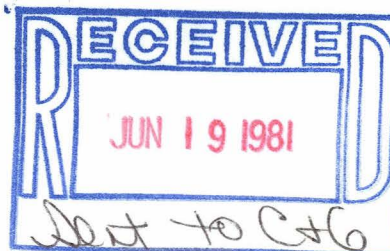Third Quarterly Progress Report


THE ROLE OF LITERACY IN THE NON-SCHOOL AND SCHOOL
ENVIRONMENT OF LOWER CLASS CHILDREN

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During the past quarter we continued our description and analysis of the literacy environment at home and at school of our target children. However, during the past quarter our emphasis was placed on beginning the development of the analytic framework mentioned in our last report. This activity involved specifying the conceptualization of culture in the project using as well as outlining the theory needed to organize our data in a meaningful way. This report will focus on our progress in this area of the project.

## Analytic Framework

### Culture

As we stated in our first report the basic unit in our research is the literate event. This type of description also yields a description of the cultural context of literacy. We consider this type of description to be very important since our approach assumes that written language is a product of cultural history, not a result of biological evolution. The particular view of culture we are using in this study is one which sees it as describing the active life of the human organism. We use the term to refer to the normal, routine patterns of action enacted by people living interactively within a dynamic environment. Thus we take the position that culture is created by people in a mutually transforming relationship with the environment. As recently as thirty years ago S.F. Nadel (1951) pointed in the direction we are taking when he told us;

> Society and culture are broken down, not to, say individuals nor to the "works of man" (Krober), but to man-acting. In this sense no more legitimate isolate can be discovered than that of a standard-ized pattern of behavior rendered unitary and relatively self-contained by its task-like nature and its direction upon a single aim. (Nadel, 1951, p. 75)

A very similar idea is proposed by Fortes (1970) in his discussion of traditional forms of education. For Fortes the "man-acting" unit is called a "social space" and it is discussed in connection with the growing child's interactions with its environment. Fortes characterized the social space as "the part of the society and habitate that the child is in effective contact with." On characterizing relationships between the child and its social space Fortes said;

> The individual creates his social space and is in turn formed by it. On the one hand, his range of experience and behavior are controlled by his social space, and on the other, everything he learns causes it to expand and become more differentiated. (Fortes, 1970, p. 35)

The view of culture we share with Nadel (1951) and Fortes (1970) presents a view of the family of man as people who combine, transform and otherwise acts upon the variety of problems and resources presented by the complex, yet limited, environment. This activity, itself, yields regularities both in terms of individual actions (eating a meal, attending religious services, communicating with others over long distances, etc.) as well as social systems of actions (economics, politics, technology, education, etc.). The regularities appear to result from the human organisms predisposition to select historically and situationally effective actions. Moreover, what we call "predisposition" is, of necessity, constituted of something we must understand as knowledge. In other words the problems and resources presented to the human organism enables that organism (most often, interactively) to make continuing modifications in its store of information, subsequent actions and the nature of the problems and resources the person interacts with. Thus culture is the dynamic nexus between human organisms and their environment. Literacy is one

of the tools created by the family of man which has provided one means of effectively interacting with the environment. However, like language, the ability to use literacy as a tool must be developed, and, like language, literacy is learned in the context of things social.

The analytic framework we are constructing is organized around the literate event and thoroughly involves our definition of culture. Moreover, it seizes upon the fact that literacy is typically displayed in a child's environment as a recurring link in the chain of activity which the child regularly observes, occasionally talks with others about, and participates in. Through the framework we are able to suggest that literacy may also serve as one of the links between culture and cognition. In other words, the action of writing, say, for example, a letter extends in many directions and includes both "things" cultural and "things" cognitive as well as requiring specific operations.

## Theory

Consider the very recent characterization of schemata by Rumelhart and Norman (1980). Condensing their discussion slightly we can conclude that schema theory attempts to account for the representation and application of human knowledge. According to this and all other schema theories, knowledge is represented as schemata. Schemata consist of subschemata. Different theories pursue the micro-structure of schemata to different degrees. We will be concerned here only sub-schemata that can be related in some way to cultural variations in experience. When we look to the hypothetical content of schemata, the relationship to anthropological units such as "person-acting" become immediately apparent. Rumelhart and Norman tell us that there are

schemata representing,

> ...our knowledge of objects, situations, events, sequences of
> events, actions and sequences of actions. A schema contains, as
> part of its specification, the network of inter-relations that is
> believed normally to hold among constituents of the concept in ques-
> tion.

Moreover, a schema theory is based upon a prototype theory of concepts (see Smith and Medin, 1979). That is, since schema are closely identified with the meaning of concepts, meanings are assumed to represent the _typical_ or _normal_ situations and events that are instances of the schema. The context specificity of schema theory is nicely captured by Rumelhart's statement that:

> Schemata play a central role in all of our reasoning processes.
> Most of the reasoning we do apparently does not involve the applica-
> tion of general purpose reasoning skills. Rather, it seems that
> most of our reasoning ability is tied to particular bodies of
> knowledge. (Rumelhart, 1980)

We see in these ideas about schemata, the cognitive psychological, "internal" version of the "outside" context of "man-acting." Concerned as we are with specifying how the outside influences the inside and vice versa, we cannot proceed leaving these two systems as independent entities. Somehow, we must deal with the problem of "inside" and "outside" together, as mutually influencing systems. This task has not been attempted by modern American cognitive psychology, but it has been the subject of systematic investigation by Soviet psychologists for many years (see Luria, 1931; Vygotsky, 1962, 1978; Leontiev, 1972).

From a contemporary Vygotskian perspective, the basic unit of analysis is called _activity_. Like the idea of a social space or a behavior setting, the idea of activity emphasizes the interactions between social unit and individuals, in the process of which take on their defining characteristics. As

Leontiev put it,

> In activity the object is transformed into its subjective form or image. At the same time, activity is converted into its objective results...activity emerges as a process of reciprocal transformations between the subject and object poles...In society humans do not simply find external conditions to which they must adapt their activity. Rather, these (external) social conditions carry within them the motives and goals of their activity, its means and modes. In a word, society produces the activity of the individuals that it forms. (Leontiev, 1972 in Wertsch, 1981.)

In this statement we see the major elements of the anthropological concept of contexts as "person-acting" units that interact to define each other, a psychological, schema-based unit as the "subjective form or image" and an explicit statement of the idea that interactions between external and internal "roles" create "mind" at one end and "society" at the other.

## Data

By focusing our analysis of the data on the interactions between social units (including other people and technology) and individuals we are learning how literacy fits into the process of active life in the U.S. As our data continues to accumulate we are increasingly able to elaborate parameters of our analytic scheme. The first thing we are able to see is that literacy is not unidimensional. Literacy is constituted of two domains of action, reading and writing. Each domain is organized around different but related technologies. For example, books, magazines, newspapers, etc., are the primary technology employed in reading while paper, pencil, pen and typewriters are the primary technology employed in writing. Requisite knowledge for acting in either domain involves the command of certain specifyable concepts and operations as well as an understanding of the various functions of reading and writing. It is these properties that are presented in the bare-bones outline

of a multidimensional approach to literacy given schematically in Figure 1.

Another feature of literacy which seems to be emerging from the data is that literacy can be placed in two categories of use. Specifically, literacy is used to "learn" things and to "do" things. It is not yet clear how the categories of use are integrated with the various dimensions of literacy. This relationship, however, will command a good deal of our attention during the analysis. For the present time we can simply describe the nature of the distinction we are making. From the point of view of the more literate person who controls the context the child is presented with two major sources of information about literacy. The first source of information can be referred to as literacy-to-do (LTD) events and to the second source of information as literacy-to-learn (LTL) events. Both types of events have at least three characteristics in common. Both activities involve reading (or reading-like) behavior, and/or writing (or writing-like) behavior as well as doing something to achieve some purpose. Sometimes the "doing" involves some other literate activity (always the case with LTL and sometimes with LTD) and other times the "doing" primarily involves performing some nonliterate physical operation where literacy is incidentally embedded in the activity (this is more charac-teristic of LTD). Moreover, what is to be done is different both in terms of time and location. This difference in time and location serves as a useful major distinction between the two types of literate activities. LTD is rather specific in regard to place and limited in regard to time whereas LTL may be used at any time and in any place during the course of one's life.

Other characteristics which seem to differentiate the two types of literate activity would include the following; (1) LTD events use literacy as

an external memory whereas LTL focuses on internal memory, (2) LTL events make much  more extensive use of the known answer question than the LTD events, (3) more literate people self-consciously draw preschoolers into direct participation  in  the  LTL event while the preschooler is primarily left out of direct participation in the LTD event.  (This is not to imply  that  the  preschooler gains  nothing  from  the  LTD  event, as the reader will see, the preschooler seems to "appropriate" information about literacy  from  these  events.)  With this  distinction  in mind it is appropriate to consider that the two kinds of activity present different contexts for the learner  which  enables  different performances  by the learner.  These will be discussed later.  For the moment, let's consider in more detail what is meant by LTD and LTL events.

Literacy-To-Do.  An LTD event is defined as an activity whose purpose  it is to alter or change some aspect of the material and/or physical environment. During the LTD event reading or writing is  only  incidental  to  the  ongoing activity, it serves as an aid in achieving the objective of activity.  In this case literacy is presented to the child as one piece of a larger  puzzle  containing  several  pieces (most of which have nothing to do with literacy).  We have restricted the operational definitions of a LTD event to  the  mechanical operations  of  reading  and  writing <u>and</u> all the actions which surround these operations.  By restricting the definition of an LTD event in this  manner  we are also presented with a means of operationally defining the LTD context.  In the LTD event or context literacy appears as a tool, for example,  it  appears as an external memory.  Literacy serves this memory function either by recording information (through the operations of writing) which will be referred  to in  the  future  or by providing the means (through the operations of reading) for retrieving perviously recorded information which is needed at the  present

moment. An example of an LTD event will serve to make this point. This sequence of activity has four LTD operations. It should be noted that the three adult LTD operations are embedded as independent actions in an activity whose objective is eating dinner.

Event 1 [Field Notes: December 3, 1980]

On a Friday morning in December, an after breakfast conversation is initiated by Beverly (mother of TC) when she tells Luther (father of TC) that she needs to go to the grocery store to get food for dinner. Luther replies by telling how much money he has for shopping. Beverly begins to suggest things that she would like to cook (presumably within the dollar amount that Luther mentioned) for dinner. This conversation ended when they decided on the meal. At this time Beverly goes into the kitchen and gets out one of her cookbooks. Beverly takes the book to the kitchen table where Marion (TC) is sitting. Beverly sits directly across the table from Marion and first consults the table of contents then turns to a particular recipe and studies it. The entire event lasts for five minutes and Marion pays close attention throughout but never verbally or physically interacts with Beverly. Immediately after closing the book, Beverly gets a small tablet and a pencil and sits back at the table. Marion then asks mom, "what'cha doin ma?" Beverly responds inaudibly but partially says, "...and I got to make my list." Still sitting directly in front of Marion, Beverly begins to work on the list.

List construction involves both reading and writing. Beverly began the list by writing names of items she needed (hamburger, tortillas, cake mix, etc.), then she would get up and check the refrigerator or the cupboard, return and write additional items on the list. She did this three times during the six minutes used for list construction. This phase is ended when Beverly takes both kids into the bedroom to get ready to go the store. Throughout this entire eleven minute event, Marion has payed very close attention and asked just one question.

Ten minutes after completing this literacy event Beverly and the two children are in the car off to the market. When the family arrives at the store both kids are placed in the basket. The first stop is the produce section. Beverly selects some oranges and bananas without using her list. As she moves past the produce sections, Beverly takes out her shopping list and uses it as a reference before selecting each item. Beverly selects six items after casually reading some and carefully reading other labels. Throughout the entire process of item selection, Marion does not seem to pay attention to the literacy activity occurring around her. Rather she plays with the things already in the basket. The family spends about 20 minutes in the market.

On the way back home Marion finds a pen in the glove compartment and piece of paper on the floor and starts using them to "write." When they arrive back home and are getting out of car, Marion pauses and shows the piece of paper to a friend who had been along during the trip. When she shows the paper to the friend, she says, "see my list." Once the family is back in the house Marion continues working on her "list." Suddenly while putting the groceries away, Beverly notices that Marion has her "good" pen and she says to Marion, "girl, give me my pen." (Beverly is not really aware of what Marion is doing). Marion replies, "no, I want to write" and Beverly replies, "oh, ok." Beverly goes back to putting groceries away and Marion goes back to working on her list for another two minutes. Marion's work on list construction went on for ten minutes with a two minute interruption to get from the car to the house. This literacy event ends when Marion apparently finishes her list and goes to help Beverly put the groceries away. For Marion the change in location is a change from "writing" to "reading." In the kitchen she takes items out of the bag and hands them to Beverly, in the process she looks at and comments on or asks a question about words on the labels of a few items. This happens nearly every time Beverly goes to market.

This entire sequence of activity began more than an hour earlier with the goal of preparing the evening meal. This stream of activity is related to that goal, and the elements of literacy woven into it, are not complete. When the meal is actually prepared there is a reasonable chance that Beverly will again refer to the cookbook. The above example rather clearly illustrates how literacy is woven into the flow of activity in a very instrumental way. The flow continues from the kitchen to the television (Beverly often uses the TV Guide to select a program) on throughout the day. These kinds of literacy-to-do activities occur with some frequency during the course of a week. They occur at a time and in a place where Marion can see them on the average of ten times per week. On about half of these occasions, Marion will practice by apparently imitating the adult performance.

Literacy-To-Learn. An LTL event is defined as an activity whose purpose is to produce, refine or manipulate literacy practice. During LTL events

reading and/or writing is both the object and objective of activity. All intentions and operations of LTL activities are interactively subjected to the motive of literate practice. The child participates in a sequence of activity that is organized to transmit specific information about the domains of reading and writing. Rather than externally recording information for future use or retrieving previously externally recorded information, the LTL activity emphasizes the ability to record itself. Again, we have restricted the operational definition of both the LTL event and LTL context to the mechanical operations of reading and writing <u>and</u> the actions which surround these operations. It must be added that the LTL event is much more complex than the LTD event in that it requires a greater amount and variety of actions to enable its productions.

The LTL activity seems to get organized around the three specifiable objectives mentioned in the definition. Here we will pause to briefly consider each of them since they are important for understanding the arguments presented in this section. The objective of activity organized around <u>production</u> is to enable a person to graphically and vocally produce the written or printed word. Producing alphabetic symbols and the words for the letter names usually functions at the center of this activity. Occasionally there is a production of the alternate sounds related to the symbol. Often, comprehension of the written or printed word gets involved in this activity. In this case some production actions overlap with refinement activities and experience with semantics is also presented to the child.

The objective of activity organized around <u>refinement</u> is to enable the production and comprehension of what is or can be printed. Combining letters

of the alphabet to purposefully produce a word or words and interactive reading usually functions at the center of this activity. The first production is typically the child's name. The resources used in this activity can range from print on a tee-shirt and product labels to connected discourse in a child's story book.

The objective of activity organized around <u>manipulation</u> is to enable complex literate practice.[1] To achieve complex literate practice, a person performs semantic expansion and syntactic elaboration. Literate activity at this level focuses specifically on advanced comprehension which revolves around experience. By semantic expansion in writing is meant the ability to capture and freeze personal experience and then to go beyond and generalize its meaning, without distorting its essence, in a manner which makes the intended meaning clear and perceptible to readers who do not have the writer's same experience. Semantic expansion is the ability to communicate in print by transforming individual experience into human experience (i.e. into words that are understandable by many in terms of their own personal experience). Semantic expansion in reading refers to the ability of a reader to extract meaning from text which goes beyond the literal meaning of that which is printed. Semantic expansion is the ability to relate text to one's own experience or activity (no matter how abstractly or philosophically).

Syntactic elaboration is the means by which semantic expansion is achieved. Syntactic elaboration suggests that the person has such command of

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1. Complex literate practice is defined as the ability to comprehend such that the reader or writer presents and discusses ideas beyond the basic text Often this type of activity is described as decontextualized thought or logical reasoning.

words that they can combine them to communicate and derive understanding which transcends the basic text. Semantic expansion and syntactic elaboration refer to the process of interacting with the printed word in a manner which is most familiar to any individual; in terms of personal experience.

Children we have been observing only very rarely take an active role in this type of activity. Direct participation in this type of activity sometimes occurs in relation to writing or receiving a letter. Occasionally a child is asked to "say" something in a letter being written (by an adult) to a friend or relative. However, much more frequently, they are exposed to this type of activity during group Bible study sessions or solitary study sessions carried out by their parents.

This discussion of LTL activity is not meant to imply that activity organized around one objective does not also involve actions from another. For example, actions and information used in production activities are used in refinement activities. In fact, it seems that it would be very difficult indeed to carry out most refinement activities without drawing upon already encoded production activity. Often, comprehension of the written or printed word gets involved here. In this case some production actions overlap with refinement activities and experience with semantics is also presented to the child. At the same time it is important to emphasize that I am not suggesting a conception of literacy which is based on the developmental sequencing of skills. Skills, in the traditional sense are but elements of some larger experience. The point of view taken here is that what is being accumulated through LTL (and even LTD) activities is experience and information. In this way, we are referring to the active and interactive accumulation of a special

kind of knowledge: <u>literate knowledge</u>.

Generally speaking, four different strategies for accumulating and using literate knowledge are practiced by more experienced others in interaction with the less experienced child. Sticht (1974), in his discussion of reading activities in the work setting provides a means for us to more clearly specify these strategies. Sticht presents data which demonstrate that most people use one or more of these four strategies to "consciously learn" work related material. People apparently use these strategies in other settings as well because we see these same strategies being used at home as part of LTL activities.

Rewrite/Reread: Involves repeatedly processing the literacy actions and information produced during interaction with minimal elaboration or transformation.

Questions/Elaboration: Involves asking questions about LTL activity, or elaborating the ongoing activity through decontextualized references to past experience of the child; actions which stimulate a cognitive and/or physical search for obtaining specific literate answer or response. A question and response structure is often created between the child and a more experienced person which functions to facilitate the child's ability to independently produce and/or comprehend printed information.

Associate/Relate: Involves use of mnemonics; discussion of material; association of new information with other information; further elaboration.

Focus Attention: Involves activities which reduce the amount of information in some manner, e.g., underlining key points, outlining, taking notes.

Again a couple of examples may be useful in elaborating this point. In considering these examples the reader should keep in mind that unlike LTD

activities, some LTL activities appear to be something other than what they are. Some of these activities are deceptive because they have distinctive characteristics of a short range instrumental operation. In order to distin- guish the two types of literacy activities, it is useful to go beyond the immediate context of the event and understand it in terms of the larger domain of "practice." On the other hand, there are clear examples of literacy-to- learn activities which are difficult to confuse with anything else. Examples of each are provided below. The first is an example of a mixed-goal literacy event and the second is of a pure literacy-to-learn event.

Event 2 [Field Notes: November 14, 1980]

The mixed-goal event begins when Sally (TC's six-year old sis- ter) comes home from school. Since this is her first day back at school after a two week absence, she is carrying a great deal of homework with her. Pam (TC's mother) asks Sally what she has. Sally replies that she has homework and doesn't have to take it back until the end of next week (about 10 calendar days away). Sally attempts to put the work down to go and play. Pam replies, "no, we might as well do it right now, at least get started now." Pam helps Sally get prepared to work at the kitchen table. Pam apparently decides that since she is going to be sitting and helping her daughter do her homework she might as well work on a letter she "owes" a "brother" in Arizona. While Sally gets started Pam goes to her room and gets her Bible, an ink pen and a tablet of unlined paper.

Back in the kitchen both begin doing literacy. Sally chooses to start with her spelling words by asking Pam, "Ma, help me with my spelling words." Pam tells Sally, "Let me see them." Sally responds by handing the list of words to Pam who replies after looking at the words, "okay, we're going to do these like we always do, you write each word five times and when you finish I'll give you a little test." With this statement Pam hands back the list of words, tears off a page from her tablet and gives it to Sally. Norma (one of the TC's in the home), who followed Pam back into the kitchen, has been watching and listening throughout the interaction, now asks for a sheet of paper and a pencil. Pam gives Norma (4 years old) a sheet of paper and Sally gives her a pencil. Mother begins her letter, Sally begins writing her spelling words and Norma starts producing marks on her page. This interaction has been going on now for about 12 minutes.

Four minutes after they all began to write Pam opens here Bible for the first time. She is flipping back and forth through about eight pages. Then she finds what she is looking for and directly copies a passage from the Bible into the letter. Norma glances up at Pam for about 20 seconds then goes back to "writing." About this time Alfred (the other TC who is three years old) enters the kitchen carrying a bat. He stands and surveys the ongoing activity for about 45 seconds without saying a word. As Alfred is turning to apparently leave the kitchen, Norma notices that Alfred is carrying "her bat" and moves quickly to claim it. With this act an argument and tugging match occurs. Pam stops what she is doing to bring the argument to a close by taking the bat and putting it into a corner with instructions to both kids to keep their "hands off of it." Pam and Sally go back to literacy while Alfred heads outside and Norma goes to watch TV with Tousaint (the nine year old brother of the TC's). Norma spent about six minutes "writing" before she terminated the activity.

As Pam continues writing the letter she pauses twice more to search for and use a quote from the Bible before Sally interrupts, "I'm ready for my test, Ma." This occurs about 25 minutes after Sally began writing. Pam stops letter writing to recite the spelling list. After reciting each word, Pam would pause and Sally would fill the pause by spelling the recited word. While going through this list Pam varied the order of presentation from the way the list was constructed and Sally had practiced writing them. Sally spelled each word correctly and Pam rewarded her with praise. While the spelling interaction was going on, Alfred came in once and watched and listened for about one minute. Pam and Sally repeated the list three times in succession before Pam suggested that Sally do some math.

The primary interaction between Pam and Sally continued for a total of one hour and fifteen minutes. It terminated when Sally received permission to go and play. After Sally left Pam continued working on her letter for about another 15 minutes until a friend, who had been present the whole time, began asking questions. Pam's explanation included four more references to the Bible. Two of these references included a joint comparison (by both adults) of two versions of the Bible. The interaction between the two adults continued for another 20 minutes. During the entire one hour and forty-five minutes of literacy activity Alfred periodically stood and watched a total of nine times with each occasion lasting from 30 seconds to two minutes. After Norma's first period of activity she returned to the kitchen four more times, standing and watching in intervals of one to about three minutes.

The sequence of activity presented above seems to contain an example of literacy-to-learn and an example of literacy-to-do. This conclusion would be

only partially correct. In fact, the entire sequence of activity involves literacy-to-learn. Clearly, Sally is doing literacy-to-learn when she is studying her spelling words. She is using a reread/rehearse strategy in preparation for the "test" with mom. However, it is not as clear that Pam was also doing literacy-to-learn. Both the reading and writing she was doing were instrumental to finishing and mailing a letter. She is not preparing for an exam, nor does she seem to be attempting to retain any information for future use. Only when Pam's letter writing activity is viewed as text analysis is our perception of it transformed from a literacy-to-do to a literacy-to-learn activity.

Pam's religious beliefs require her to faithfully learn, internalize and live "the word of God." From Pam's point of view, there is only one way to really understand God's will for man and that is through consistent study and application in daily activity. Therefore, Pam takes her religion seriously and is a student of the Bible. In addition to the activities discussed below, she can be seen regularly studying the Bible and using study aid books. In using these books Pam can be seen to underline, outline and take notes. For Pam, the "word" is her religion and learning how to be a better text analyst is synonymous with advancing in her religion.

Now, with this perspective in mind let's briefly reconsider Pam's letter-writing sequence. First, it is important to note that the brother she was writing the letter to is not her biological brother, he is a church brother. The two exchange letters "four or five times a year." The style of letter they write revolves around spiritual talk. They write thoughts of encouragement, reflection, etc. Occasionally, they will use direct quotes

from the Bible to make a point.

Four minutes after starting the letter, Pam used two literacy-to-learn strategies. First, she searched through the text (Bible) to obtain a specific quotation or answer. This is a problem solve/question strategy. Then, when copying the quotation from the Bible, she repeated the processing of information taken from the text. This act involved minimal elaboration and no transformation making it a reread/rehearse strategy. During the course of the entire sequence Pam used this particular strategy a total of seven times. Moreover, the strategies she used for letter writing are only a variation on the relate/associate strategy she uses four hours per week during Bible study sessions involving all of her kids and others of her church brothers and sisters. The Bible study sessions fully use mnemonics; discussion of specific textual material; associations of textual information with other information and elaboration.

For the children in this home, these activities are routine occurrences in their environment. Thus the point is again made that both the activities which involve literacy and the motives which support these activities are embedded in the normal flow of activity which surrounds our research participants.

Event 3 [Field Notes: February 7, 1981]

The event which follows is a portion of one of the daily LTL events which take place in this home. As usual the event involves all of the children and one adult. On this occasion the adult is the father who conducts 75% of the families' LTL activities. The children are as follows Adrian (age 5), Lori

(age 4), Baby Joe (age 3), Alice (age 2) and James (age 1). For the most part Alice and James are observers who rarely speak. The reader should keep in mind that each of the three older children have repeated practice with recognizing, saying and producing the alphabet. The following event is then an example of the early stages of refinement of LTL activity. The reader should also note the strategies for storage and retrieval used in the excerpts.

## Story Book Time

1.  Kids:  In...

2.  Father:  Ok, what's the name of this book?

3.   All:  In, out, upside down.

4.  F:  No, it's inside outside upside down.

5.  All:          side, outside upside down.

6.  All kids: Inside, outside upside down.

7.  F:  O.K., BJ open the first page.

8.  BJ:  (Turns to title page)

9.  F:  O.K., now read what you see.

10.  BJ:  In...In...    Inside outside upside down.

11.  A:          Inside

12.  F:  That's right, now turn over.

13.  A:  Ga...

14.  BJ:  Going in (the only print on the page).

15.  L:          in the house (in reference to the picture).

16.  F:  Um...hum.

17.  A:  Going to the house.

18.  F:  O.K., now let L read that.

19.  BJ:  Next girl read this.

20.  L:  In...

21.  BJ:  No.

22.  BJ:  In his house.

23.  A:  That's in his house.

24. L:  In...

25. A & BJ:  In the box.

26. L:  Stop you guys.

27. F:  In what?

28. A:  A box.

29. BJ:  In box.

30. L:  In a box.

31. F:  No, where is the wording on that page, L.
        Do you see all that on that page?

32. L:  Yes.

33. F:  What word do you see on the page?

34. L:  This one (points to inside).

35. F:  What word is it?

36. L:  In the box.

37. F:  That's the same word that's on the outside cover.

38. L:  Inside...

39. F:  That's inside, that's correct, go on to the next page.

40. L:  Inside, a box.

41. F:  O.K., pass it over to Adrian.

42. A:  Upside down.

43. F:  Read across the page now.

44. A:  Upside down, Inside a box.  Upside down.

45. F:  O.K., turnover and continue reading.

46. A:  Going (don't tell me) out (long pause) it's the same
        thing on the outside, father.

47. F:  That's right.

48. BJ:  I know.

49. L:  Upside down.

50. BJ: No.  [seems to know the answer]

51. L:  I can't see the book.

52. F:  Move back so she can see the book.

53. L:  Outside.  [she can now see the book and gives
        the correct response]

54. F:  That's right L, it's outside.  The same word is right here.
        A couldn't even reason that.  She said going out.  Then
        she go over to the next page and see a word over there
        that's got out in it and she can't even reason that.  L
        let A. try it again.

55. L:  See this and this.  That's how you spell outside.

56. F:  L, let A. try it again.

57. A:  Outside.

101. A:  Going to town,-on a truck.  Out         .

102. F:  Uh...huh.  Out  what.  Out is o-u-t, but you've got
         more than o-u-t in this word.

103. A:  Outside.

104. F:  O.K., spell outside.

105. A:  O-U-T-S (pause to look at the ceiling).

106. F:  Look at it in the book.

107. A:  I-D-E.

108. F:  Spell it again.

109. A:  O-U-T-S-I U-T

110. BJ:           I-U-D (looking up in the direction of the ceiling).

111. F:  One person spell it at a time.  Spell that word by looking
         at it in the book first.

112. A:  O-U-T-S-I-D-E

113. F: You saw it twelve-fifteen times and you still don't
    know how to spell it.  Now keep spelling it.

114. A: O U T S I D E

115. F: Now, what are you supposed to do after you spell a word?

116. In Unison:  Read it.

117. F: You supposed to say it.

118. In Unison:  Say it.

119. F: Spell it again.

120. A: O-u-t s-i-d-e.

121. F: Now, what about it.  What is it?  (Long pause)  What
    does it spell?

122. A: Outside.

123. F: Now, spell inside.

124     (Long pause)

125. BJ: Inside is right on that book, girl.

126. A: I-n-s-i-d-e.

127. F: Spells what?

128. A: Inside.

129. F: Well, say it.

130. A: Inside a box.

131. F: O.K., now reread that page now.

132. L. Upside down.

133. F: L, would you be quiet and sit down.

134. L: O.K.

135. A: Going to town-on a truck-out-in.

136. F: Where you see in, N sound like it's got an 1-N in it,
    does it sound like it's got an "in" somewhere in it.
    Do you see the N's first (pause) point to the word you

first.

137.  A:  Going to town.  On a truck.
          (Long pause with the other kids whispering to help A)

138.  F:  L, can you look at that word that she's having trouble
          with.  Show her, point to the word you're having trouble
          with A.

139.  A:  This (points to the word).

140:  F.  She just finished spelling that word, she don't even
          know what it is now.  That how long her attention
          span is.  Just go in one ear and out the other and
          onto the floor.

141.  L:  O-u spells, you know.

142.  F:  O-u what?  You have to spell the whole word, L.

143.  L:  O-U-T-S-I-D-E.

144.  F:  What do you think that words spell?
          (Long pause)

145.  F:  What do you think O-U-T, what does it spell, What does it
          sound like?

146.  A:  Out.

147.  F:  Sound like out.

148.  A:  Outside              In a box.

149.  F:           That's right

150.  F:  In what?

151.  A:  In        .

152.  F:  In is just two letters, right here.  That in.

153.  A:  Inside          a box              upside down

154.  F:          All right      alright    say the whole


This seems to be a rather typical LTL event.  It  contains  many  of  the
necessary  characteristics  of this type of event.  First, it can be seen that

its primary purpose is to refine literacy skills. The reader will recall that refinement activity focuses on combining letters of the alphabet to produce a word or words and/or interactive reading of print material. Also, in this type of activity a question/answer structure is typically created between the child and the more literate person which functions to facilitate the development of the child's ability to independently produce and/or comprehend printed information. The three minutes of interaction (drawn from a 30 minute session) presented above satisfies every criteria of refinement activity. The following interpretive remarks will serve to clarify this point.

The preceding excerpted portion of a LTL event presented at least three important types of actions carried out by the person who is controlling the context. The father (1) makes extensive use of the known answer question, (2) specifically communicates his expectations about using internal memory and (3) introduces and provides both several opportunities to practice and a example of the internal memory storage and retrieval strategies he expects his children to use in order to accumulate and use literate knowledge. Now let us consider each type of action is slightly more detail.

Known Answer Question. First, it is important to notice that this father uses the Known Answer question in two ways. The first way that father uses this type of question is to focus attention as is demonstrated in lines 2, 31, 33, 35, 102, 136, and 150. It also seems possible that father may be using this type of question as a cue to store the information into memory (at least it seems to have had that consequence). This interpretation is possible because by the time we get to line 104 we can see the children enacting behavior which is culturally related to remembering (staring up at the ceil-

ing). We should also note that using the question in this way always comes about when the book has the answer.

The second way the known answer question is used occurs when the child has (or should have) the answer. This type of questioning is demonstrated in lines 115, 121, 127, 142, 144, and 145. It is important to note that this way of questioning always draws on either a question/elaboration or associate/relate memory strategy (discussed earlier). What is even more interesting is that it seems that three year old Baby Joe (line 125) and four year old Lori (line 141) have picked-up on the memory strategies and are attempting to use them to help five year old Adrian respond to father.

Expectations. That father expects the children to remember information from this and past LTL activities is clearly demonstrated in lines 37, 54, 113, 115, 140 and 200. Lines 37 and 200 are good examples of how father helps the children know that they should and generally how to conform to his expectations. In these two instances father does much of the memory work for the children. In line 115 father uses a known answer question to cause the children to remember information they have gone over in the past.

Practice. Father provides the children with a great deal of practice with the memory strategies mentioned above. During the brief period excerpted from the longer interaction father encourages the children to use three of the four memory strategies. In addition to the question/elaboration and associate/relate strategies already discussed in relation to the use of known answer questions, father also uses one other. Line 104-112, 114 and 119-120 are examples of how father encourages the children to use the reread/rewrite strategy.

After reviewing the three events presented in this section (each one being drawn from a different family), it is now possible to present a few summary statements. First, it is possible for us to state that before a child is able to skillfully practice literacy, it seems that they do acquire some of the information necessary to carry out literate practice. Second, it seems possible to suggest that what a child will learn is a function of the particular organization of literate practice presented by the child's environment. Finally, we should note that different environments organize literate practice in different ways.

During the next quarter our emphasis will be to develop a category system to describe the various ways that literacy is displayed in the child's environment. Another emphasis will be an attempt to integrate the various threads of our analysis. One way we expect to try to discover the links is to organize literacy events in terms of their functional significance. In this way it may be possible to elaborate one of the dimensions of literacy discussed earlier.
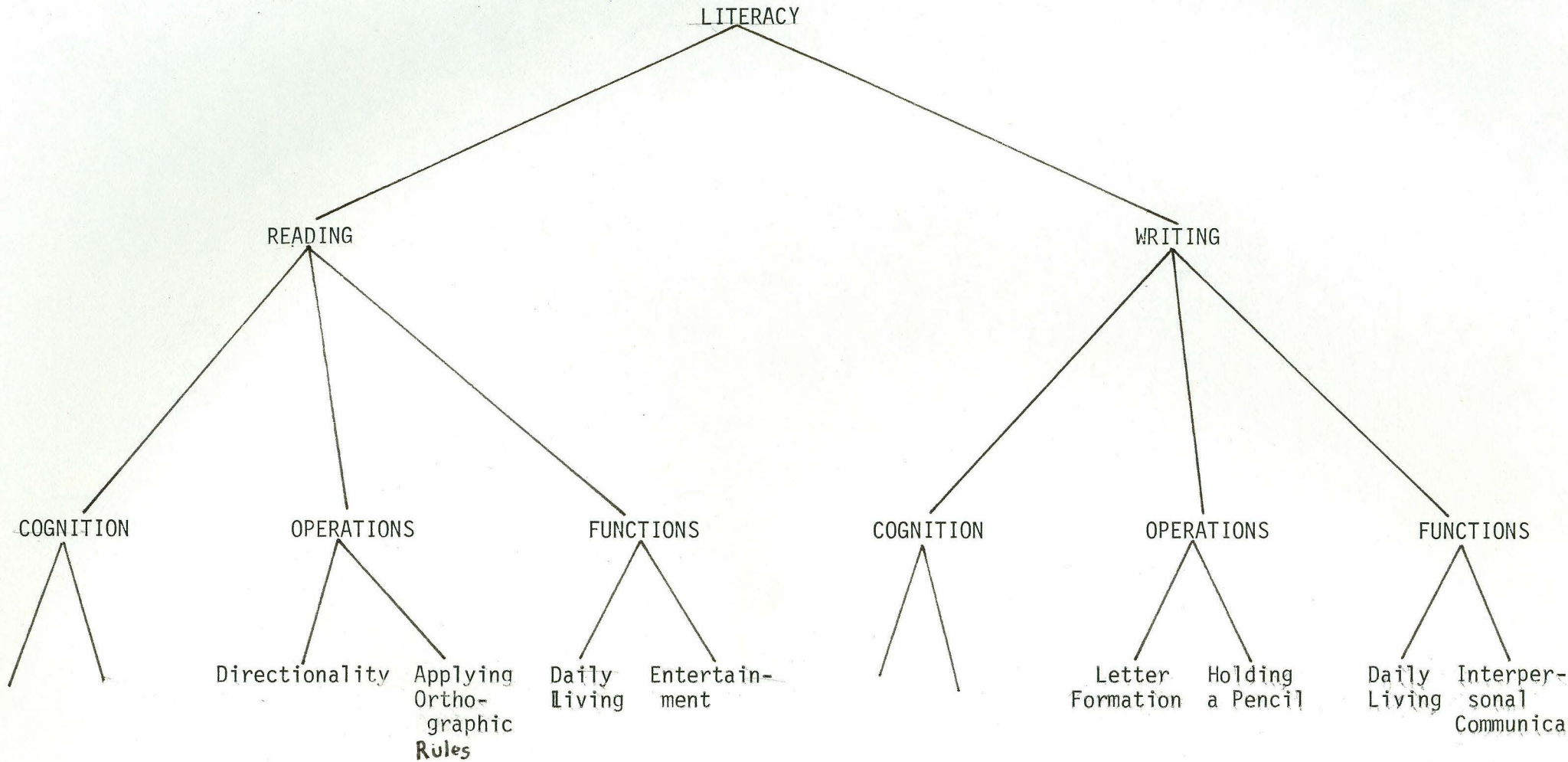
Figure 1  Partial multidimesional representation of litreacy

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