medin, D. (1975). Comparative psychology and human cognition. In W. K.

- Estes (Ed.), *Handbook of learning and cognitive processes* (Vol. 1. Hillsdale, NJ: Lawrence Erlbaum & Associates.
- Cole, M., & Scribner, S. (1975). Theorizing about socialization of the intellect. *Ethos*, 3, 249-267.
- Hall, W. S. (1976). Black and white children's responses to Black English vernacular and standard sentences: Evidence for code switching. In D. Harrison & T. Trabasso (Eds.), *A seminar on black English*. Hillsdale, NJ: Lawrence Erlbaum & Associates.
- Hall, W. S., Cole, M., Reder, S., & Dowley, G. (1977). Variations in young children's use of language: Some effects of setting and dialect. In R. O. Freedle (Ed.), *Discourse production and comprehension*. Hillsdale, NJ: Lawrence Erlbaum & Associates.
- Hall, W., Reder, S., & Cole, M. (1975). Story recall in young black and white children: Effects of racial group membership, race of experimenter and dialect. *Developmental Psychology*, 11, 628-634.
- Scribner, S. (1974). Developmental aspects of categorizable recall in a West African society. *Cognitive Psychology*, 4, 475-494.
- Scribner, S. (1975). Situating the experiment in cross-cultural research. In K. F. Riegel & J. A. Meacham (Eds.), *The developing individual in a changing world: Historical and cultural issues*. The Hague: Mouton.
- Scribner, S. (1975). Recall of classical syllogisms: A cross-cultural investigation of error on logical problems. In R. J. Falmagne (Ed.), *Reasoning: Representation and process*. Hillsdale, NJ: Lawrence Erlbaum & Associates.
- Scribner, S., & Cole, M. (1973). Cognitive consequences of formal and informal education. *Science*, 182, 553-559.
- Scribner, S., & Cole, M. (1976). Studies of subcultural variations in semantic memory: Implications of cross-cultural research. *Bulletin de Psychologie*, Special Annual.

Phase 3: 1974-1978

It was very clear after two years of constant effort that a serious attempt to apply our comparative, culture-sensitive approach to cognitive research was going to flounder without substantial, highly skilled, and dedicated minority group initiatives. But those minority scholars who braved their colleagues' scorn to work with us were not especially skilled in this new kind of interdisciplinary research and their commitment was understandably limited.

Either a redoubling of effort was required or the enterprise would have to fold. We redoubled our effort. We needed an ethnically diverse research group that combined research and training. Bootlegging training in the face of demands to deliver the research goods for a paradigm that did not exist was a recipe for failure.

The key opportunity to break out of this deadlock appeared in the person of William S. (Bill) Hall, the Black psychologist, whose work I mentioned briefly above. When Hall came to Rockefeller, he and Cole had found that they had many interests in common, most importantly a desire to conduct genuinely cross-cultural research within the U.S. They planned the bi-racial, bi-dialectical study of language and memory which we mentioned above.

Hall accepted a position at Vassar College for the 1973-74 academic year, which allowed him to pursue collaborative plans with Cole. The result of this planning was two-fold:

- 1) A training program in the conduct research on cognition
- 2) An observational study of early language and cognitive socialization that varied ethnicity and social class, and which incorporated the principles of contextual variability that had grown out of the early work of the laboratory: children would be followed into the home and community.

Support for the research on language socialization was provided by Carnegie to Hall. Support for research by A. J. Franklin and the training program was provided by the Ford Foundation. in separate grants. With these resources, supplemented by federal grants to the Behavioral Sciences Group at Rockefeller University, for experimental studies of cognition, LCHC was born.

Accomplishments: 1974-1978

During this period, the cross-cultural research of LCHC members was completed and all energies were turned to comparative studies in the United States. Several lines of research were being conducted simultaneously:

1. Bill Hall conducted his massive project on the spontaneous language use of Black/white, mid- -dle class/lower class children with 10 preschoolers representing each category. Each child was fitted with a transmitting microphone and his/her talk recorded over a period of weeks in several different settings.

Results of this work have been appearing in print gradually as Hall has brought the corpus under control. Early findings included marked ethnic and social class variations in the degree to which the vocabulary in basal readers and IQ tests was present in the childrens' environment. These differences were themselves conditional on where the recordings were made. The lower class Black children ,emerged as a group with very different language experience than the other three and the largest mismatch between language socialization experience in the home and school.

When these results were put along side of experimental studies emphasizing the importance of frequent contact with the *content* of ability tests, the way in which culturally organized experience can result in test bias was clearly laid out. This result does not thereby erase the problems many of these children experience in school. But it should re-orient our educational activities.

In the course of carrying out this work, Hall collaborated with a variety of scholars, notably John Dore, whose speech act theory provided one of the early analytic tools for rendering the corpus suitable for comparative purposes. The corpus, in turn, challenged the theory, producing a healthy give and take in both directions. In addition, Hall acted as supervisor for several pre-doctoral and post-doctoral fellows (See the separate section on the training program).

Sample Publications

- Hall, W. S. (1982). Continuities and discontinuities in language use." In E. Gordon (Ed.), *Review of research in education*. Washington, DC: American Educational Research Association.
- Hall, W. S. (In press). Continuities and discontinuities in the function and use of language as related to socio-economic status. *Childhood bilingualism: Aspects of cognitive, social and emotional development*. Norwood, NJ: Lawrence Erlbaum & Associates.
- Hall, W. S., & Gearhart, M. (1982). Internal state words: Cultural and situational variation in vocabulary usage. In Borman (Ed.), *The social life of children in a changing society*. Norwood, NJ: Lawrence Erlbaum & Associates.
- Hall, W. S., & Jose, P. E. (1983). Cultural effects on the development of equality and inequality. In *The child's construction of social inequality*. New York: Academic Press.

2. Sylvia Scribner was a key social science theoretician instrumental in the formulation of the idea of literacy *practices* as a basic unit of analysis. She was project director on the Vai literacy project but she was also active in planning and executing New York-based comparative research and helping to train pre-doctoral and

post-doctoral fellows. She initiated research into the development of writing and logical problem solving. Others of her studies demonstrated how school experience teaches a distinctive mode of language use that strips away content in favor of abstract logical rules.

Sample Publications

- Scribner, S. (1974). Developmental aspects of categorized recall in a West African society. *Cognitive Psychology*, 6, 475-494.
- Scribner, S. (1975). Recall of classical syllogisms: A cross-cultural investigation of error on logical problems. In R. J. Falmagne (Ed.), *Reasoning: Representation and process*. Hillsdale, NJ: Lawrence Erlbaum & Associates.
- Scribner, S. (1978). Modes of thinking and ways of speaking. In R. O. Freedle (Ed.), *Discourse production and comprehension* (Vol. 2). Hillsdale, NJ: Lawrence Erlbaum & Associates. Reprinted in P. N. Johnson-Laird & P. C. Wason (Eds.), *Thinking: Readings in cognitive science*. Cambridge: Cambridge University Press.
- Pratt, M., Scribner, S., & Cole, M. (1977). Children as teachers: Developmental studies of instructional communication. *Child Development*, 48, 1475-1481.
- Scribner, S., & Cole, M. (1976). Studies of subcultural variations in semantic memory: Implications of cross-cultural research. *Bulletin de Psychologie*, Special Annual.
- Scribner, S., Orasanu, I., & Lee, C. (1979). Development of category organization and free recall: Ethnic and economic group comparisons. *Child Development*, 50, 1100-1109. Reprinted in S. Chess & A. Thomas (Eds.), *Annual progress in child psychiatry and child development*.

3. A. J. Franklin completed a series of studies among adolescents on the dependence of memory on culturally organized content. Dr. Franklin received the Martin Luther King award for research and contributions to the community, awarded by the New York Society of Clinical Psychologists in 1983, as well as Distinguished Psychologist of the Year which was awarded by the New York Association of Black Psychologists in 1980. On sabbatical leave from CUNY where he is a Professor of Psychology and Associate Director of the clinical doctoral program, Dr. Franklin received a research fellowship from the Rockefeller Foundation and is doing a postdoctoral fellowship at ISR, University of Michigan.

Sample Publications

- Boykin, W., Franklin, A. J., Anderson, J., & Franklin, N. B. (In press). Psychoeducational perspectives on parenting in Black child development. In McAdoo & McAdoo (Eds.), *In research in black child development*. Beverly Hills: Sage.
- Franklin, A. J., & Anderson, J. (1980, June). *Monograph of Basic College Skills*. New York: City University (CUNY), Center for Academic Skills.
- Franklin, A. J., & Anderson, J. (1982). Therapeutic interventions with urban black adolescents. In Jones & Korchin (Eds.), *Minority mental health*. New York: Praeger Press.
- Franklin, A. J., & Anderson, J. (1983). The social context and socialization variables as factors in learning and thinking. In Glaser & Chipman (Eds.), *Thinking and learning skills*. Hillsdale, NJ: Lawrence Erlbaum & Associates.

4. John Dore, in collaboration with Denis Newman and Meryl Gearhart developed Dore's approach to speech acts into a viable descriptive scheme to be used in evaluating cognition and comparing language use across settings. This work carried them into some of LCHC's earliest work in the teaching/learning process.

Sample Publications

- Dore, J. (1979). What's so conceptual about the acquisition of language. *Journal of Child Language*, 6, 129-137.
- Cole, M., Dore, J., Hall, W. S., & Dowley, G. (1978). Situation and task in young children's talk. *Discourse Processes*, 1, 119-176.

Dore, J. et al. (1978). The structure of nursery school conversation. In K. Nelson (Ed.), *Children's language* (Vol. 1). New York: Gardner Press. (co-author)

5. Ray McDermott wrote several theoretical papers on the way contexts are constructed and maintained through interaction, with heavy attention to reading and classroom interaction.

Sample Publications

- McDermott, R. P. (1977). Social relations as contexts for learning in school. *Harvard Educational Review*, 47, 198-215.
- McDermott, R. P. (1977). The cultural context of learning to read. In S. Wanat (Ed.), *Issues of evaluating reading*. Arlington: Center for Applied Linguistics.
- McDermott, R. P. (1977). The ethnography of speaking and reading. In R. Shuy (Ed.), *Linguistic theory*. Newark: International Reading Association.
- McDermott, R. P., & Aron, I. (1978). Pirandello in the classroom: On the possibility of equal educational opportunity in American culture. In M. Reynolds (Ed.), *The futures of education*. Reston, V A: Council for Exceptional Children.
- McDermott, R. P., & Gospodinoff, K. (1978). Social contexts for ethnic borders and school failure. In Wolfgang (Ed.), *Nonverbal behavior*. New York: Academic Press.
- McDermott, R. P., Gospodinoff, K., & Aron, J. (1978). Criteria for an ethnographically adequate description of concerted activities and their contexts. *Semiotica*, 24(3/4), 245-275. Reprinted in 1981, *Language, culture, and cognition*. In R. Casson (Ed.), *Anthropological perspectives*. New York: Macmillan.
- McDermott, R. P., Orasanu, J., Boykin, A. W., & Laboratory of Comparative Human Cognition. (1977). A critique of test standardization. *Social Policy*, 8, 61-67.
- McDermott, R. P., & Roth, D. (1978). The social organization of behavior: Interactional approaches. *Annual Review of Anthropology*, 7, 321-345.

During this period my activities were a mixture of experimental and techniques. At the experimental end I conducted a whole series of studies on content variation, roughly parallel to those being conducted by A. J. Franklin. I also did content variations in the concept learning domain. These were two arenas chosen by Jensen to develop his two level theory of mental abilities, one rote, one conceptual. They were strategically useful to me because they were arenas within which there were fairly well developed process theories so that there was some chance of clear empirical refutation of Jensen's claims.

Through varying the content of the materials (Black and white dolls instead of Black and white people) we showed that children judged non conceptual by Jensen's standards clearly engaged in conceptual behavior when the content was changed to include objects for the children's everyday worlds. Through varying the social setting, we could produce "different levels of language development" in the same children by varying social context. We could produce variations in verbal learning and word use that made minority students appear more or less competent by the standards of the literature.

But these variations were, by and large, of the magnitudes that one encounters in experimental journals. Group performance levels vary, but not generally by vast amounts; all of the children are of normal health and enrolled in the school systems. They all know more or less what to do in such situations. The gap between the small differences in behavior that we could see in our test settings and the large differences we could see in their overall academic attainment was too substantial to be ignored. Equally vexing was the gap between what our experiments looked at and the full range of adult activities that education is supposed to prepare one for. Students who were doing poorly in the classroom appeared more capable in other settings where they had more control over the flow of the activity. It seemed that we needed to get a more principled account of the everyday organization of activities involving basic skills like reading that are central to the curriculum.