EVERYDAY LESSONS OF NORTH AMERICAN PRESCHOOLERS: SOCIAL CLASS AS CULTURAL COMMUNITY

by

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Twenty children (11 middle and 9 working class) aged 28 to 48 months residing in one city were observed for twenty hours each over 6-7 days. Observations were unobtrusive and naturalistic. Coding focused on the activities going on around the children, their involvement in activity, their roles and their social partners' roles in activity, how the activities began, and aspects of the physical and social environment. The focus of this dissertation is the lessons in which children were involved and their play with academic materials.

Compared to their working-class counterparts, middle-class children engaged in more lessons and initiated more skill-nature lessons alone and with a social partner. Middle-class children also engaged in more play with academic objects in their own environs than at school. Girls were involved in significantly more interpersonal lessons than were boys.

Middle-class children were also somewhat more likely, compared to their working-class counterparts to have more academic and skill-nature lessons available to them, and they were also somewhat more likely to initiate academic lessons and to initiate their own involvement in skill-nature lessons.

However, culture is not homogeneous. Individuals recreate cultural constraints in unique ways. Also shown in the data was considerable variability within these groups, illustrated graphically as well as by transcripts of field notes and from videotape.

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CHAPTER I

INTRODUCTION

Children are born into a dynamic system of interpersonal and ecological relationships which have been shaped by history and culture (Bronfenbrenner, 1979, 1989, 1993; Tudge, & Putnam, in press; Valsiner, 1987, 1989a, 1989b; Wertsch, 1991). Although children are born with physiological and psychological dispositions that serve as the basis for distinctively human functions (Vygotsky, 1987), their capabilities are shaped to a large extent by the process of growing up amidst the cultural practices and systems of values of the community in which they find themselves.

This is not a one-way process; children actively collaborate with adults in arranging their participation in activities of the cultural community (Rogoff, 1990). According to studies of middle-class settings, children frequently initiate their involvement with adults and structure interactive situations (Carew, 1980; Nelson-LeGall, 1985; Rogoff, 1990). As the child participates in the cultural practices and systems of values of the community, certain constraints are constructed which guide the developmental process (Valsiner, 1984).

Constraints are created as the child participates in cultural activity. They exist at the level of process, directing and organizing the environment and the child's activity in the environment so that a certain range of development is probable. Constraints are structures

or boundary systems within which the interaction of people with the environment and witheach other is guided and shaped by culture (Lave, 1988; Rogoff, 1990). Cultural organization can be conceptualized as a mediator between the active, dynamic, developing individual and his or her developing environment (Valsiner, 1989a) and as an active part of the system whereby the range of variability of development (Valsiner, 1984) is guided, shaped, and constrained. Culturally organized activity, interpersonal involvement, and individual effort serve as a mutually constituting system (Rogoff, 1993) which limits the potential directions that the life course of an individual in the culture may take (Valsiner, 1988). It is by examining the limits of variability that cultural constraints can be inferred. Indeed, when the wide variety of contexts within which humans develop is considered, culturally shaped context may be a "tool" in the Vygotskian sense whereby the range of possible human diversity is narrowed in a particular time and place by the construction of certain higher mental functions and social relations (del Rio & Alvarez, 1994; Kozulin, 1985).

Different environments are associated with discernible differences in human relations, abilities, activities, and values. These different environments and their associated differences in what Bronfenbrenner has termed "the process and product of making human beings human" (Bronfenbrenner, 1979, p. xiii) are seen not only across but within societies along social class lines.

Factors associated with educational level, occupation, residence, and income are frequently invoked by researchers conducting studies within a society to explain

differences between social class groups on a wide variety of variables, including parenting beliefs (Kohn, 1979), achievement motivation (Kohn & Schooler, 1983), sex-typing (Brooks-Gunn, 1985, 1986), mother-child mutual play (Farran & Haskins, 1980), language use (Hart & Risley, 1992; Heath, 1986; Quay & Blaney, 1992), parental views of the importance of education (Ogbu, 1979, 1981), and creative potential (Dudek, Stobel, & Runco, 1993). The process whereby these variables or their combination might have the effect being examined is rarely addressed, although Elder and his colleagues (1974; Elder & Caspi, 1988) have given considerable attention to the principal processes linking different levels of analysis, such as family adaptations in household economy during the Great Depression.

Beliefs, attitudes, and value judgments that family members adopt about their own and other's behavior have a significant impact on the way in which these members interact and influence one another (McGillicuddy-De Lisi, 1985). Kohn (1977, 1979; Kohn & Schooler, 1983) argued that parents working in professional occupations set goals for their children of self-direction, independence, and control over their environments, while parents working in non-professional occupations value conformity and obedience in their children. Kohn (1979) also argued that this value difference may be relatively invariant across societies and found evidence for it in many societies, although it is associated with different psychological meanings in different societies (Slomczynski, Miller, & Kohn, 1981).

Studies which generalize about groups based on extrinsic characteristics emphasize the homogeneity of the members of a group, yet members of a group differ from each other while remaining members of the group (Välsiner, 1984). These differences are reflective of the diversity of human activity and thinking in any given society and in any cultural group within the society. Rather than being treated as uninteresting error or "noise," individual variations are decisive for the understanding of a dynamic open system (Valsiner, 1984).

Development is at the same time constrained by culture and open-ended due to the individuality of the process of internalization (Lawrence & Valsiner, 1993). Through the process of internalization the individual transforms values, attitudes, beliefs, assumptions, and other cognitive and affective processes of the community into his or her own (Holland & Valsiner, 1988). In addition to its dynamism, it is the openness of the system at personal, interpersonal, and cultural levels that allows new forms of consciousness to emerge in ontogeny through person-environment co-construction.

Statement of the Problem

Cultural community is defined as a group that possesses a distinct set of shared practices, values, and beliefs that are passed on to and created anew (in ways that both reproduce and transform them) by each generation (Tudge, Putnam, & Sidden, 1994). Culture, in this definition, is not synonymous with society or nation. It is based in values and beliefs and rooted in history, and it may encompass within-society groups, such as social class.

Children become members of their cultural community by getting involved in the activities that are going on around them, initiating new activities, and by engaging social partners in activity. They do so in ways that are constrained by culture. At the same time, adults encourage or discourage children's participation in activities in ways that vary by cultural community. It is these patterns of activities, roles, and relations, and the characteristics of the settings in which they take place that constitute the immediate (microsystem) level of the cultural ecology. The microsystem is shaped, guided, and constrained by the values and belief systems of the culture as a whole (macrosystem).

The role of the cultural ecology in the co-construction of the relationships, abilities, and activities of the next generation is the subject of this study. An initial step is the examination of children's everyday, lived experience, and of the cultural beliefs and values which underlie and shape experience. Although the child's evolving construction of a value system and understanding of reality cannot be observed directly, they may be inferred from patterns of activities, roles, and relations within the surrounding context.

CHAPTER II

REVIEW OF THE LITERATURE

Lev Vygotsky's cultural-historical theory and Urie Bronfenbrenner's ecological theory form the theoretical foundation for this examination of children's daily lives. In addition, the work of the sociologist Melvin Kohn, of John and Beatrice Whiting, Carolyn Edwards, and their colleagues in cultural anthropology, and critiques of traditional psychology by feminist researchers and others have influenced the underlying thinking.

Compatible with both Vygotsky's and Bronfenbrenner's theories are two related, central concepts. First, the child-in-activity is part of larger action-relationship-meaning systems that include both the systems of actions, relationships, and meanings which constitute the life of the individual and those which constitute the various levels of social systems in which the individual finds him or herself. Second, these systems are coherent (although they may not always be consistent), patterned by underlying beliefs and values based in culture.

Cultural-Historical Theory of Lev Vygotsky

A growing number of contemporary psychologists, responding to challenges to the relevance and ecological validity of traditional psychological methods and seeking a fresh approach to the understanding of human development, have begun to expand their theoretical and methodological repertoire (Asendorpf & Valsiner, 1992; LeVine, 1989;

Tudge, Gray, & Hogan, in press; Tudge, & Putnam, in press). In doing so, they are taking a new approach to some old models from anthropology and from the history of psychological theory in the work of several early twentieth century theorists, among them Janet, Werner, Levin, Mead, Baldwin, and Vygotsky (e.g., Bronfenbrenner, 1979, 1993; Cairns, 1992; Glick, 1992; Rogoff, 1990, 1993; Tudge & Rogoff, 1989; van der Veer & Valsiner, 1991; Wertsch, 1991).

These early theorists viewed the socius as the important departure point for understanding what it is to be human. They each emphasized, in different ways, that to investigate the mind, a scientist must seek a theory of the relationship of the individual to culture.

Culture is a tool for shaping human consciousness, shaping consciousness while at the same time being shaped by it. Rather than being independent of each other, developmental processes and cultural forms are related in both form and content. The relationship between developmental processes and cultural forms is not that they are parallel or correlated; culture is the means of organizing the process of assimilation of cultural-historically developed capacities, which are reconstructed by individuals in the course of mental development. Individual reconstruction of cultural semiotic material is at once reproduction and transformation as the intersubjective becomes intrasubjective (Lawrence & Valsiner, 1993).

Vygotsky's theory of human mental development is explicitly concerned with the social nature of cognition and the social, co-constructive nature of cognitive development

(Vygotsky, 1978, 1981). Certain core concepts of his cultural-historical theory of human mental development are central to the present argument: (1) higher mental functions, such as thinking and memory, are shaped by learning activities and upbringing; (2) qualitative change in social activity is important for mental development; (3) the original form of mental activity is external and social, (4) and is then internalized; (5) sign systems, such as language, are essential tools of culture for the extension and development of human consciousness.

Vygotsky's (1981) greatest interest was in the genesis of "higher" mental functions, those that are shaped by culture, such as voluntary memory, voluntary attention, problem-solving, and language. He assumed a "natural" line of development, which is characteristic of other animals and the involuntary mental processes of humans, as a basis on which higher mental processes are built (Vygotsky, 1978). Culture guides and structures the development of the higher mental functions of the child through an "apprenticeship" with more skilled members of the culture (Rogoff, 1990). Nature and culture work together to advance the child's skills and understanding through progressive changes in social activity with others.

Activity involves a mutuality between the child and other people and the environment. The roles that both the individual and social others take in activity are inseparable from the meaning and purpose of the activity. Vygotsky (1987) stressed the active role that children play in their development and emphasized that cognitive development occurs in situations in which the child's problem solving is guided by an adult

or more competent peer who structures and models the appropriate solution (Vygotsky, 1978).

Qualitative changes in social activity are the basis of mental development in Vygotsky's theory. Where behaviorally oriented psychologists saw "behavior" and anthropologists saw "behavior" of the individual as a member of a social group, Vygotsky saw "actions," which were shaped by the cultural milieu and individually motivated by a social being. According to this view, the developing individual is guided in becoming increasingly sophisticated in the initiation of and participation in progressively more complex activity.

Vygotsky called social activity "the principal source of development" (Vygotsky, quoted in Davydov and Zinchenko, 1989). The development of the child's mind is realized through his activity, which takes place within particular concrete conditions of life. Since those concrete conditions and social interactions are culturally organized, the internalized psychological processes are also culturally organized, although they are also individual, because the internalization process involves a reconstruction. Internalization implies transformation and not simply socialization (Lawrence & Valsiner, 1993).

Vygotsky and his followers (primarily Luria and Leont'ev) proposed that cultures arrange and select contexts for children and shape the social relationships and activities in which children become competent members of their world. Institutions, tools, and symbol systems, developed by human beings throughout human history, connect the child to his or

her cultural heritage through daily life. The co-creative nature of the relationship of mind and culture in Vygotsky's theory is clearly stated.

> Culture creates special forms of behavior, changes the functioning of mind, constructs new levels in the developing system of human behavior ... In the process of historical development, a social being changes the means and methods of his behavior, transforms natural inclinations and functions, develops and creates new, specifically cultural, forms of behavior (Vygotsky, 1983, pp. 29-30, quoted in Tudge & Winterhoff, 1993, p. 66).

For the young child, the family is the primary cultural institution that mediates between the broader culture and the child's mental and social development. It is only within the framework of the cultural-historical perspective that the meaning of interactions in the family setting can be understood. Culturally organized parental values and beliefs are of major theoretical importance in understanding parent-child interactions and the physical organization of the home. Upbringing and learning are necessary for the development in the child of historical and cultural characteristics and capacities.

Although parental values and beliefs may be assessed directly through questionnaires, questionnaires have the usual problems of interviewer and respondent bias, as well as the following difficulties which are also related to the co-constructive process. One of the premises of this study is that activity is co-created; that is, that the child and parent (or other social partner) together mutually create the interaction, not that the parent influences the child in a unidirectional 'if parent does X, then child will do Y' fashion, or by extension in a linear 'if parent values A, then parent will do X, which will cause the child to

do Y' fashion. Secondly, questionnaires do not allow examination of the context of ongoing interaction. Included in context are, of course, the physical and social surroundings of the interaction. Also included under the rubric of context are other simultaneous activities, and the transformation of the activity being examined. This latter aspect of context, the activities occurring immediately before and after the interaction being examined, may be viewed as the immediate prehistory and post-history of the activity, the naturally occurring, microgenetic setting in which this activity occurs in this particular community.

Vygotsky's approach to the processes that bring about developmental change states that they are internal as well as social. He proposed that psychological processes first occur on the social plane and then are internalized to the psychological plane. Vygotsky stated his "general genetic law of cultural development" as follows:

> Any function in the child's cultural development appears twice, or on two planes. First it appears on the social plane, and then on the psychological plane. First it appears between people ... then within the child ... (Vygotsky, 1987, p. 145).

It is through the process of internalization that ways of thinking and behaving that are part of the social surroundings become part of the child's own, individual repertoire. It is the process through which human beings become human.

At first, a child participates in joint activity with more experienced members of the culture. Later, the child will be able to engage in the activity independently, based on the mental functions developed while participating in joint activity. In conceptualizing social

interaction, Vygotsky was interested in the relationship between the individual's internal processes and his or her social processes, in the difference between the individual's level of functioning independently and level of functioning which is not yet mature and in which the collaboration of someone more knowledgeable is required. He saw this relationship as a dynamic, fluid range within which an individual is capable of understanding and acting and called it the "zone of proximal development." This zone is created in the course of human interaction and is a key concept in understanding the relationship between culture and individual development. It is the boundary, set by the child's level of development and ability, within which the social world can influence the child's further development through collaboration (Tudge & Winterhoff, 1993). It is within the zone of proximal development that the individual and the social are intermingled.

In addition to institutions, symbols and sign systems play essential roles in the transition from collaborative accomplishment to individual action. Symbols are neither individual nor social but both, mediating between culture and the individual in the process of internalization. Symbols, such as mnemonic devices and words, are cultural tools to guide thinking, shaping and structuring the inner world, just as a hammer is a tool for shaping the outer. Rooted in history and culture, signs, especially language, are very powerful tools in the formation and functioning of individual consciousness. During ontogeny, the use of cultural tools is internalized, a process which both shapes thinking and modifies the nature of the tool.

Vygotsky's view of the mutual, co-constructive nature of human consciousness and sociocultural activity led him to critique the basic assumptions underlying traditional psychological research and the reductionist methods associated with those assumptions. Saying that "any fundamentally new approach to a scientific problem inevitably leads to new methods of investigation and analysis" (Vygotsky, 1978, p. 58), Vygotsky sought a new method with which to test his theories. Anticipating systems thinking, he thought the new method should retain the quality of that being studied. In order to understand the emergence of new and higher types of connections between thoughts, Vygotsky argued that "we must move beyond the study of isolated concepts; we must move beyond the study of the single stitch to the investigation of the fabric of thought" (Vygotsky, 1987, p. 233). Just as water cannot be better understood by breaking it into its constituent parts for observation, Vygotsky felt that the unit for studying mental processes must retain the relationship between these processes and their cultural, historical, and institutional settings.

Vygotsky's theory has influenced cross-cultural psychology through the work of Leont'ev (1981), Luria (1976), Wertsch (1991), Minick (1985), Tulviste (1991), and Valsiner (1987, 1989b; van der Veer & Valsiner, 1991). In the United States during the last 25 years, children's activity in the social and physical world has been the subject of an increasing amount of interest (Cole, Gay, Glick, & Sharp, 1971; Laboratory of Comparative Human Cognition, 1983; Rogoff, 1990; Wertsch, 1985). His work on appropriate units of analysis for the study of mental development is also beginning to

influence the field of psychology (Asendorpf & Valsiner, 1992; del Rio, Alvarez, & Wertsch, 1994).

In Vygotskian theory the problem of mental development is redefined. Rather than a changing representation of a pregiven world by a pregiven mind, mental development is viewed as the co-creation of world and mind on the basis of a history of actions that the individual performs in the world, actions that are shaped and given meaning by history and culture.

Ecological Theory of Urie Bronfenbrenner

As Glick (1992) pointed out, "Development does not proceed unaided or uncontexted" (p. 560). Vygotsky emphasized the aids to development, regarding development as social in nature, as the child is aided by others more knowledgeable about the institutions, tools, and symbol systems of the culture. Bronfenbrenner emphasized the context. His ecological systems theory provides a structure for conceptualizing the changing person within a changing environment, an environment that is made up of physical and material factors, as well as social activities, roles, relationships, symbolic systems, and the patterns and linkages between different levels of the environment. Ecological systems theory articulates the contextual systems which give shape and meaning to the activities and social interactions guiding the development of human psychological processes. Bronfenbrenner's emphasis on the actions of other people and the child's engagement in activity recalls his association with Russian cultural-historical psychology and Vygotskian theory.

Bronfenbrenner argued that a common sense psychology must reflect life as it is experienced (Bronfenbrenner, 1979, 1988, 1989, 1993). His descriptions of context focus on children's psychological development in relationship to their experiences: the activities in which they engage, their social partners, the roles they and their partners take in activity, and the proximal and distal settings in which activities occur. In this view, psychological processes such as learning and motivation cannot be isolated from the context in which they occur but are systemically tied to the specific context. They are properties of a system, a system in which the individual is but one element. Developmental change is a function of a person's exposure to and interaction with the environment.

Bronfenbrenner's principle that the development of the individual is a function of the interplay between the person and his or her environment is a transformation of Kurt Lewin's classic equation, B=f(PE) (Bronfenbrenner, 1979, p. 16), where B = behavior, f = function, P = person, and E = environment. The importance of process and the element of time in development, not present in Lewin's formula, led to the transformed equation D=f(PE) (Bronfenbrenner, 1993, pp. 7-8), where D = development. This equation illustrates that, whether the environment is a university laboratory, home, or child care center, the development of the participants is inextricably tied to that environment. The environment itself is described in terms of the evolving process of interaction through which the behavior of participants in the system is instigated, sustained, and developed. Children learn "not only <u>how</u> they should behave, but also ... how they should behave

where" (Super & Harkness, 1982, p. 18). A corollary of Bronfenbrenner's equation linking the development of the person to a particular time and space is that features of the system are meaningful, meaning that is understood in relationship to a particular context.

In addition to inclusion of both the person and context in the understanding of development, Bronfenbrenner's theory focuses attention on the evolving, dynamic nature of behavior. Bronfenbrenner has referred to this as a person-process-context model (1988; Bronfenbrenner & Ceci, 1994). The person-process-context model envisions a synergistic relationship between the characteristics of the person and the environment (Bronfenbrenner, 1993) and between certain processes and particular environmental contexts (Bronfenbrenner & Ceci, 1994). Synergy, or combined action, is nonadditive. Basic to the synergistic model is the implication of probable variation in developmental processes through the combined action of the individual and the environment. Children become competent members of the culture only by virtue of their ordered interactions with others, and these interactions may have different effects in different contexts. The person-in-activity-within-cultural-context is a dynamic, progressively more complex system, constantly reconstructing itself and relating to itself on many different levels. Observing children's behavior with other members of their social group maintains the integrity of the system in process and reveals aspects of the system not evident in the members of the group when observed singly or when context is not taken into account.

The person-process-context model (Bronfenbrenner and Crouter, 1983) envisages the possibility of differences by social class not only in childrearing practices and

outcomes, but also in the processes that interconnect them. Developmental processes are assumed to vary as a joint function of biological and environmental factors, with childrearing attitudes and belief systems being treated as important mediators of childrearing behavior. Reciprocal influences are recognized, as are cumulative effects on development over time.

Bronfenbrenner's concept of the environment reflects another of Lewin's ideas, the topology of the "life space" (Bronfenbrenner, 1979, p. 23). He conceives of the environment as nested levels of regions each contained within the next. The environment is not just the immediate setting; it is conceived as a complex system. The theory reflects broader systems theory in that

> definite rules of order apply to the dynamics of the whole system, ... reflected in the orderliness of the over-all architectural design, which cannot be explained in terms of any underlying orderliness of the constituents; and ... that the over-all order ... as a whole does not impose itself upon the molecular population directly, but becomes effective through intermediate ordering steps, delegated to sub-systems, each of which operates within its own, more limited authority (Weiss, 1968, p. 23).

Four levels of the environment, which Bronfenbrenner calls the microsystem, mesosystem, exosystem, and macrosystem (Bronfenbrenner, 1979, 1993), respectively describe the immediate setting, the interconnections between such settings, and the external influences emanating from the larger surroundings.

Microsystem

Settings which contain the individual define the microsystem. Young children in the United States are in face-to-face interaction with others in many settings: at home, in the homes of their grandparents and of other extended family members and friends, on the playground, at the bowling alley, in the doctor's office, the child care center, the grocery store, restaurant, church, and library. These settings, with their particular physical and material characteristics, as well as the patterns of activities, roles, and relations in which the child engages, as well as the symbolic features that "invite, permit, or inhibit, engagement" (Bronfenbrenner, 1993) within them constitute the microsystem.

Aspects of the microsystem that are most powerful in shaping the course of psychological growth are those that are meaningful to the person in the given situation. Three aspects of the environment are likely to be most salient to the young child: the relations of the various parties with each other as members of a group engaged in common, complementary, or relatively independent undertakings, the ongoing activity in which he/she or others are engaged, and the degree to which the environment is structured to inhibit, permit, or promote certain initiatives by the child. Echoing Vygotsky's (1978) emphasis on the social environment, Bronfenbrenner, more than fifteen years ago, declared the actions of other people to be "the most powerful environmental forces that instigate and influence development" (Bronfenbrenner, 1979, p. 45). In addition, Vygotskian theory (1978) focuses on the child's engagement in activity as the "principal engine of psychological, and especially cognitive, development" (Bronfenbrenner, 1993, p. 11).

Gibson's theory (1979), on the other hand, places emphasis on the immediate environment as a habitat that has evolved reciprocally with the perceiving being. The "affordances" of the environment are what it provides or furnishes to be perceived, acted upon, and known (Gibson & Spelke, 1983). Further evidence of the impact of the physical environment has been accumulated by Wachs (1979, 1987, 1989, 1990; Wachs & Chan, 1986). The microsystem environmental influences on development, therefore, include the pattern of relationships between the child's social partners, activities, and features of the physical environment.

Physical Surroundings

Because one of the basic functions of social order is to serve as a learning device (Edelstein, 1983), a society organizes learning, shares meanings, rules, and interpretations, and structures the environment to facilitate certain goals. Key to the understanding of this learning for young children is the organization of immediate, lived experience, and key to the child's lived experience is the physical surround.

From the point of view of humans as tool-using animals, who throughout human history have created and used cultural symbols as tools to shape consciousness, form and arrangement of the environment can be viewed as due more to the need to utilize internal resources than to the need for control of the physical environment. The physical setting may be seen as an aspect of the microsystem designed to provide possibilities, albeit not imperatives, for human activity.

Differences in house form and arrangement within a city are clearly related to differences in income of the inhabitants. However, as Rapoport (1969) makes clear, socio-cultural aspects need to be considered.

> The specific characteristics of a culture - the accepted way of doing things, the socially unacceptable ways and the implicit ideals - need to be considered since they affect housing and settlement form; this includes the subtleties as well as the more obvious or utilitarian features. It is often what a culture makes impossible by prohibiting it either explicitly or implicitly, rather than what it makes inevitable, which is significant (p. 47).

Given a climate and the availability of certain building materials, the use of physical space reflects many sociocultural forces, including the vision people have of the ideal life, their livelihood, and social relations. The way the living space is used, the furnishings, and whether they are adult-oriented or child-modified is less the result of individual desires than of generally accepted goals and values.

Environment is a complicated construct, blending physical and social. The distinction between physical and social environment is not as clear as it may first seem. Researchers in the field of child development have used various strategies to distinguish between social and physical environmental factors. Wachs distinguished animate versus inanimate and responsive versus unresponsive environmental factors (Wachs, 1990). Wozniak (1993) argued that the distinction rests on the presence or absence of subjectivity, and that people and animals to which we attribute subjectivity and events involving them are social. That which is a physical object in one culture or circumstance

may, in another culture or under different circumstances, be part of the social environment (Wozniak, 1993) and vice versa.

Rapoport, a geographer, has taken the position that the organization of living space is guided by cultural goals and values. Vygotskian theory and Bronfenbrenner's conception of context are compatible with the idea that there are culturally evolved forms for assisting the young to learn certain valued skills and abilities and for assisting caretakers in child care. What forms these "prostheses" take are related to the community's ecology, social organization, economy, and values.

Different cultures have arrangements for holding or carrying infants, giving them comfort, or encouraging certain activities. In the U.S., these arrangements are frequently physical objects or arrangements of the space. Middle-class U.S. babies are placed in holding containers, whereas infants in the Ituri Forest of Zaire are carried on their mother's back (Rogoff, 1990), Ecuadorian infants are wrapped against their mother's back in a shawl, and Navaho infants are swaddled to a cradleboard (Valsiner, 1989a). U.S. middle-class households tend to be age-segregated by separate bedrooms, and, in the place of a comforting adult, infants are given a bottle, pacifier, special blanket or other security object, attractive toy, or teddy to help them "establish their independence in the transitions to sleep and waking in the night and at nap time" (Rogoff, 1990, p. 124).

Parents and other care givers arrange the environment to promote and encourage certain activities and skill development and to discourage others. For example, children are placed in devices believed to encourage motor development, such as rolling walkers in

the U.S. and a pen made of cornstalks at arm-railing height in Guatemala (Rogoff, 1990, p. 89). Other devices, such as a small step stool in the bathroom on which the child can stand to reach the water faucet and closet bars and shelves in the child's room at a level the child can easily reach, facilitate the child's independent action and indicate that it is expected in certain situations. Whiting and Edwards (1988) reported that in the U.S. samples where mothers do not have help with child care during the day, mothers value the ability of children to do things for themselves. Their sample of mothers in Orchard Town, New England, were usually home all day alone with their preschool children and taught the children early to feed themselves and to be self-reliant in play and cleanliness habits.

Research by Wachs has examined correlations between aspects of children's development and the physical and social environment. Using his inanimate versus animate and unresponsive versus responsive distinctions to define factors of the physical environment as inanimate or unresponsive, Wachs has argued that the physical environment can have an impact on development that is independent of the social environment and critical to understanding the nature of social influences on development (Wachs & Chan, 1986; Wachs, 1990). His concept of the physical environment includes such variables as room decoration and number of toys; amount of noise and confusion; counts of the number of people, siblings, and visitors coming and going in the home; and regularity of meals and naps (Wachs, 1979, 1987, 1989, 1990; Wachs & Chan, 1986). In an effort to support his model suggesting that physical environment influences mediate social environment influences on development, he and his colleagues used correlational

and canonical analysis techniques to examine relationships between the physical environment and cognitive development (Wachs, 1979), mastery motivation (Wachs, 1987), premastery play (Wachs, 1990), and communication performance (Wachs & Chan, 1986). They found numerous positive correlations between specific environmental and social variables and child functioning, including positive correlations between provision of new toys for children by parents and the likelihood that the parents will name objects for the child (Wachs & Chan, 1986), a responsive, ordered, physical environment that promoted exploration and measures of cognitive development (Wachs, 1979), and between the amount of personal space for the child in the home and measures of cognitive development (Wachs, 1979).

Bronfenbrenner, while citing research by Wachs as an example of study of the microsystem, has said that Wachs' use of correlational analytic techniques methodologically and substantively violate the non-additive assumption of the ecological model (Bronfenbrenner, 1993). Nevertheless, Wachs' findings regarding the promotion of the child's exploration by features of the physical environment and amount of personal space in the home defined as the child's have contributed to the understanding of the microsystem.

The immediate environment surrounding the young child is a complex, highly differentiated, multi-factor phenomenon, a system of relationships, activities, opportunities, and constraints that are pattered by cultural values and beliefs.

Meso-, Exo-, and Macrosystems

In Bronfenbrenner's ecological theory, the principle of interconnectedness is seen as applying not only to the parties within settings but between settings, as well. Linkages between settings in which the individual actually participates constitute mesosystems. A mesosystem is a system of microsystems, such as, for a child, the relations between home and child care center. It is formed or extended when the child goes into the child care center, when parents communicate with the teacher, or when a friend from child care comes to the child's home to play. Features and processes of these linkages may be synergistic, in that they may work together to increase each other's action, or they may be inhibitory.

Those linkages between the settings in which the individual is present and other settings he or she may never enter but in which events occur that affect, or are affected by, events in the immediate environment constitute exosystems. An exosystem in the case of a child might include the parent's place of work, a school attended by a sibling, and a local school board meeting.

The macrosystem refers to consistencies in the form and content of the lower-order systems that exist at the level of culture as a whole, along with any belief systems, ideology, lifestyles, opportunity structures, and patterns of social interchange underlying such consistencies. These consistencies differ for various socioeconomic, ethnic, religious, and other within-society cultural groups, reflecting contrasting belief systems and

lifestyles, which in turn help to perpetuate the ecological environments specific to each group.

In the system, the structure of the whole determines the operation of the parts (Weiss, 1968). This is exactly the opposite of a machine, in which the outcome depends on strictly predefined operations of the parts. Because the interaction between person and environment is interactive, the micro-, meso-, exo-, and macrosystems have profound effects on the developing person.

In this study, children were observed in a multitude of settings: pizza parlor, bowling alley, church, older sister's Brownie meeting, grocery store, library, child care center, baby sitter's house, grandparents' house, yard, park, and so on. These settings constitute the microsystem. Linkages between these settings (the mesosystem) were not the focus of study. The exosystem, those settings in which the child does not go but that have an effect on the child's life, were also not a focus of study. Although parents' occupations were of special interest, occupation was considered as a macrosystem, rather than an exosystem, level variable. Occupation, in this study, was considered from the standpoint of Melvin Kohn's theory, which views occupation as an indicator of social class status, with its characteristic system of beliefs, values, and goals not necessarily shared with another social class. Social class is viewed here as a within-society culture that has a basis in history and that structures settings and various forms of mediated action.

The position taken here is that culture provides a pattern of thinking and action. Within each culture there come into being characteristic goals which are not necessarily

shared by other cultures. Even the most varied acts are congruous with its particular goals. The form that these acts take can be understood only by understanding first the cultural values and beliefs in which they are based. Such patterning of culture cannot be ignored as if it were an unimportant detail. The whole, as systems theory insists, is not merely the sum of all its parts, but the result of a unique arrangement and interrelation of the parts that has brought about the culture. As Ruth Benedict noted more than 60 years ago (1934):

> The diversity of custom in the world is not, however, a matter which we can only helplessly chronicle. Self-torture here, head-hunting there, pre-nuptial chastity in one tribe and adolescent license in another, are not a list of unrelated facts, each of them to be greeted with surprise wherever it is found or wherever it is absent. ... The significance of cultural behaviour is not exhausted when we have clearly understood that it is local and manmade and hugely variable. It tends also to be integrated. ... to overlook it [the pattern of culture] in the study of the patternings of human behaviour is to renounce the possibility of intelligent interpretation (pp. 42-43).

Studies in Psychological Anthropology

Despite differences in basic paradigms (see Edgerton, 1974), anthropology and psychology have historically had strong connections. Franz Boas worked in Wundt's laboratory before coming to the U.S. to teach anthropology at Columbia. Margaret Mead was a student in psychology at Barnard before being recruited by Ruth Benedict to study anthropology with Boas. The Whitings trace their intellectual ancestry to Pavlov, Freud, and Malinowski, as well as Boas. With the work of Ruth Benedict and Margaret Mead (Benedict, 1934, 1938/1955, 1949; Mead, 1930, 1949, 1955b), the activities of children

and the development of certain patterns of thinking and personality began to be systematically studied in anthropology. Although earlier naturalistic observations of children by anthropologists were made by Kidd in 1906 among the Kafir and Grinnell in 1924 of Cheyenne children (Mead, 1955), the chief impetus to study children came from psychology, on the one hand, and from medicine - through Freud - on the other. Anthropologists, such as Benedict, Mead, and the Whitings turned to psychology for understanding of the relationship between child rearing practices and the patterns they observed in adult personalities in different cultures (Whiting & Child, 1953; Whiting & Edwards, 1988; Whiting & Whiting, 1975). These anthropologists felt that attention to psychological process would provide a way of going beyond formal statements of culture toward understanding the interconnections within behavioral systems, a way to connect the "loosely overlapping ideas and action systems" of ethnographies (Sapir, 1934, p. 411), and they have had formative influences on current researchers in psychological anthropology (see Harkness & Super, 1980; Heath, 1986, 1989; Laboratory of Comparative Human Cognition, 1979; LeVine, 1977, 1989; Minturn & Lambert, 1964; Ochs & Schieffelin, 1984; Ogbu, 1979, 1988; Rogoff & Morelli, 1989).

Yet psychology's focus on the etic and nomothetic offered little or no information about children's behavior in naturalistic settings. Too often the only naturalistic studies of children were made by the psychologist of his own children, e.g., Binet, Baldwin, Piaget.

Interest in the ethnographic study of the lives of children, culture, and the interactions between them led John Whiting, Irvin Child, and William Lambert to develop

a design for the collection of comparable data on children's learning environments and socialization practices in a sample of societies that represented the variety of cultures existing in the world (Whiting & Whiting, 1978). The result was the six cultures study (Whiting & Whiting, 1975), a large study based in materialist-functionalist, Freudian, and social learning theory. Field work was carried out from 1954 to 1956 in India, Okinawa, the Philippines, Mexico, Kenya, and the U.S., and reported in a series of monographs (B. Whiting, 1963; Minturn & Lambert, 1964; Whiting & Whiting, 1975). At least fourteen five-minute observations were made of each of 134 children (67 girls and 67 boys) aged 3 to 10 years. Observers recorded the settings in which children were found, the activities in progress in those settings, and the interactions between the children and others. Reflecting the materialist-functionalist approach, the research model started with the environment (climate, flora, fauna, terrain) and history, which were directly related to maintenance systems (subsistence patterns, means of production, social structure, division of labor, and so on), which directly related to the child's learning environment (the settings occupied, caretakers and teachers, tasks assigned, and mother's workload).

Workload of the mother appeared to be the important predictor of child training. They reported that in societies in which mothers had the highest workload, children were pressured to be responsible, obedient, and nurturant, whereas in societies in which mothers had the lightest workload, children were pressured to be self-reliant and achievement oriented. The mothers of Orchard Town, New England, U.S.A., were judged to have the lightest workload, and their children scored comparatively low on

nurturance and responsibility as measured by the researchers' code. (All of the fathers in this sample were salaried wage earners or self-employed.) Children of Orchard Town had relatively high scores on egoism, seeking behavior (a category that included seeking help, attention, and approval from others), and sociability and low scores on nurturance. It was important for Orchard Town children to do well in school.

For psychological anthropology the importance of environmental and historical factors stems primarily from their effect on the maintenance systems, the economy, settlement pattern, and familial and political social structure factors which influence the division of labor, status, and roles of the adults. The Whitings held that those were the variables which influenced parental behavior, overlooked in the traditional study of child development because there is relatively little variation in western societies where most of the psychological theories were developed. They felt that it was the function of psychological anthropology to identify these hidden variables, hidden by "cultural blindness."

> Although child psychologists have paid lip service to social structure and economic variables they have summarized them in the concept of SES (social economic status) and have spent too little time exploring the independent effect of the elements hidden in this concept (Whiting & Whiting, 1978, p. 55).

This idea was later taken up by Bronfenbrenner (Bronfenbrenner & Crouter, 1983) with the catch phrase "social address" used to emphasize the non-explanatory nature of the label. In general, Whiting and Whiting (1975) argued that appropriate adult social

behavior is dictated by the socioeconomic and family structure, imbedded in the value system of the culture, and imbued in children through socialization practices. They found that nurturance, responsibility, achievement, and self-reliance were types of behavior differentially preferred by different cultures, and that the younger children in their sample were already behaving in accordance with the expectations of their culture.

An interesting aspect of the research program of the Whitings was their strategy of working back and forth between the macro cross-cultural level and the micro level, the detailed study of type cases and individual differences within a culture.

> We have attempted to replicate the associations we find between custom complexes on each of these levels [macro and micro]. We favor beginning on the macro level, if possible ... If our hypotheses seem to work on this macro level, wherever possible we turn to the analysis of the best field research type cases or best of all organize the field work ourselves. Finally, we attempt to do a test of the hypothesis within a culture if there is sufficient individual variation in the independent variables (Whiting & Whiting, 1978, p. 51).

The six cultures study prompted a follow up and further exploration of the effect of setting on the behavior of parents and children. Setting was defined as the physical space where customary behavior takes place, the cast of characters with whom the child frequently interacts, and the activities in which they are usually involved. Six more communities were added to the original six (India, Okinawa, the Philippines, Mexico, Kenya, and Orchard Town, U.S.A.), four in Kenya, one in Liberia, and another site in India, and "spot observations" in three Kenyan communities, Guatemala, Peru, and Claremont, California, U.S.A. The original six cultures data were reanalyzed. Methods

were modified for the extended study, for which observations were made between 1960 and 1980.

These studies by the Whitings (1975) and Whiting and Edwards (1988) were important in the development of the present study. The selection of a naturalistic "spot observation" technique, the selection of physical setting, children's activities, their social partners, and the roles of children and their partners in activity as foci of observation, and the repeated observations of children in a variety of settings were all influenced by the six cultures study and its sequel. However, there are key differences. Basic assumptions about the nature of children's participation in culture are quite different. Rather than an active child, in a dynamic, co-constructive relationship with the environment, the Whitings and Whiting and Edwards were quite explicit in their view of socialization as a "top-down" process. "Socializing agents orchestrate children's participation in these learning environments by assigning children to some and proscribing others" (Whiting & Edwards, 1988, p. 35). Their focus on patterns of social interaction, particularly between mothers and their children, behaviors, and modeling reflected their basis in Freudian theory and behaviorism. Culture was considered to be the theater in which interaction occurred, providing the backdrop of ecology, history, economics, religion, and customary rules within which social interaction is understood. The view of the child was one of being molded by the rules made by adults, rules which were circumscribed by the characteristics of the community, and the focus was on social behavior, rather than on activity. In contrast, the view from Vygotskian theory of the child as active creator of his or her own

thinking and activity in partnership with other people and the cultural surround has required the systemic view taken in the current study of the child-in-activity-in-cultural-context. In addition, the conception of the cultural context from Bronfenbrenner's theory is also systemic in nature, placing the emphasis in this study on processes and relationships between interconnected aspects of the individual, social partners, ongoing activities in the vicinity, and the physical environment.

Secondly, the Whitings and their colleagues did not consider within-society cultural differences. Both of the communities observed in the U.S.A. (Orchard Town, New England, in the six cultures study, and Claremont, California, in the spot observation sample) were predominantly middle- to upper middle- class. Variation within the U.S., between social classes, ethnic groups, regions of the country, urban versus rural, and so on, were not considered. Regrettably, only 8 observations were collected on each of 17 children in Claremont, and they were made only after school and on weekends, allowing limited conclusions to be made about these children's daily lives. This leaves Orchard Town as the primary example of children reared in an industrialized, schooled society. Within-society cultural differences in the experiences of parents and children can be profound, as studies of different socioeconomic, ethnic, or racial groups have demonstrated (Heath, 1983; Kohn, 1977; Kohn & Schooler, 1983; Ogbu, 1979).

Finally, the Whitings and Whiting and Edwards viewed the behavior and actions of the people observed as resulting from different cultural scripts for daily life. They assumed that the cultural scripts of the communities studied (in social behavior, maternal

workload, child work assignments, maternal-child interaction patterns, companions of children, nurturant acts by children to infants, and so on) were mechanisms whereby humans solved the problems of living in a particular environment and its associated maintenance system. Whatever differences they found between the communities in their cultural scripts, the researchers related back to the climate, economy, level of technology, subsistence pattern, social structure, and division of labor. Goals were related to accomplishing a task. They gave no attention to the role of values and beliefs in shaping the sociocultural context.

This study examines the differences in activity, social partners, roles in activity, and arrangement of the physical environment in two communities within a single city. It is the values and beliefs associated with social class within one society and the ability of the cultural system based in those values and beliefs to shape patterns of activity and social interaction that are the focus of this study.

Studies in Ecological Psychology

Naturalistic studies of children's lives in the United States have been rare. Preceding the work of the Whitings, were the notable ecological psychological studies by Barker and Wright and the Kansas school (Barker, 1965, 1968, 1978; Barker & Gump, 1964; Barker & Schoggen, 1973; Barker & Wright, 1951, 1954).

During the late 1940s through the 1960s, Barker and his associates investigated environments and their contribution to the variance of behavior. They worked with problems in the naturalistic observation of behavior, such as "How does one collect

specimens of behavior? What are the parts of the continuing stream of a person's behavior, and how does one enumerate and describe them? Among the limitless attributes of a person's surroundings, which ones are relevant to his behavior, and how does one identify and measure them?" (Barker, 1968, p. 1).

Barker and his associates, following the lead of Kurt Lewin, argued that behavior settings are not neutral; the behavior pattern and the milieu are dynamically inseparable (Barker & Schoggen, 1973; Schoggen, 1989). They argued that experimental psychology knows only how people behave under the conditions of experiments and clinical procedures, but it knows little about behavior outside of laboratories and clinics. In agreement with Lewin, they felt that a truly scientific psychology must be able to know about the laws of behavior under the conditions that occur in daily life. Lewin (1936) argued that scientific psychology must find a logically consistent framework for representing and deriving psychological processes, and that framework must take into account the psychological life space. The life-space in Lewin's terms was the world as a particular person perceives and is otherwise affected by it. Lewin's focus was on representing the relations between the person and the environment, as the formula B=f(PE) illustrates, and on understanding environment as a context for evoking behavior. For Barker and his colleagues, a necessary step toward a scientific psychology was a descriptive, natural history of both the life space and the ecological environment.

To that end, they studied the environmental elements of complex, real-life settings, the uncontrolled noise and confusion that psychology had excised from the laboratory,

what Barker called the "psychologist-free environment of behavior" (Barker, 1968, p. 4). They catalogued behavior settings in the U.S. town of Midwest, from abstract and title company offices to x-ray laboratories, and listed their attributes and the behaviors occurring in them. They later extended the catalogue to a town in England (Barker & Schoggen, 1973). They also catalogued all the events in a child's day (Barker & Wright, 1951; Barker, 1978). These studies were intensive; 8 observers spent fourteen hours, in thirty-minute observation periods, cataloguing every aspect of a day in the life of Raymond Birch, a 7-year-old boy in the town of Midwest. These extensive descriptions were intended to be "specimens" of the behavior and of the cultural and psychological habitats.

These studies provided evidence for the idea that most of the variance in people's behavior is accounted for by the settings in which they are located. In addition, human beings must possess the skills required for the activities expected in the settings in order for the settings to function effectively. However, as pointed out by Bronfenbrenner and Crouter (1983), the impact of the setting may only represent a temporary adaptation to an immediate situation. Although behavioral change is demonstrated, it may not be developmental change and it may not be part of a cultural pattern. What is needed is evidence of consistency of the child's behavior in a variety of different settings. This study examines children's activities, roles, and social partners, as they relate to larger cultural patterns, across a wide variety of settings.

Parenting

Parents are a major influence in their children's lives. Central to Vygotsky's theory is the concept that children participate in cultural activities with the guidance of more skilled partners. For young children, parents are frequent guides in the process of apprenticeship in the skills of their culture (Rogoff, 1990).

Competence is relative to the culture which defines it (Laboratory of Comparative Human Cognition, 1983; Ogbu, 1979, 1981). The kinds of learning opportunities a family provides a child depend on the sociocultural organization of the home, what parents are trying to accomplish through interaction with the child (Heath, 1989), and what instrumental competencies are valued in the culture (Ogbu, 1979, 1981). Studies of competence outside Western societies by psychologists (Cole, Gay, Glick, & Sharp, 1971; Dasen, 1977; Greenfield, 1966), anthropologists (LeVine, 1967), and cross-cultural psychologists (Berry, 1977, 1980) suggest that child-rearing patterns of a population may be influenced by the nature of its required competencies.

Because cultures differ in objectively discernible historical and current conditions of life, and therefore in shared meaning about how life should be lived, parents value different competencies in their children related to their goals and evaluations of what personal qualities are desirable (Baumrind, 1993). These goals differ widely across cultures. Cultural variations in shared meanings evolve over time, and cultures and cohorts differ on what their members regard as "normal." For example, Japanese mothers promote harmonious participation in the communal, interdependent Japanese corporate

structure by promoting mother-child enmeshment, cultivating unconditional acceptance and indulgence by being totally responsive to their young children's demands (Doi, 1973). This goal would be anathema to

> mainstream parents in the United States [who] typically cultivate independence and self reliance by challenging and optimally frustrating their children, and setting standards for autonomous achievement (Baumrind, 1993, p. 1301).

Culturally specific, contrasting family values result in distinctive, psychologically important characteristics (Cooper, Grotevant, & Condon, 1982).

Responsibility of children or parents to adapt to the other in the process of interacting varies widely between cultures (Ochs & Schieffelin, 1984; Rogoff, 1990). Research by Johnson and Martin (1985) suggests that high values on independence and initiative in children will be associated with parental role-centered orientations in child-rearing and increased encouragement and support for adult-child linguistic interaction. Efforts by U.S. parents to aid children in learning psychosocial competencies and cognitive skills related children's learning to such parenting skills as scaffolding, academic achievement, and high-level distancing skills (Baumrind, 1993). Reflecting her own internalization of middle-class U.S. views of child rearing (Lawrence & Valsiner, 1993), Baumrind's thesis is that a high level of parental involvement and commitment is necessary for optimal child development. In this view, if parents believe that they can control their children's outcomes, they will view the ways in which they interact with their children as a responsibility to be undertaken with serious intent.

Parents' caretaking practices have been related to children's internalization of social norms and social-emotional development. Middle-class children frequently initiate their involvement with adults and structure interactive situations (Carew, 1980; Nelson-LeGall, 1985; Rogoff, 1990). Ginsburg and Bronstein (1993) found that over- and under-controlling family styles were related to an extrinsic motivational orientation, whereas autonomy-supporting family styles were associated with intrinsic motivation.

In other U.S. studies, adolescents of authoritative parents demonstrated high internal locus of control (Baumrind, 1993). (Authoritative parents make high demands for mature behavior but respond to their children's individuality and seek to communicate concerning parental expectations and sanctions.) Authoritative parenting style is significantly associated with middle-class status (Baumrind, 1993), characterized by elaborated, effortful, person-centered disciplinary techniques.

Investment in work and in parenting by middle-class, white-collar parents of three-to-four year olds affects their socialization practices. Greenberger and Goldberg (1989) suggested that men with a high investment in work may have a greater stake in promoting their children's personal and social maturity. For women, commitment to work was negatively associated at a modest level with commitment to parenting. Women's concern was the promotion of their children's development. Invested parents were more willing to provide explanations, more sensitive to their children's needs and abilities, and firmer.

Learning in the Home

As part of its function of "making human beings human" (Bronfenbrenner, 1979) the family provides an environment conducive to learning certain skills. Connolly and Bruner (1974) have argued that competence involves knowing the sets of skills which are essential for coping with existing realities. Competence consists of general skills, "knowing how rather than simply knowing that" (Connolly & Bruner, 1974, p. 3) and appear to depend on what has properly been called a "hidden curriculum in the home" (p. 5).

For 2- and 3-year olds, lessons about socially acceptable behavior, about what is allowed and what is forbidden, are frequently the focus of family interaction. Dunn and Brown (1991) examined the features of maternal prescriptions in Cambridge, England, and Lancaster, Pennsylvania, U.S.A. The American mothers more frequently focused on the categories of rights (possession), whereas English mothers focused prescriptions on positive justice (sharing, taking turns), harm to others (kindness, aggression), and destruction. For both groups, by far the most frequent prescriptions focused on rules of the house (issues of daily routine, politeness, tidiness, appropriate clothes). Meal behavior was the topic which received the most attention from English mothers, tidiness from American mothers. English mothers used more normative language, prescriptions couched in the form of explicit rules, whereas American mothers directed their messages in terms of the child's individual actions.

Early learning opportunities provided to children by their parents in the sociocultural context of the home and community establish much of what may be learned, how and when it will be taught, and the rate of learning (Heath, 1989; Schieffelin & Ochs, 1986; Super & Harkness, 1986). Research within a Vygotskian tradition has shown that adult guidance and scaffolding within the zone of proximal development foster cognitive development (McGillicuddy-DeLisi, 1985; Rogoff & Wertsch, 1984; Sigel, 1982). Sigel (1982) found that preschool children whose parents used "high level distancing strategies" (anticipating, proposing alternatives, and evaluating outcomes) that challenged their representational abilities outperformed children with equivalent IQs on anticipatory and memory tasks. Sigel's concept of "distancing" strategies involves a developmental stance to the instructional process that calls upon the learner's constructive abilities, through such processes as discovery learning, inquiry training, and problem solving approaches that require the child to participate in the learning process. Distancing requires the parent to be sensitive to the child's zone of proximal development and is clearly effortful.

Distancing strategies are pedantic in tone, reflecting what Rogoff (1990) called "the didactic and dyadic role assumed by American middle-class parents" (p. 133). Socioeconomic status has been shown to be a significant predictor of motivational orientation and academic performance, accounting for a substantial portion of the variance in the child's judgment, class behavior, grade point average, and achievement (Ginsburg & Bronstein, 1993). Finally, ability to utilize adults and peers as resources in learning situations is a skill of major importance for children (Nelson-LeGall, 1985).

In summary, background literature on parenting in the United States indicates that culturally specific, contrasting family values result in distinctive, social skills and psychological characteristics. Middle-class parents have a greater stake in fostering academic skills in their children at an early age; they provide more explanations in a more elaborated and didactic style with their children than do working-class parents. How parents' goals for their children differ between social classes in the United States is clarified by the work of Melvin Kohn, discussed in the following section.

Social Class

As the above literature indicates, the psychological development of children in the family is affected by the parents' world of work. When the world of work is considered as an environment to which the parents have access and the child does not, it is an exosystem in Bronfenbrenner's model (1979, 1990). When the job held by a parent is an indicator of patterns of values and beliefs that also pattern the home environment, then the exosystem and the microsystem are both lower-order systems reflecting the consistencies of the macrosystem of social class. The position taken in this study is that a cultural group, rather than being synonymous with a society, "is one that possesses a distinct set of practices, values, and beliefs that is passed on and reproduced (though never as an exact copy) from generation to generation" (Tudge, Putnam, & Sidden, 1994, p. 110). Such is the case with social class; members of different social classes experience different life conditions, see the world differently, develop different views of reality, different

aspirations and personality characteristics, and base their lives on different systems of beliefs and values.

When social class is used in research as a label, without explicit consideration of the processes through which it might affect the course of development, it is being used as what Bronfenbrenner and Crouter (1983) called a "social address" and Whiting (1976) called a "packaged variable." These terms refer to independent variables, such as sex, age, culture, and social class, that have shown themselves to be good predictors of differences in dependent variables but are not "unwrapped" to reveal the associated processes, experiences, or dimensions that may account for the differences. In the U.S., social class is typically a composite of occupational status, parental education, family income, and place of residence. Some of the process of unwrapping social class has been done by sociologist Melvin Kohn and his colleagues, who have used causal modeling techniques to demonstrate relationships between parental work experiences and the values parents have for their children.

This study seeks to examine some of the ways in which processes at different levels of the ecology are linked by examining the relationship between social class, at the macrosystem level reflecting beliefs and values, and young children's activities, associated with cognitive development, at the microsystem level. Environmental characteristics associated with different class backgrounds are pervasive and range from the quality of housing conditions, to the nature of toys, to the number of books available to the child (Elder & Caspi, 1988). Thus, social class may be related to children's cognitive

development because the physical environment associated with it provides stimulation, independent of the activities in which the individuals engage. However, the argument has been made connecting the nature of parents' work with the achievement motivation of children through a specific type of family environment (Ginsburg & Bronstein, 1993; Greenberger & Goldberg, 1989; Kohn & Schooler, 1983).

Kohn (1969) proposed that the structure and content of the father's job shaped his value orientations to other aspects of his life, including his goals and methods of childrearing. He tested the hypotheses in a series of studies and repeatedly demonstrated that social class was consistently related to parental values (Kohn, 1963, 1969, 1975; Kohn & Schooler, 1973, 1978, 1982, 1983). Middle-class occupations involve more complex work, typically dealing with manipulation of interpersonal relations, ideas, data, and symbols, are not routinized, and are free of close supervision. Working-class occupations typically deal more with things and are more subject to close supervision and standardization. A fundamental difference between them is in opportunities to exercise self-direction. Specifically, men working in the non-professional sphere (working class) whose jobs required compliance with authority tended to hold values that stressed obedience, conformity, manners, orderliness, and neatness in their children. Fathers working in the professional arena (i.e., middle class) expected in their children the qualities demanded by their occupations, stressing self-direction, independence, freedom, creativity, achievement, individualism, and initiative (Kohn, 1987; Triandis, 1989).

The personal qualities demanded by the father's job influenced both parents' childrearing values (Kohn, 1963, 1969, 1975; Kohn & Schooler, 1973, 1978, 1982, 1983; Kohn & Slomczynski, 1990; Luster, Rhoades, & Haas, 1989). In interviews, middle-class mothers gave higher priority to values that reflected internal dynamics and were significantly more likely than were working-class mothers to value happiness (in particular for sons), consideration, self-control, and curiosity. Working-class mothers, by contrast, gave higher priority to values that reflected behavioral conformity, obedience, and neatness. Waters and Crandall (1964) reported the emphasis middle-class parents placed on self-actualization to be related to placing a high value on academic achievement.

Parents' attitudes toward transgressions was related to their valuation of self-direction (middle class) or conformity to external authority (working class) (Kohn, 1979). Middle-class parents were more likely to discipline their children based on their interpretation of the intent (the reasons for the misbehavior), whereas working-class parents were more likely to base their discipline decisions on the consequences of the misbehavior (Kohn, 1969; Gecas & Nye, 1974). Middle-class mothers were more likely to punish their children physically when the child's misbehavior was defined as loss of temper than when it was defined as wild play, because loss of temper was equated with loss of self-control. Working-class mothers, on the other hand, based their decisions concerning physical punishment on the consequences of the child's behavior. Middle-class parents were more likely to discriminate with regard to the circumstances when deciding to use physical punishment than were working-class parents (Gecas & Nye, 1974). Middle-class

parents were more likely to use physical punishment in the case of intentional disobedience and less likely to use physical punishment when something was accidentally broken.

Differences between social class groups in values and beliefs regarding internal dynamics (self-control, self-actualization) versus external dynamics (obedience and conformity to prescriptions) affected parents' views of their roles as parents (Bronfenbrenner, 1958; Kohn, 1977; Luster, Rhoades, & Haas, 1989). Middle-class parents viewed themselves as supportive of the child's efforts, used less emotional control, were freer in expressions of affection, and more tolerant of the child's impulses. Middle-class parents believed that children should be free to explore and provided environments that supported exploration, whereas working-class mothers restricted the children's actions and used physical punishment more often during home observations (Luster, Rhoades, & Haas, 1989). Parents in the working class were oriented toward maintaining order and obedience and placed more emphasis on their responsibility to constrain their children (Bronfenbrenner, 1958).

The value middle-class parents place on independence is reflected in sleeping arrangements for the family. Middle-class U.S. parents, in a comparative study of U.S. and Highland Maya parents' decisions regarding sleeping arrangements during their child's first two years (Morelli, Rogoff, Oppenheim, & Goldsmith, 1992), explained their practice of separating sleeping arrangements for infants in terms of the value of independence for infants. Independence of action may explain why middle-class children frequently initiate their involvement with adults and structure interactive situations (Carew, 1980; Nelson-

LeGall, 1985; Rogoff, 1990). Farran and Haskins (1980) found that in laboratory play activity middle-class children changed the mother's behavior more frequently than lower-class children and that middle-income dyads were more nearly equal in initiating and terminating mutual play episodes, suggesting more reciprocity in their interactions.

Although Wachs argued that social class is a social environmental variable (Wachs & Chan, 1986), as a macrosystem, social class is a higher order system that has a co-constructive role in structuring the physical and social environment. He viewed social class as a distal measure, and thus entered it in the regression analyses last "to assess whether there was residual variance not accounted for by the specific proximal environmental predictors" (Wachs & Chan, 1986, p. 1467). In spite of parceling out variance to 32 physical items and nine social codes, Wachs and Chan found that social class contributed significant variance to the production of new words, and that individual variation in new word production was associated with provision of new toys and changes in room decorations (Wachs & Chan, 1986). In addition, the average educational level for a set of parents was positively correlated with object mastery (goal-directed behaviors by which the child is able to produce an effect or solve a problem), social-object mastery (child's attempts to get adult interaction through use of objects, as in the handing of an object to the adult while looking at the adult), and social mastery (attempts to get adult interaction without use of objects, such as vocalizing to the adult), and negatively correlated with passive object play (watching objects) and active object play (playing with

a toy but not in such a way as to produce an effect or solve a problem posed by the toy) (Wachs, 1987).

> A more viable environmental action model may involve looking not only at separate physical and social environment influences but also at how the degree of covariance between physical and social environments influences variability of development (Wachs & Chan, 1986, p. 1473).

These problems in attempting to analyze social class within the reductionist framework highlight the importance of maintaining the integrity of the physical and social system in understanding the child's world.

Socioeconomic advantage may bring cognitive stimulation and support for academic development during the preschool years. This was operationalized by Wallach and Wallach (1976) by the presence of many books in the home environment. The value system underlying the presence of books in the home is the same as that which would place emphasis on children's learning and be seen in the child's activities with others, as well. This greater emphasis on academic skills in the higher socioeconomic group may be demonstrated in various ways.

Cross-national studies, comparing the U.S. and Poland (Slomczynski, Miller, & Kohn, 1981), and in Japan (Naoi & Schooler, 1985), have replicated some of the U.S. findings and have demonstrated the stability of Kohn's findings regarding social class values and parenting. Early in his program of research, Kohn (1969) demonstrated that class was more powerfully related to parental values than was the total combined variance,

when controlling for class, associated with race, religion, region, and national background. With his studies comparing a capitalist (U.S.) to a socialist (Polish) society, Kohn began to distinguish between social stratification (Slomczynski, Miller, & Kohn, 1981) and social class (Slomczynski & Kohn, 1990). Social stratification referred to "the hierarchical ordering of society in terms of power, privilege, and prestige" (Slomczynski, Miller, & Kohn, 1981). Social class referred to "groups defined in terms of their relationship to ownership and control over the means of production, and their control over the labor power of others" (Slomczynski & Kohn, 1990, p. 2). Slomczynski, Miller, and Kohn (1981) replicated Kohn and Schooler's (1973, 1978) findings which demonstrated that occupational self-direction could affect one's intellectual flexibility and the relationships of social stratification and job conditions to values and social orientations. The relationships of social stratification and job conditions to values and social orientations were again replicated in Japan, a non-Western, interdependent society. These studies provide strong evidence for the relationship of social stratification to general values and parental values.

Gender

Wachs' specificity hypothesis states that different aspects of development have unique environmental predictors (environmental specificity) for different individuals (organismic specificity) (Wachs, 1987). It is essential to recognize that the environment does not influence every individual in the same way. In Bronfenbrenner's terms, inclusion of characteristics of the individual in a study of the influence of context on developmental

processes is essential for a person-process-context study (Bronfenbrenner, 1993). Gender constitutes a person variable.

Gender is socially constructed (Lather, 1988), as demonstrated by Whiting and Edwards' (1988) finding that cultures differ in the meaning of maleness and femaleness and in definitions of what is appropriate for boys and for girls. Anthropologists, such as Margaret Mead (1949) and Whiting and Edwards (1988), have employed knowledge gained in the field to demonstrate the malleability of sex role behavior through the very different roles played by men and women in different cultures. In addition, gender is one of the most salient features of any social interaction, and parents' goals for and beliefs about their children have been reported to be greatly influenced by gender (Kohn, 1969).

As is clear from the work of Kohn and his associates, social class position is experienced not just in terms of control of material resources, but is expressed in people's lived experience and social relationships. Class is a relationship to control over the labor power of others (Slomczynski & Kohn, 1990; Weiler, 1988), and social class interests shift according to one's work and access to forms of power. Both class and gender are historical structuring processes, ways in which social life is constantly being organized, altered, and reorganized through time. Like social class, gender is something we enact, not an inner core of traits we express (Riger, 1992); it is something we "do" rather than "have."

Evidence for the social construction of gender can be found in the social class literature. Parents have different values and goals for girls than for boys (Kohn, 1969).

Middle-class mothers' conceptions of the desirable were much the same for boys and for girls, but working-class mothers distinguished between the sexes. All the mothers were more likely to regard dependability, school performance, and ambition as important for boys, and to regard happiness, neatness, cleanliness, and good manners as important for girls. Good manners may be more important for girls in general; Maccoby (1990) reported that during the two-year period just before school entry, girls progressively adopted an interpersonal influence style when playing of using polite suggestions, whereas boys were becoming less and less responsive to polite suggestions, preferring instead to make direct demands. Boys in their groups were more likely than girls in all-girl groups to use power assertive behavior and girls were more likely to be polite (Maccoby, 1990). Maternal sex-typed beliefs affect children's interaction styles by the age of 2; daughters of low sex-typed mothers were more responsive and more likely to seek comfort than daughters of high sex-typed mothers (Brooks-Gunn, 1986). Maternal beliefs about sex-typed characteristics were related to social class; low sex-typed mothers were primarily middle class, while high sex-typed mothers were primarily working class.

For these reasons, some differences between girls and boys in lessons, particularly those pertaining to politeness can be expected. In addition, lessons related to early acquisition of academic skills are expected to be more frequently available to middle-class boys.

Child in Activity as the Unit of Analysis

The unit of analysis in this study is the child-in-activity-within-cultural-context. This complex systems view of the developing child is related to Vygotsky's (1987) metaphor concerning the relationship of language to consciousness. They are not related, he wrote, "through repetitive connections ... analogous with the associative connections that arise between two meaningless words" (p. 284). Nor are they connected as are "other structural connections that can arise between two objects such as the stick and the banana in the chimpanzee experiments" (p. 284). They are related as are oxygen and hydrogen in water, inseparable.

Rogoff (1990) argued,

> From the sociohistorical perspective, the basic unit of analysis is no longer the (properties of the) individual, but the (processes of the) sociocultural activity, involving active participation of people in socially constituted practices (p. 14).

The importance of activity was underscored by Minick (1985), who argued that, from the Vygotskian point of view, the individual and the sociocultural system are integrated in activity.

> [T]he links between dyadic or small group interactions and the broader socio-cultural system must be recognized and explored. ... actions are at one and the same time components of the life of the individual and the social system. This point is as critical for the analysis of the development of intermental actions as it is for the analysis of the development of intramental actions. No less than the action of an individual, the action of a dyad or small group is a component in the social system. Correspondingly, the intermental action and the social interaction that

> makes that action possible will be defined and structured in certain respects by the broader social and cultural system (p. 257).

In order to understand the meaning of the activity of a developing child, it is as necessary to maintain the "links" between the child, activity, and culture as it is to maintain the integrity of water in order to understand many of its properties. To elaborate on the metaphor, breaking down water into hydrogen and oxygen gives us some knowledge of water, but water as integral entity reveals things about itself that its parts do not. Water dissolves things; neither hydrogen nor oxygen alone does that. Although something is learned by analysis, something different is learned by examining wholes. If water is decomposed into its elementary particles, the water disappears (Swimme, 1985).

The parallel argument for the child-in-activity-within-cultural-context is that by maintaining the integrity of the system, the relationships between the individual, action, and the various levels of the social and physical ecology, a greater understanding of the developmental process can be attained. In the integral activity of the whole, the patterns of relationship between the individual and the culture are maintained.

The systems concept expresses the experience that there are patterned processes which owe their typical configuration not to a prearranged, absolutely stereotyped, mosaic of separate component performances, but on the contrary, to the fact that the component activities have many degrees of freedom, but submit to the ordering restraints exerted upon them by the integral activity of the whole in its patterned systems dynamics. This study is designed to retain the integrity of these patterned processes and reveal them.

To summarize the theoretical position underlying this study: (1) The activities and occupational conditions characteristic of each social class are associated with different conceptions of social reality, defined as cultural beliefs. (2) Patterns of interactions, available activities, roles taken in activity, available partners, and partners' roles, as well as the physical arrangement of the surroundings provide an interpretive key to understanding the differences in middle and working-class parental values, based in their cultural beliefs. (3) The understanding of human development necessarily involves the consideration of multiperson systems in multiple settings. (4) Analysis of these interdependent, multiperson, multi-setting systems requires a method and variable that maintain the relationships of the system which is the focus of study. (5) Due to the internalization process there will be wide variability within the groups.

Constraints Model

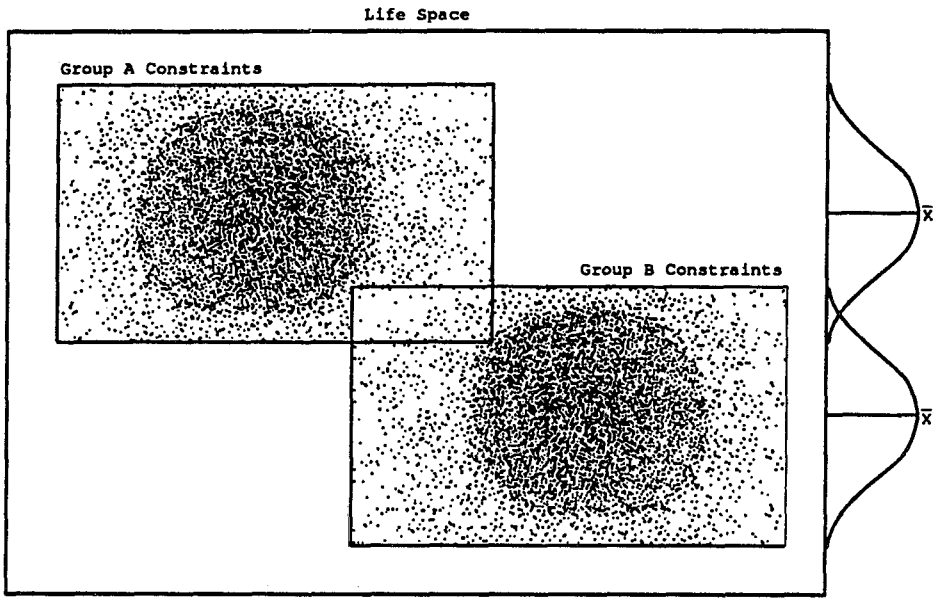
The belief underlying this study is that by examining the everyday lives of children, certain patterns in activities, roles, partners in activity, interactions with social partners, and physical setting will emerge, patterns based in the values and beliefs associated with social class membership. These patterns may be seen by taking a broad overview (averages or proportions for the data) and then moving in for a closer examination of the variation displayed in the lives of individual children.

Patterns are created by values and beliefs, which place constraints on the range of activities and relationships of members of a cultural group. Cultural constraints are subtle but can be inferred from the distribution of the patterns of activities and relationships.

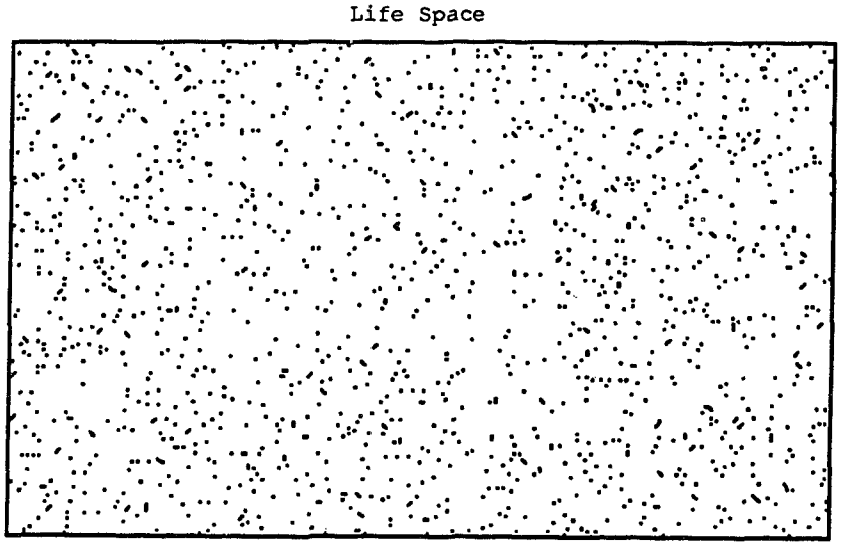
For example, Boas concluded that each culture borrows and develops features, which are then adapted to the special constraints operating on the people (LCHC, 1983). LeVine (1974) observed that the Gussii of Kenya carry their toddlers more than North Americans do and explained this as their adaptation to the cultural constraint resulting from the practice of cooking over an open fire, since parents recognize that fires represent a special danger that children have to be protected from once they start to toddle. He hypothesized universal goals which are formulated and symbolically elaborated in culturally distinctive beliefs, norms, and ideologies. These goals include the development of the child's behavioral capacity for economic self-maintenance in maturity and the development of the child's behavioral capacities for maximizing other cultural values, such as prestige, wealth, personal satisfaction, etc. These interlocking, contingent aspects of culture create constraints within which the culturally competent individual constructs his or her experience.

In this study, the two groups will demonstrate some overlap due to the multitude of things that they have in common: such as race, nuclear family structure, city/region/country of residence, and access to television. In addition, one of the persistent problems in drawing conclusions from naturalistic studies--individual variability--can be anticipated. Nevertheless, the constraints created by the value and belief system associated with social class membership will be discernible from the clustering of individuals within the group over several characteristics.

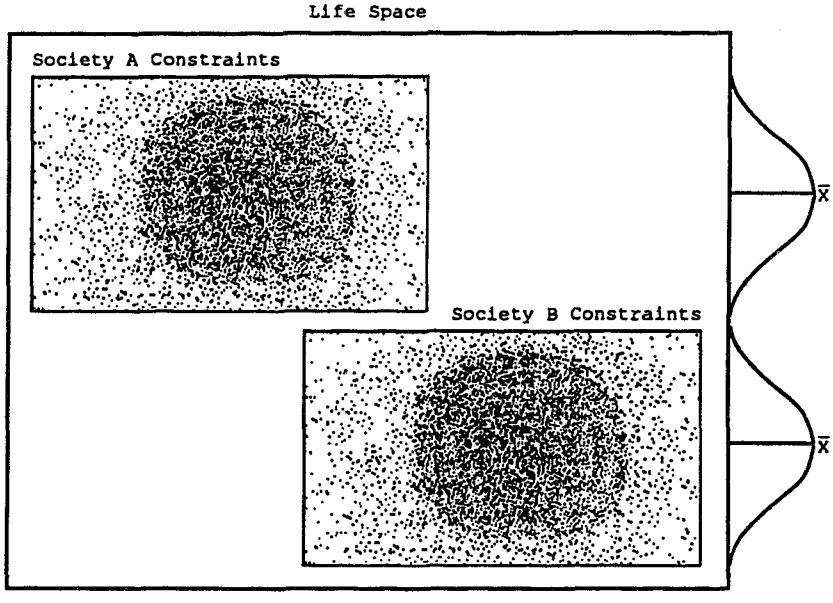
The following model illustrates a range of individual variation within a system of cultural constraints for two groups within one society. Most of the children in a group are expected to show similarities to each other on a particular cultural characteristic (such as activity or role in activity). However, because of the many things most children in the U.S. have in common, some overlap is expected on particular characteristics. It is the pattern of overlap and variation on the different characteristics that places an individual within a particular cultural group. The following diagram represents two cultural groups within a society:



By comparison, if there were no constraints, the distribution pattern would be random.



A comparison of two cultures, one technologically complex and one technologically simple, would be expected to show a pattern like this:



The following hypotheses were formulated, on the basis of previous research or theory, to examine multiperson systems of interaction not limited to a single setting and taking into account aspects of the environment beyond the immediate situation containing the participants. They were structured with five goals in mind: (1) to examine the variation in the daily lives of young children, the settings, lessons, social partners, and roles in which the children engage as they construct their life stories in partnership with other members of their culture; (2) to examine setting as an indicator of cultural value placed on independent action by the child for each child and by social class; (3) to examine the kinds of lessons in which each child engages and differences by social class group; (4) to examine initiation of lessons and initiation of involvement in lessons as an indicator of the child's independence and initiative in interacting with others in lessons - for each child and by social class group; and (5) to examine the incidence of involvement in the different types of lessons by girls as compared to types in which boys are involved.

Hypotheses

Hypothesis 1. Patterns will emerge showing that middle-class children spend more time in environments modified to encourage independence and that they will play more frequently with toys designed for the acquisition of academic skills.

1-1. When children are in their own environs, middle-class children's activities will occur in child modified locations more frequently than those of working-class children.

1-2. Middle-class children will engage in more play with academic objects than will working-class children.

1-3. The patterns of engagement in play with academic objects in their own environs versus in school or professional child care settings will be different for middle-class children than for their working-class counterparts. Middle-class children will engage in play with academic objects more frequently in their own environs than in school or professional child care settings, whereas working-class children will engage in play with academic objects more frequently in school or in professional child care settings than in their own environs.

1-4. On each of the above, analyses of individual children will show variation in each group with some overlap between them.

Hypothesis 2. Social partners of middle-class children will place a higher value on academic skills and engage in more explicit teaching of the children than will the social partners of working-class children.

2-1. Middle-class children will be exposed to and engaged in more lessons than will working-class children.

2-2. Middle-class children will be exposed to and engaged in more academic lessons than will working-class children.

2-3. Middle-class children will be exposed to and engaged in more skill-nature lessons than will working-class children.

2-4. On each of the above, analyses of individual children will show variation in each group with some overlap between them.

Hypothesis 3. Middle-class children will initiate more academic and skill-nature lessons alone and with a social partner, and will initiate their involvement in more academic and skill-nature lessons alone and with a social partner than will working-class children. Within the middle class, males will initiate more academic lessons alone and with a social partner, and will initiate their involvement in more academic lessons alone and with a social partner than will females.

3-1. Middle-class children will initiate more academic lessons alone and with a social partner than will working-class children.

3-2. Middle-class children will initiate more skill-nature lessons alone and with a social partner than will working-class children.

3-3. Middle-class children will initiate their involvement alone and with a social partner in more academic lessons than will working-class children.

3-4. Middle-class children will initiate their involvement alone and with a social partner in more skill-nature lessons than will working-class children.

3-5. Middle-class males will initiate, alone and with a partner, more academic lessons than will middle-class females.

3-6. Middle-class males will initiate their involvement, alone and with a partner, in more academic lessons than will middle-class females.

3-7. On each of the above, analyses of individual children will show variation in each group with some overlap between them.

Hypothesis 4. Although a preponderance of interpersonal lessons is expected for all children of this age, girls will be involved in more interpersonal lessons than will boys and in more interpersonal lessons than any other type of lesson, regardless of social class group.

4-1. Across social class, females will be involved in more interpersonal lessons than any other type of lesson.

4-2. Within each social class, males will be involved in more academic lessons than will females.

4-3. On each of the above, analyses of individual children will show variation in each group with some overlap between them.

CHAPTER III

METHODS AND PROCEDURES

City

Participants in the study resided in Greensboro, North Carolina, a traditional, southern U.S., medium-sized city named for Revolutionary War General Nathanael Greene, who fought a decisive battle there with the British soldiers of General Lord Charles Cornwallis in 1781. Street names, place names, and the number of Quaker meeting houses reflect the area's early settlement by Quakers. According to the 1990 U.S. Census, the population of 183,521 is 64% white, 34% black, and 2% consists of people of other racial/ethnic groups.

According to current sources, the median effective buying income (EBI) for the 77,300 households is $31,253 (Greensboro Area Chamber of Commerce, 1994). Effective buying income is defined as personal income (wages, salaries, interest, dividends, profits, and property income) minus taxes (federal, state, and local). Effective buying income is generally equivalent to the government's "disposable income." Of Greensboro households, 17.8% report an EBI of $10,000-19,999, 26.6% $20,000-$34.999, 19.4% 35,000-49,999, and 24.3% $50,000 and over.

History

Founded in 1808 (Sieber, 1993), the city has been shaped by the value systems of its inhabitants, its location, and its history. Settlers in the region during the colonial and

early national periods were a number of Ulster Scots (sometimes called Scotch-Irish, they were descendants of Scots who had lived in Ulster, Ireland, before coming to the American colonies) (Fripp, 1982), English and Welsh Quakers, Moravians, and Germans. The traditions of these groups emphasized technical skills, commerce, and diversified agriculture rather than the development of a plantation economy supported by slave labor (Glass, 1992). From the mid-18th century through the end of the 19th, various kinds of mills were built in the state, and the textile industry in the piedmont region, which was suitable for water-powered industry, grew slowly and steadily. Greensboro emerged from its status as a minor commercial center to an important textile city after the Cone family of Baltimore began its operations there in 1896 (Glass, 1992). By the end of the 19th century, North Carolina was the most industrialized state in the south. Greensboro took its place as one of the largest cities in the state, with a population of just over 10,000 and good rail connections for the transportation of its products to northern and southern markets (Stoesen, 1993). The city's economy is still based in manufacturing, primarily of textiles, furniture, and tobacco products.

In addition to their cultural aptitude for industry, the Quakers were important in another aspect of Greensboro history. Quaker abhorrence of slavery helped make Greensboro unique in the southern United States. One branch of the Underground Railroad, the network of anti-slavery activists who helped African-Americans to escape slavery, began in 1819 near the New Garden Friends Meeting House in Greensboro (Sieber, 1993; Stoesen, personal communication, July 16, 1995). The first local school

for African-Americans, also an underground operation of the Quakers, was established in 1821 but was suppressed within a few months by the state law that forbade the teaching of slaves to read and write (Sieber, 1993). The influence of the Quakers may well have contributed to Greensboro's 20-to-1 vote against secession from the Union in 1861, six weeks before the state's participation in the Confederacy and the Civil War (Sieber, 1993).

Many Quakers emigrated to non-slaveholding states at about the time the Civil War broke out, and their legacy met challenges from other regional influences. The Ku Klux Klan was in evidence during and after Reconstruction, as were the efforts of African-American leaders and their supporters in the white community. In 1870, city religious leaders established the first graded school for African-Americans which was later supported by state taxation (Sieber, 1993). However, segregation was a way of life until the 1970s. In 1960, the '60s sit-in movement in the United States began at Woolworth's in downtown Greensboro, when four African-American students at North Carolina A & T College (as it was then called) demanded service at a segregated lunch counter. In 1979, armed Ku Klux Klan members confronted a rally of the Communist Workers Party (CWP) in the predominantly black Morningside Homes area of the city. Five CWP members were killed in the "Morningside Massacre," which received national publicity and prompted a comprehensive examination of race relations in the city (Stoesen, 1993).

Both economic and racial considerations were important in the creation of a class of urban, working-class whites who made up the textile labor force from the first half of the 19th century until the mid-1970's (Glass, 1992). Although some of the mills experimented with an integrated work force, during the first half of the 19th century there were economic and racial objections to using slave labor in the textile mills, including the high cost of slaves and restrictions against teaching slaves a trade (Glass, 1992). Textile work continued to be segregated after emancipation, as poor, white, farming families moved from the hard-pressed farms to the cities for factory work. During the late 19th and early 20th centuries, the textile mills were typically built on the outskirts of a city, far enough from the city that the workers could not commute to and from the town but near enough that transportation facilities were available. Concomitant with the textile mills were the mill villages, houses built and owned by the mills in which the employees lived. Some mills operated stores, stocked with meat, milk, and other products produced on mill farms; provided "welfare," which consisted primarily of cooking, sewing, and child care classes for the women; and built churches and recreational facilities for the villages (Glass, 1992; Hines, 1991). Until 1915, children of mill families typically worked in the mill from before the age of twelve years, creating a legacy of illiteracy among workers (Glass, 1992). The practices of employing entire families, providing the mill village, and paying low wages isolated the mill workers socially and economically from the surrounding communities.

Beginning in the mid-1930s, national economic and political changes brought about the closing of the mill villages. The last major company-owned housing community in North Carolina was sold to private owners in 1982 (Glass, 1992). Although descriptions of mill village life range from grinding poverty to bucolic comfort (Glass, 1992; Hines, 1991; Stoesen, 1993), and the discourse about the mill owners from greedy industrialists to altruistic philanthropists (Glass, 1992; Hines, 1991), historians agree on two long-term effects of the mill village system in North Carolina: a distinctive white laboring class and neighborhoods of what were once mill houses, now in private hands. As the 1990s began, the textile industry was still the largest industrial employer in North Carolina (Glass, 1992), continuing to shape the economy, politics, and social structure as it has since the early 1800's.

Communities

Selection of the two communities within the city for study was guided by a concern for keeping some factors as similar as possible (primarily race, geographic region, degree of industrialization, and availability of community resources), while, at the same time, selecting distinctly different groups.

In keeping with these concerns, two predominantly Caucasian communities, one considered to be middle class (which will be referred to as Holden) and one considered to be working class (which will be referred to as Summit), were selected by visual survey of the city. Distinct from each other, the two areas chosen were small (each one and one-half to two square miles) and were internally relatively homogenous in the size, age, and

types of houses represented; outside play equipment in both communities indicated the presence of young children; and both were bounded on all sides by physical boundaries, with no major roads or other obstructions transecting them. Houses were detached from each other and faced the street. The Holden community was bounded on the east and south by heavily traveled, four-lane streets, on the west by a two-lane, major through-street, and on the north by a green belt right-of-way and a major four-lane thoroughfare. On the other side of the same city, approximately three and one-half miles from Holden, the Summit community was bounded on the west by a railroad track and its broad right-of-way, and on the south, east, and north by heavily-traveled, four-lane streets.

Holden Community

Development of residential houses in Holden started in the 1960s on Benbow Farm and is ongoing. Four lakes and many large trees of the formerly heavily wooded areas remain. Three of the four boundary streets are designated scenic corridors. Houses, which typically are quite large, range in price from $200,000 to $300,000 (J. Fore-Judy, personal communication, June 30, 1995). In contrast to Summit, Holden presents a sense of spaciousness. Houses are typically built on large lots, ranging in size from 120 X 200 feet to 200 X 300 feet and larger. There are six parks in the community.

Many of the streets in Holden have limited ingress and egress. The entire area is zoned residential, except for a synagogue, a church, and a fire station. The fire station and church are both located on boundary streets.

Summit Community

Many of the houses, a church, school, and a nearby YMCA in Summit were built as part of the mill village that was auxiliary to the giant White Oak textile mill. The plant, which began production in 1905, was built to be and remains the largest denim mill in the world (Stoesen, 1993). The mill and its warehouses, sewage treatment plant, motor freight yards, and railroad lines dominate the area. The railroad tracks and right-of-way form one boundary of the community.

First built outside the city limits, the White Oak plant and its village became part of Greensboro when the city expanded its limits in 1923 (Stoesen, 1993). By 1959 the last remaining dwellings had been sold to employees of the mills (Stoesen, 1993). The once suburban community now borders Greensboro's central business district. By contrast to Holden's boundary streets, which are designated scenic corridors, Summit's boundary streets are home to fast food restaurants, branch banks, storage units, gas stations, beauty and barber shops, insurance agencies, churches, United Way offices, a post office, an elementary school, and retail shops selling auto, office, gardening, and medical supplies, furniture, and carpet.

With the exception of some apartment complexes and some duplexes near the perimeter, houses in the community are well-maintained with neat gardens. The houses are well-spaced on lots measuring 75 X 150 feet, and currently range in price from $50,000 to approximately $60,000 (J. Fore-Judy, personal communication, June 30, 1995). Population density in Summit (3.5 persons per acre) is almost identical to that in

Holden (3.6 persons per acre) (Davis, 1994). However, the large area occupied by the mill and its facilities, the smaller house lots, and a greater number of streets in Summit result in an average living space per residential unit that is approximately 63% of that in Holden. Two day care centers, and a small baseball field are located in the neighborhood. Because the community surrounds the mill property, streets tend to be short and are generally traveled by local traffic.

Participants

Twenty children, eleven from the Holden community and nine from the Summit community, and their families participated in the project. The basic social unit was the nuclear, monogamous family. All the participants are Caucasian and had lived in their respective communities all their lives, a period of time ranging from 28 to 45 months. This is the age of child that Whiting and Edwards (1988) referred to as a "knee child" (p. 39). The rationale for observing children of this age is that their language and motor skills allow them to more actively seek and control their interaction with people around them and their engagement in activities, but they are still constantly monitored by care givers and do not yet have the autonomy of four- to five-year-olds. Ages of participants by community and gender are presented in Table 1.

Table 1
Ages in Months of Participants by Community and Gender

	Communities of Study								
	Holden			Summit			Combined Communities		
	M	SD	n	M	SD	n	M	SD	n
Males	34.40	7.64	5	39.00	4.55	4	36.44	6.54	9
Females	38.33	6.62	6	35.20	4.15	5	36.91	5.61	11
	36.55	7.03	11	36.89	4.51	9	36.70	5.89	20

Family socioeconomic status was assessed during a telephone interview prior to data collection and again by mail survey after data collection was completed. Assessment was based on Hollingshead's (1979) Four-Factor Index. The four factors are father's years of education, father's occupation (scored according to Hollingshead's scheme, ranging from 0 for unemployed to 9 for professional), mother's years of education, and mother's occupation.

As shown in Table 2, Holden parents were considerably more affluent, more highly educated, and worked in jobs with higher Hollingshead rankings than Summit parents. Holden families, responding to an income range rather than a precise amount, reported a minimum median income of $70,000, ranging from $40,000 to more than $85,000. Holden parents were primarily professionals, with a median Hollingshead ranking of 8 (administrators and lesser professionals), with a range 7-9. Fathers' occupations included attorney, owner of several bookstores, pathologist, and sales manager. Mothers listed their occupations as bookkeeper, nurse, office manager, and special education teacher. (Six mothers, who worked in the home, were excluded from

Table 2
Demographic Comparison of Holden and Summit Families

Family Income	Median Range	Range	
Holden	$70,000	$40,000-$80,000	
Summit	$25,000	$10,000-$40,000	
Education	**Median**	**Mean Years After Age 14**	**SD**
Holden fathers	B.A.	8.9	1.70
Holden mothers	B.A.	8.1	1.23
Summit fathers	high school	4.6	1.62
Summit mothers	high school	4.9	1.54
Occupation	**Median Hollingshead Rank**	**Range**	
Holden	8	7-9	
Summit	4	2-5	

the Hollingshead calculations.) On the whole, Holden mothers were well educated, with a median educational attainment of a college degree, ranging from some college to

graduate degrees. These mothers reported an average of 8.1 years of full-time education after age 14 (SD=1.23). Holden fathers' median (and minimum) educational attainment was a bachelor's degree. Two had doctoral degrees. Fathers reported an average of 8.9 years of full-time education after age 14 (SD=1.7).

By contrast, Summit families reported a minimum median income of $25,000, ranging from $10,000 to $40,000. Summit parents were primarily skilled manual laborers, with a median Hollingshead ranking of 4 (range 2-5). Fathers' occupations included parking garage attendant, pizza delivery, automobile service technician, brick mason, postal clerk, and shift supervisor. All mothers but one worked outside the home. Working mothers' occupations included teaching assistant, dental assistant, data entry clerk, hospital laundry worker, and bulk mail worker. Mothers' median (and maximum) educational attainment was "some college" and all had finished high school. Summit mothers reported an average of 4.9 years of full-time education after age 14 (SD=1.54). Summit fathers' median educational attainment was completion of high school and ranged from "less than high school" to "some college". Fathers reported an average of 4.6 years of full-time education after age 14 (SD=1.62). The educational and occupational status of the one divorced, non-residential father were excluded from the analyses.

Recruitment Procedure

Participants were located by searching county birth records for all children born two to four years earlier to parents residing in the two communities. A city telephone

directory and city maps were used to determine whether the parents still resided in the areas of study and to obtain addresses and telephone numbers of the families. Letters were sent to the parents describing the project and notifying them that the researchers would be contacting them by phone to discuss the project with them. A sample introductory letter is included in Appendix A. Mailing of the letters was sequenced so that the amount of time from initial contact to completion of telephone contact, as well as observation of participants, was as consistent as possible for all of the participating families.

Within a week of mailing the introductory letters researchers contacted the families by telephone. A copy of the telephone interview protocol is included in Appendix A. The purpose of this contact was to determine whether the family met criteria for participation. Families were screened for residency of the child within the household, nationality of the parents, education level, and occupation. Criteria for participation in the Holden group were a bachelor's degree or greater level of educational achievement and an occupation in the professional sphere on the Hollingshead index, held by either one or both parents. Criteria for participation in the Summit group were less than a bachelor's degree education level achievement by either parent. One Summit community parent, a divorced father residing in another city, had a college degree. This was also the only single-parent family that participated in the study.

Forty-six families with children in the target age group were contacted in the two communities, 28 in Holden and 18 in Summit. Of the 28 Holden families contacted, 18

(64%) wished to participate, six of whom did not meet the criteria; in the other case, day care did not give permission. Eleven Holden children participated in the project. Of the 18 Summit families contacted, 14 (78%) agreed to participate, five of whom did not meet the criteria. Nine Summit children participated.

If a family met the criteria and agreed to participate, a home interview was scheduled. During the home interview, researchers met with all members of the family to explain the project, demonstrate the use of the equipment, obtain the necessary consent forms, and schedule times for observations. Copies of the initial home interview protocol, family consent form, and preschool/day care consent form are included in Appendix A. The relaxed, social nature of the home visit was important in establishing trust between the family members and the researchers, clarifying expectations of family members concerning the week of observation, and establishing initial contact between the observer and the focal child.

If the child attended preschool or day care, the preschool or day care center was contacted. An appointment was made with both the teacher and director so that the aims and methods used in the study could be explained and their consent obtained. It was important to clarify with day care or preschool personnel that neither they nor the child was being evaluated. Care was taken to explain that teachers were not the focus of study, but rather that the child's activities and social partners were the focus of interest. Several of the children were in the same preschool class, a fact which facilitated the consent process in those cases. Teachers indicated that the observer's presence was not

disruptive. One private, in-home child care provider initially indicated reluctance to be observed. Upon having the purpose and methods of the study explained to her, however, she agreed to participate. Both the child's teacher and the preschool or day care director signed the day care consent form, a copy of which is included in Appendix A.

Eighteen of the 20 children attended some form of out-of-home care: four attended a preschool or day care center during parent work hours (typically 7:00 a.m. to 5:00 p.m.) every weekday, three stayed with a baby sitter in her home during parent work hours on weekdays, nine attended a preschool or day care center three to four hours during the mornings only for between one and five days a week, one child was cared for by her grandmother during the day, and another stayed with her grandmother at night while her parents were at work. All 11 of the Holden children attended some form of preschool or child care outside of their homes, compared to seven of the nine Summit children. One Summit mother did not work outside the home, as compared with six Holden mothers. One mother and father worked different shifts, so that one parent was always available for child care. Child care arrangements are detailed in the results section.

For participation in the project, each focal child received a savings bond in his or her name, which upon maturity will yield $250. Researchers felt that the intrusiveness of the research method required a substantial remuneration and that the focal child was the logical recipient. Although it is unclear how much of an incentive the savings bond was

for individual families, it may have been more salient for the Summit families than for the more affluent Holden families.

Method

Families were requested not to alter their normal activities to accommodate the researcher. Most of the observations were of routine activities. However, it was recognized that occasionally family routines change, and researchers observed these less routine times (such as an extended-family gathering for a St. Patrick's Day party) as well. To discourage family scheduling of observations solely during quiet times or when the child and family were likely to display best behavior, researchers arrived at the initial home meeting with a limited set of schedules for observations already decided upon, which could then be presented to family members for approval. On occasion, families tried to schedule observations at times when there would be few interruptions, rather than during older sister's Brownie meeting or on a shopping day, for example. In one case, a mother who planned to be out of town on Saturday, leaving the child in the father's care, expressed a desire to schedule the observer's visit on another day. Observations were conducted on both these occasions, as well as during a mother's church committee meeting, a cousin's birthday party, and a brother's soccer game. Accommodation of the predetermined schedule was rarely necessary, but did occur in an instance when a child was staying in another city while her mother competed in a triathlon event.

Each child was observed for twenty hours spread over a six- to seven-day period of time. The twenty hours of observation were scheduled to cover the child's entire

waking day. Each of the first two days' observation periods were two hours in length. The final four days' observation periods were four hours each, with the last two hours of the final observation period being videotaped. The first two days were considered to be acclimation periods (although these data are being used), and every child appeared to have completely acclimated to the presence of the observer before the end of the second two-hour session. The introduction of the camcorder in the final two of the twenty hours of observation was sometimes disruptive for both child and family. For this reason, and because the narrow field of view afforded by a camcorder prohibits the kind of broad attentional focus and understanding of context used for the observations and coding, these final two hours were not coded for numerical analysis. Transcripts of lessons from the video tapes are included in Appendix D.

During observation periods the focal child wore a belt pack which held a small transmitter. A microphone was clipped or pinned to the child's clothing on or close to the shoulder. The observer wore a similar belt pack, containing the receiver, and an earphone through which could be heard the child's verbalizations as well as those from his or her partners. Thus, the observer was able to hear the child without hovering and making the child self-conscious. One benefit of using the transmitter was the ability of the observer to maintain some distance from the child and still hear, for example, on the playground of a child care center, where a nearby, unknown adult might alter the behavior of the child's playmates and teachers. In addition, the child could usually be heard when traveling in another car. Although whenever possible the observer traveled

in the car with the child, there were times when it was necessary for the observer to follow in her own car.

Interaction between the observer and the focal child was minimized during observation hours, with freer social exchanges occurring during the observer's arrival and departure times. Children quickly understood what to expect of the observer and accepted her presence, sometimes explaining to other children that "she can't play; she's working" or prompting the observer to follow into another room.

Observations were made using a modified spot observation technique (Ellis, Rogoff, & Cromer, 1981; Munroe & Munroe, 1971; Rogoff, 1978; Whiting & Edwards, 1988). The technique incorporates coding of the variables of study at specified points during the observation (referred to as "windows") but requires continuous observation to provide information on the context of the events within the coded "window."

In this study, observations were made as field notes on forms attached to a clipboard and were coded every 5 1/2 minutes during a 30-second "window." The field notes provide information concerning the flow of activity leading up to and following the coded "window." A tape player with recorded time intervals hung by a strap from the observer's shoulder and played continuously in the observer's other earphone. An additional benefit of the data collection equipment was that the observer (with two sets of earphones, a tape player, and a clipboard on which she was continually writing) appeared to be quite busy and inaccessible to play with or talk to the child.

A follow-up home visit was scheduled within two weeks after the completion of observations. During this visit, a copy of the videotape was delivered to the family. Each family was asked to watch the tape and return a consent form covering use of the taped material. Along with the consent form, each family also returned a questionnaire regarding their family income and other demographic information. These forms are included in Appendix A.

Coding

The coding scheme used in this project was developed during the summer and fall of 1990 by Dr. Jonathan Tudge in collaboration with Judy Sidden, a master's student, and the author. Drs. Barbara Rogoff and Gilda Morelli were involved in the development of an initial version of the coding scheme on which the final version was based.

The coding scheme was specifically designed to meet the following research agenda: 1) to be used in societies of differing levels of technological complexity, 2) with a broad attentional focus, so that observation included not only the child and his or her activity, but also the activities of the child's social partner(s) or potential social partner(s), the technological complexity of tools being used in activity, and the child-centeredness of the immediate context. In addition, the coding scheme was designed to 3) utilize the child-in-activity as the unit of analysis, and 4) maintain a direct connection between the child-in-activity and the context of other ongoing activities and location.

The goals for the coding scheme reflect a basic distinction being made at the level of activity. Activities in the setting are divided into those in which the child is involved

and those which are available to the child, even if only for the child's observation or hearing. Activities within the child's eye- or earshot were considered to be available.

Our goal was to examine the activities available to young children, the activities in which they were involved, who initiated the activities themselves and the children's involvement in them, the children's partners (if any) and their respective roles in the activity, and the location in which they occurred. The activities of interest were lessons (four categories), work (five categories), play (10 categories), and conversation (three categories). A code for "other" contained six categories (including sleeping, eating, bodily functions, etc.). The full coding scheme is included in Appendix B; however, full details of lessons will be included here, as lessons are the primary concern of this study.

A lesson involves an attempt to impart information or to receive information. Except in the case of an interpersonal lesson, as described below, a lesson must have a clear curriculum to be coded as such.

Academic Lesson was coded when the lesson related to schooling or pre-school skills, such as labeling colors, counting, or helping to read a story. Playing a game with academically related objects (where there was no direct attempt to impart information, for example, looking at pictures in a book) was coded "play with academic object."

Interpersonal Lesson was coded when the lesson was about culturally appropriate behavior, etiquette, values, etc. Examples are getting the child to say "please" or "thank you," and commenting on unacceptable eating actions and interrupting other people. Simple discipline commands (such as "stop" or "don't do that") were not coded as

lessons, but "stop that; it's not polite" when the speaker is commenting about appropriate etiquette was, as was a simple reminder to say "please." This category typically involved briefer lessons than a lesson on color or number (academic) or a skill/nature lesson.

Skill/nature Lesson was coded when the lesson concerned information about the workings of the material or natural world, such as how to put on shoes, fold clothes, stir cookie batter, and operate a VCR or stereo, or information about the natural world, seasons, time, behavior of animals, etc. Lessons on health and safety were included in this category.

Religious Lesson was coded when the lesson pertained to matters of religious or spiritual affairs, or to rituals associated with these matters. Religious lessons were very rare in the groups reported here.

With the exception noted below, all activities occurring within easy eye- or earshot of the focal child were recorded. Activities occurring within easy eye- or earshot of the child were considered to be available and were recorded whether or not the child was involved in them. However, only one activity in each category could be recorded per window, so if two lessons of different types occurred within the same 30-second window, only the one in which the child was involved or the one occupying the greatest proportion of time was coded. More than one activity could be recorded if they fell into different categories. For the activity (or activities) in which the child was involved, the following were coded: the child's role in the lesson, who initiated the lesson, who initiated the child's involvement in it, the focal child's partners in the lesson, their roles,

whether the partner was engaged in another activity in addition to that with the focal child, other partners potentially available, the location, and whether or not mother and father were within hailing range. These codes are outlined below.

Focal child's role could be coded as "no role," or as "trying to manage or direct the activity," "trying to prevent, discontinue, or avoid the activity," "facilitating," "participating," "observing," or "eavesdropping." Observing and eavesdropping are passive forms of engagement, involving watching or listening to an activity. Observing and eavesdropping are distinguishable from each other by observing the behavior of the partner in activity. If the partner is in some way aware of the focal child's attention, the child is considered to be observing. If the partner appears to be unaware of the child's attention, the child is coded as eavesdropping. For purposes of analysis, the categories were collapsed into "no role," "active engagement," and "observing."

Who initiated the activity? was a category which included "unknown," the focal child, the focal child with another person (and that person's identity), or simply the other person.

Who initiated the child's involvement? included the same possibilities as did the "Who initiated the activity?" codes. This code allows the observer to distinguish those instances in which a child may join in an activity on his or her own initiative or with another person from those times when a child may simply be complying with a partner's request to join in the activity.

Partners in activity were identified and coded if they engaged the target child on some level, even if they only included the child in their gaze or used inclusive body language. They were coded using a four-level system that allowed us to distinguish partners (1) who were related within the nuclear family, related non-nuclear, or non-related, (2) by general age group, (3) by gender or group of mixed gender, and (4) whether there was one or more than one partner. See the coding scheme in Appendix B for details of the age groups coded.

Partner's role could be coded in the same categories as the focal child's role, with the exception of "no role", a logical impossibility.

Partner's other activity was recorded as simply "no other focused activity" or "yes". Of interest here was whether the partner's attention was divided between the activity with the child and some other activity. The nature of the partner's other activity was not recorded, although it is often ascertainable from the field notes or other activity codes.

Partners potentially available were those individuals who were within easy eye- or earshot of the focal child but were not engaged in activity with the child. These potential partners were recorded by age group (adult, youth, child, peer, and infant) and whether there were one, two, three, four, or five or more.

Location was recorded as "own environs," defined as the private domain of the child's family (such as in his or her own home, car, or yard), "other's environs," "school,"

or "public space." In addition, this category was broken down to indicate whether or not the location was modified for a child's care or entertainment.

Mother's and Father's location was determined by answering the question "could the child get the parent's attention by hailing her or him?" with a simple "yes" or "no."

The date, day of the week, time of day, and general weather conditions were recorded for every observation window.

Reliability

Two observers collected the data described in this report. Judy Sidden, a master's student, observed five of the children in the Holden community. The author observed the remaining fifteen children included in these analyses. Observations were made between January, 1991, to June, 1992. Reliability of the two observers was high, ranging between 87% and 100%. The extraordinarily high reliability on such a complex coding scheme was doubtless a function of the two observers' long association during development and pilot-testing of the coding scheme and their participation in the construction of the coding scheme itself.

CHAPTER IV

RESULTS

Analysis of the data proceeded in two ways, reminiscent of Whiting and Whiting's (1978) macro and micro method. In order to examine the relationship between the Holden and Summit children-in-lessons in the context of the roles they and their social partners took, in the initiative shown by the children in lessons, and in contextual variables, both quantitative and qualitative methods were used to determine the patterns exhibited by the variables and by their orders of magnitude. Quantitative and qualitative methods, with their emphasis on the one hand on separate individuals as basic units and on the other hand on the interrelations of individuals within a larger context, have been described in terms of conflicting cultures based in incompatible epistemologies (Kimble, 1984). However, Valsiner, Rogoff, and others (Kindermann & Valsiner, 1989; Rizzo, Corsaro, & Bates, 1992; Rogoff, 1982; Rogoff & Gauvain, 1986) have argued that the study of human behavior can benefit by utilizing the methods not only of psychology but of anthropology and sociology as well. In the past, the synthesis of individual and social perspectives has been more common in anthropology.

> ..once anthropologists include the mind of man in their subject matter, the methods of science and the methods of the humanities complement each other. Any commitment to methods which exclude either approach is self-defeating. The humanists criticize the social sciences because they belabor the obvious and are arid; the social scientists criticize the humanities because they are subjective. ... The anthropologist can use both approaches (Mead, 1945, p. 176).

As stated in the hypotheses, the data were examined both in aggregated, statistical form and in the particular as frequencies and field notes or videotape transcripts of individual children in activity. Utilization of both statistical and qualitative methods in this study reflected the interest in the lives of children, both as members of cultural groups and as individuals. Analyses of the data, therefore, proceeded along two complementary pathways toward the same goal of understanding human behavior.

Selection of the method of statistical analysis was guided by an examination of the data characteristics and the questions to be answered. Data characteristics are addressed here as background for the discussion of the selection of statistical methods. Every parent who lived in one of the two communities, had a child in the target age range, and could be located using the recruiting method described previously was contacted. In effect, although the groups were small in size (11 Holden and 9 Summit children), these children represented the entire population of children in their age group within their respective communities. Each child was selected and observed independently of the others; however, a particular child's activity, partner, location, and so on, in one window was not independent of his or her activity, partner, location, and so on, in the next. Continuous distribution of the variables in a population was assumed; however, there was no basis for assuming normal distributions of the variables in the two populations. Furthermore, as was illustrated in the discussion of the constraints model, individual variation within groups was expected to be considerable. Coding was a classification of items into discrete groups, yielding frequency data at the nominal level.

"The issue of uniformity is central to any theory linking individual behavior to cultural experience" (LCHC, 1983, p. 299). To test hypotheses concerning membership of the children in two distinct cultural communities and the importance of gender in constructing patterns of the availability of, initiation of, types, and occurrence of lessons, the first series of analyses relied on statistical methods to measure the extent to which the distributions of the relevant variables in the two groups overlapped. Because assumptions required about the population are much weaker than those required for classical statistics, nonparametric or distribution-free methods were necessary. For the purpose of summarizing the data, the Mann-Whitney U-test (Mann & Whitney, 1947, cited in Gibbons & Chakraborti, 1992), the nonparametric equivalent of Student's t-test, was selected as the test for location in a nonnormal distribution. With this method, only independence and continuous distributions need be assumed to test the null hypothesis of identical populations (Gibbons & Chakraborti, 1992).

The Mann-Whitney U-test is based on the idea that the particular pattern exhibited when the X and Y variables are ranked and pooled in order of decreasing magnitude provides information about the relationship between the populations (Gibbons, 1993). If the two distributions overlap greatly, the common distribution is adequate to represent both groups. From the standpoint of the constraints model, an overlapping pattern in the distribution of activities or relationships would be created by the values and beliefs of a single cultural group. However, this null hypothesis is less likely to be supported if the distributions have little overlap. Within the constraints

model, little overlap in the distributions would indicate that the values and beliefs of two different cultural groups have placed differing constraints on the activities and relationships of their members. The Mann-Whitney U-test requires that when each of the groups is of size eight or larger (as is true for most of the hypotheses), the U statistic is transformed to a Z. The probability distribution of U is symmetric about the mean, so only lower tail critical values need be found for either a one- or two-tailed test (Gibbons & Chakraborti, 1992). When the hypothesis to be analyzed using this method is directional, the critical value of Z is 1.645. The non-directional critical value of Z is 1.96. When each of the groups is smaller than eight, a critical range of two values is obtained from a table. If the observed value is less than or equal to the lower value in the table or greater than or equal to the larger value in the table, the null hypothesis is rejected. These values are given where appropriate.

When necessary the hypotheses were examined using proportions rather than frequencies of observations. Proportions were calculated, for example, when the hypothesis was expressed in terms comparing activities occurring in school to those occurring in the home. The reasons for the transformation of the data into proportions are given as applicable.

An important consideration for purposes of analysis was that the two groups were located in the same city and had many common social influences. The constraints model of two within-society cultural groups predicted some amount of overlap in the distribution patterns of the two groups; moreover, variability of psychological

phenomena is centrally important to these phenomena (Valsiner, 1984). Given these considerations, the small number of children observed, and the large number of observations, considerable within-group variability was anticipated. For these reasons, in addition to statistical analyses required for hypotheses 1-1 through 1-3, 2-1 through 2-3, 3-1 through 3-6, 4-1, and 4-2, the final hypothesis in each category referred to analysis of the patterns exhibited in the lives of individual children. Within-group variation is discussed using means and standard deviations, and, where appropriate, frequencies of the variables observed for each child are presented in table form or graphed, revealing clusters of children and discrepant children in each community. For comparison purposes, each individual child is identified in all graphs and tables by an identification number.

Analysis of the process of transformation of the lesson as sociocultural activity was accomplished by investigating the stream of activity in which each occurred. A table detailing the transformation of the activities into and out of the lessons was constructed from the field notes on the flow of ongoing activities occurring immediately before and after each lesson. These provided the qualitative context of the lesson.

Finally, examples of lessons, of a child's attempt to initiate a lesson, or other failed lesson opportunity are presented in transcript form from transcripts of videotape recordings. These transcripts and the tables from the field notes link the codes and identification numbers to the content and give depth to the analyses.

Hypothesis 1. Patterns will emerge showing that middle-class children spend more time in environments modified to encourage independence and that they will play more frequently with toys designed for the acquisition of academic skills.

The first part of this hypothesis looks at the relationship between social-class membership and modification of the environment for the independent action, comfort, or safety of children. This aspect of the environment is described in the Coding Manual (Tudge, Sidden, & Putnam, unpublished) in Appendix B, under location "modified for child's care or entertainment." The second part of the hypothesis posits a relationship between social-class membership and the activity "non-pretend play and exploration with an academic object."

1-1. When children are in their own environs, middle-class children's activities will occur in child-modified locations more frequently than those of working-class children.

Children were observed in a wide variety of settings; they were observed wherever they were at the time observation was scheduled. For this reason, the children were observed in their own environs for differing lengths of time. In order to adjust for this difference, the initial step in the analysis was to calculate the child-modified proportion of the total amount of time each child was observed in his or her own environs, as shown in Table 3.

A comparison of the means and standard deviations of the two groups is instructive of the within-group variance. In Holden, the mean proportion of time each

child was observed in child-modified own environs was .35 (SD=.12); whereas in Summit the mean proportion of time each child was observed in child-modified own environs was .26 (SD=.46). The variability, as indicated by the standard deviations of the proportions, is.

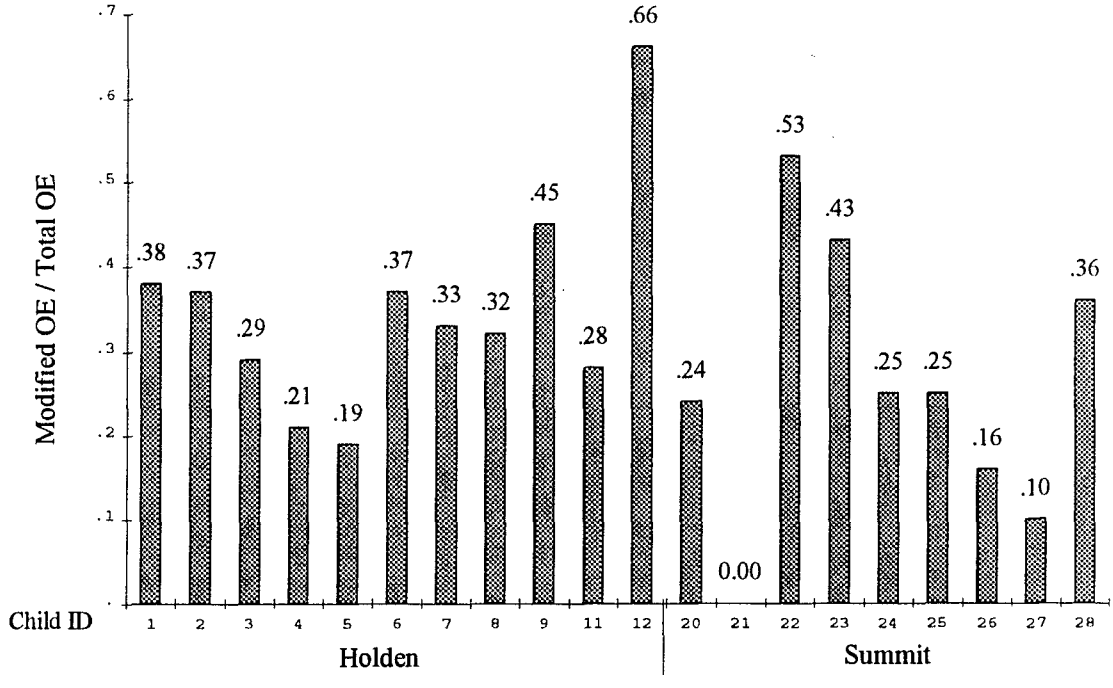
Table 3

Proportion of Total Time Observed in Each Child's Own Environs of Which Own Environs Were Child-Modified

Child ID	Total Own Environs (OE)	Modified Own Environs	Proportion Modified OE / Total OE	Child ID	Total Own Environs (OE)	Modified Own Environs	Proportion Modified OE / Total OE
	Holden (n=11)				Summit (n=9)		
1	114	43	.38	20	87	21	.24
2	108	40	.37	21	61	0	0.00
3	109	32	.29	22	145	77	.53
4	63	13	.21	23	136	59	.43
5	124	23	.19	24	162	41	.25
6	123	45	.37	25	136	34	.25
7	143	47	.33	26	117	19	.16
8	149	47	.32	27	83	8	.10
9	85	38	.45	28	151	55	.36
11	145	41	.28				
12	137	91	.66				

especially great among the Summit children, where it is larger than the group mean. Figure 1 illustrates the variability within the two communities.

Figure 1. Proportion of Observations of Each Child in His or Her Own Environs Which Were Child-Modified by Community.



The Mann-Whitney U-test of the pattern of distribution of child-modified own environs supported the null hypothesis of identical distributions ($Z=.561<1.645$; $\alpha=.05$ one-tailed; not significant).

1-2. Middle-class children will engage in more play with academic objects than will working-class children.

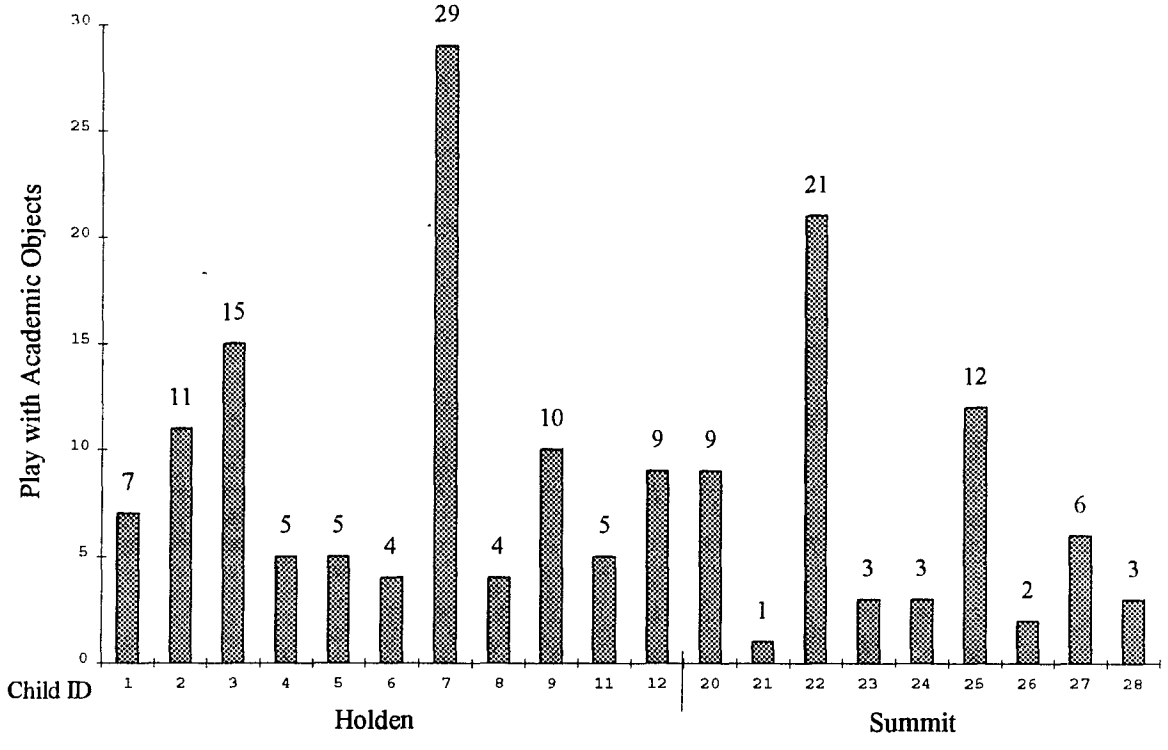
In Holden, the mean frequency of play with academic objects was 9.45, with a standard deviation of 7.01. In Summit the mean frequency of play with academic objects was 6.67, with a standard deviation of 6.09.

The standard deviations for the two groups are quite large, especially so in Summit where the standard deviation is almost equal to the mean. The wide range of variation in the observations of play with academic objects is reflected in these statistics.

Figure 2 illustrates the frequencies of play with academic objects for the children in the two communities and demonstrates the within-group variability. Two children, one in Holden and one in Summit, were observed playing with academic objects more than 20 times each. Four of the eleven children in Holden were observed playing with academic objects ten or more times, compared with two children in Summit. However, on the other end of the scale, five of the nine Summit children were observed playing with academic objects fewer than four times, compared with none of the Holden children. As a group, Holden children do appear to play with academic objects more than do Summit children. However, there are children on both ends of the spectrum within each group.

Again, the analysis did not support the hypothesis. At α=.05, one-tailed, the Mann-Whitney U statistic was Z=.5758 (<1.645).

Figure 2. Frequency of Engagement in Play With Academic Objects by Community.



1-3. The patterns of engagement in play with academic objects in their own environs versus in school or professional child care settings will be different for middle-class children than for their working-class counterparts. Middle-class children will engage in play with academic objects more frequently in their own environs than in school or professional child care settings, whereas working-class children will engage in play with academic objects more frequently in school or in professional child care settings than in their own environs.

This hypothesis carries the analysis of play with academic objects one more step, with the inclusion of the context in which academic play is more likely to occur for the two communities of children. The analysis of this hypothesis was done in three different ways. The first questions asked were: Is own environs different from school environs in terms of engagement in play with academic objects for Holden children? Is the same true for Summit children? Secondly, consideration was given to the issue of the proportionate amount of play with academic objects, given that children were observed in the two settings for differing lengths of time. Finally, the issue of whether Holden and Summit children are different from each other in the frequency of play with academic objects in which they engage in each environment was considered.

Six children were not observed in a school environment, two in Holden (child IDs 5 and 8) and four in Summit (child IDs 23, 24, 25, and 28). These children were not included in these analyses comparing own and school environs. Although all of the Holden children attended some kind of preschool or daycare facility, only one Holden child attended daycare for the full day every weekday. The other Holden children attended a preschool or daycare setting half-days, for one, two, or three days a week. Summit children, on the other hand, either attended child care for the full day every weekday, or did not attend at all. These differing patterns reflect the necessity for most parents in Summit to find child care during their working hours. Recall from the description of the participants that six Holden mothers worked solely in the home. Child care arrangements are shown in Table 4.

Table 4

Child Care Arrangements for Each Child at Time of Observations

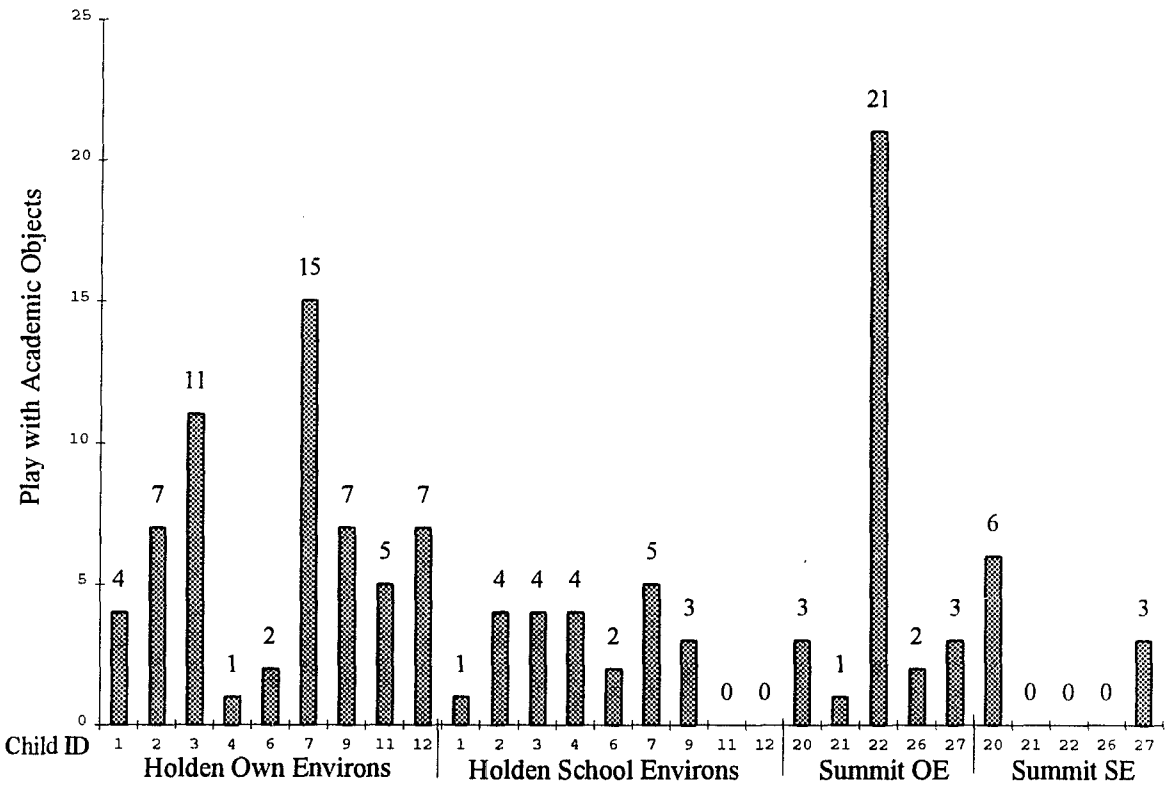
Holden Children (n=11)		Summit Children (n=9)	
Child ID	Child Care Arrangement	Child ID	Child Care Arrangement
1	Preschool 3 days/week 9-12	20	Daycare every day 7-5
2	Variable with mother's work schedule	21	Daycare every day 7:45-5:15
3	Preschool every day 9-12	22	Baby sitter every day 12:30-5:30
4	In-home daycare every day 7:45-5:45	23	Mother home 3:15 daily from work; father works nights. Preschool Tuesdays and Thursdays 9-12
5	Preschool Wednesdays 9-1	24	Parents work nights. Child stays with grandmother at night. Preschool Fridays
6	Preschool Mondays 9-12 Wednesdays 9-1	25	Mother homemaker; no other preschool or child care
7	Preschool 3 days/week 9-1	26	Daycare every day 8-5:30
8	Preschool Wednesdays and Fridays 9-12	27	Daycare every day 7:15-5:30
9	Daycare every day 8-5	28	Child stays with great grandmother every day during mother's work
11	Preschool 3 days/week 9-12		hours. No other preschool or child care.
12	Preschool Mondays, Wednesdays, and Thursdays, 9-12		

Note to Table 4: Child 21 attended child care in a licensed, in-home, child care setting. Because there were preschool-type toys available in a separate playroom set aside for the care of children from outside the home, observations from this in-home child care setting were defined as school environs for purposes of these analyses.

The difference in frequency of play with academic objects in their own environs versus in school environs was marked for all of the children. Holden children were observed playing with academic objects in their own environs an average of 6.78 times (SD=4.18) and in school environs an average of 2.56 times (SD=1.77). Summit children were observed playing with academic objects in their own environs an average of 6 times

(SD=7.54) and in school environs an average of 1.80 times (SD=2.40). Variability among Summit children was much greater than among Holden children, as Figure 3 illustrates.

Figure 3. Engagement in Play With Academic Objects in School and Own Environs in the Holden and Summit Communities.



Most children in both communities engaged in play with academic objects more frequently in their own environs than in their school environs. Indeed, child 22 was observed engaging in play with academic objects considerably more frequently than any

other child observed and only in his own environs. Four children engaged in play with academic objects either as frequently or more frequently in their school environs than in their own environs; two of these were Holden children.

Analyses regarding the first set of questions (Is own environs different from school environs in terms of engagement in play with academic objects for Holden children? Is the same true for Summit children?) yielded partial support of the hypothesis. Holden children engaged in significantly more play with academic objects in their own environs than at school ($Z=2.25>1.645$, $\alpha=.05$ one-tailed). For Summit children, however, there was no significant difference between their own and their school environs in terms of their engagement in play with academic objects ($U=18$, within range 0-25, $\alpha=.05$ one-tailed, not significant).

The second set of analyses related to this hypothesis examined the proportion of observations in own environs and school environs in which the children were engaged in play with academic objects. As can be seen from Table 4 above, children spent varying amounts of time in school environs. No attempt was made to schedule observations in order to control for these differences. In order to examine whether frequency of play with academic objects in a particular context could be an artifact of the number of observations conducted in that context, the amount of engagement in academic play observed in each context was divided into the number of observations made within that context for each child in each of the two communities. The number of observations and

the proportions of play with academic objects in each environment for each child are presented in Table 5.

Mann-Whitney U-test results were not significant. Holden children did not engage in more play with academic objects in their own environs than in their school environs when proportions of engagement in play with academic objects to observations were used in the calculations ($Z=.1767<1.645$, $\alpha=.05$ one-tailed, not significant). Nor did Summit children engage in more play with academic objects in their school environs than in their own environs when proportions of engagement in play with academic objects to observations were used in the calculations ($U=18.5$, within range 1-29, $\alpha=.05$ one-tailed, not significant).

Finally, the issue of whether Holden and Summit children are different from each other in the frequency of play with academic objects in which they engage in each environment was considered. The Mann-Whitney U-test of the difference between Holden and Summit in frequency of engagement in play with academic objects in school environs was not significant ($U=28.5$, within range 18-81, $\alpha=.05$ two-tailed, not significant). Nor was the difference between Holden and Summit in frequency of engagement in play with academic objects in own environs significant according to the Mann-Whitney U-test ($Z=.8359<1.96$, $\alpha=.05$ two-tailed, not significant).

The foregoing Mann-Whitney U-tests of difference between Holden and Summit children with regard to play with academic objects in their own and school environs indicate that the only significant difference found between Holden and Summit children

Table 5

Observations and Availability of Play With Academic Objects and Proportions of Play with Academic Objects to Observations in School and in Own Environs by Community

	Child ID	Observations School Environs(SE)	Academic Play SE	Observations SE Play With Academic Objects	Observations Own Environs (OE)	Academic Play OE	Observations OE Play With Academic Objects
Holden	1	23	1	.04	114	4	.04
(n=11)	2	51	4	.08	108	7	.06
	3	31	4	.13	109	11	.10
	4	91	4	.04	63	1	.02
	5	0*	0*	*	124*	2*	*
	6	57	2	.04	123	2	.02
	7	17	5	.29	143	15	.10
	8	0*	0*	*	149*	5*	*
	9	78	3	.04	85	7	.08
	11	28	0	.00	145	5	.03
	12	24	0	.00	140	7	.06
Summit	20	60	6	.10	87	3	.03
(n=9)	21	93	0	.00	61	1	.02
	22	22	0	.00	145	21	.14
	23*	0*	0*	*	136*	3*	*
	24*	0*	0*	*	162*	3*	*
	25*	0*	0*	*	136*	12*	*
	26	51	0	.00	117	2	.02
	27	92	3	.03	83	3	.04
	28*	0*	0*	*	151*	9*	*

* Children not observed in school were excluded from the analysis.

was that Holden children engaged in significantly more play with academic objects in their own environs than at school when frequencies were used in the calculation. This result appears to be an artifact of the amount of time these children spent at home. However, this is important in terms of the experiences these children have in their everyday lives. From Figure 3 of the frequencies of play with academic objects in their own and their school environs, it appears that both communities of children engaged in play with academic objects more frequently in their own than in school environs. However, as Table 4 shows, most Summit children spent almost all of their waking days in a school environment.

Hypothesis 2. Social partners of middle-class children will place a higher value on academic skills and engage in more explicit teaching of the children than will the social partners of working-class children.

2-1. Middle-class children will be exposed to and engage in more lessons than will working-class children.

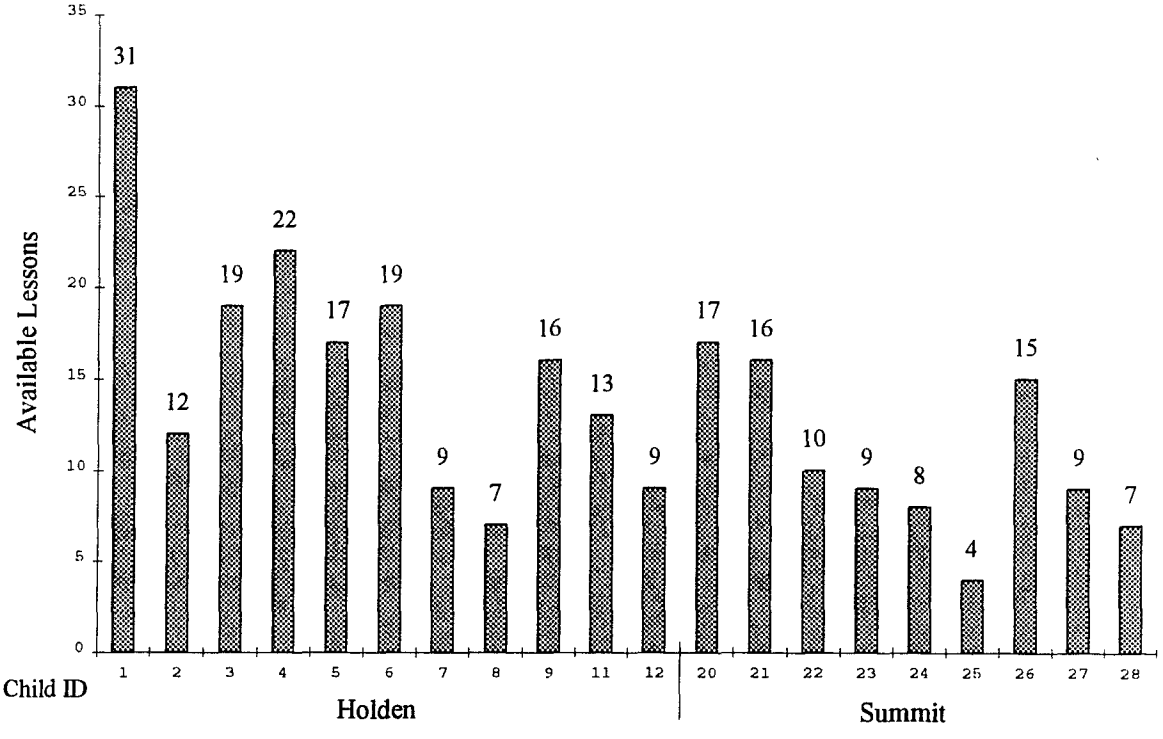
A distinction is made in this hypothesis between exposure to lessons and engagement in lessons. Exposure to lessons occurs when a lesson is going on within easy ear- or eye-range of the focal child. Activities occurring within this range are defined as available. On the other hand, engagement implies that the child has taken a role of some kind in the activity. Lessons to which the child was exposed included all lessons coded, whether or not the child had a role in them.

During the observations, Holden children had available to them an average of 15.82 lessons (SD=6.63), compared with an average of 10.56 lessons available to Summit children (SD=4.19). As can be seen from the standard deviations and from Figure 4 the variance in both communities was marked. The average number of lessons in each community and the pattern that emerges in Figure 4 appear to indicate that most Holden children do have more available lessons than do Summit children. Three Holden children have ten or fewer lessons, compared with six Summit children.

The Mann-Whitney U-test of the hypothesis yielded support for the hypothesized relationship between social class and availability of lessons ($Z=1.8237>1.645$; $\alpha=.05$, one-tailed) significant at the .05 level.

Lessons were not frequent in the lives of any of the children, as Figure 4 illustrates.

Figure 4. Frequency of Available Lessons by Community.



2-2. Middle-class children will be exposed to and engage in more academic lessons than will working-class children.

Socioeconomic status has been shown to be a significant predictor of academic performance in school (Ginsburg & Bronstein, 1993). This hypothesis examines whether the relationship between socioeconomic status and academic performance could have any precedent in the environment of these preschool-aged children.

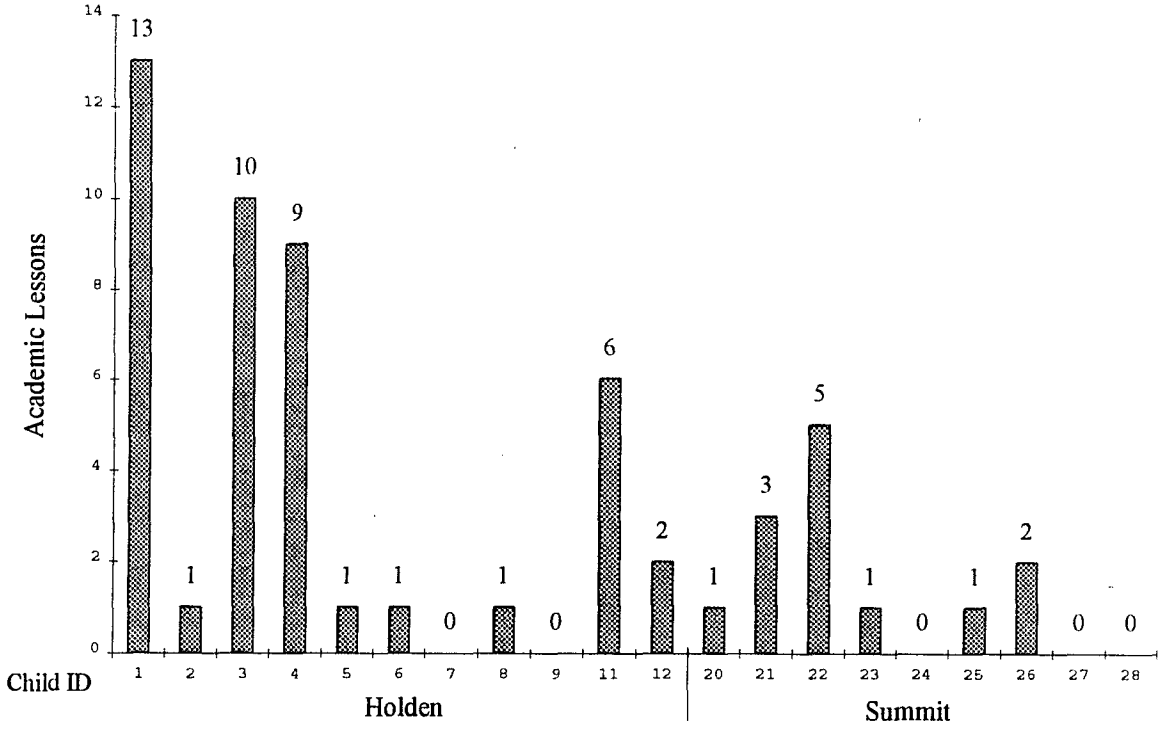
An academic lesson relates to schooling or pre-school skills. These lessons include counting with each push of the swing, saying the letters aloud as mother writes

the child's name, learning to label colors, or being shown by older sister how to draw a balloon.

As Figure 5 illustrates, the two communities appear to be different in terms of the frequencies of academic lessons available to these children. In Holden, the mean number of available academic lessons was 4, with a large standard deviation of 4.45. In Summit, the mean number of available academic lessons was 1.44, with a standard deviation of 2.47 (even larger than the mean). Although the frequencies are small, Figure 5 clearly shows that some children in each community had available to them considerably more academic lessons than others during the period of observation.

The Mann-Whitney U-test of the difference between the Holden and Summit communities in the availability of academic lessons was not significant ($Z=1.0638<1.645$; $\alpha=.05$, one-tailed). The relationship appears to be in the expected direction, however. As can be seen in Figure 5, there are a number of ties in the frequency of available academic lessons both within and between the two communities. Ties are indicative of low variance, will minimize the Mann-Whitney U-value, and increase the possibility of Type-II error (i.e., ties increase β). When the rankings were applied to the frequencies, the first-ranked child (child 1, with 13 academic lessons) had twice as many lessons as the fourth-ranked child (child 11, with 6 lessons).

Figure 5. Frequency of Available Academic Lessons by Community.

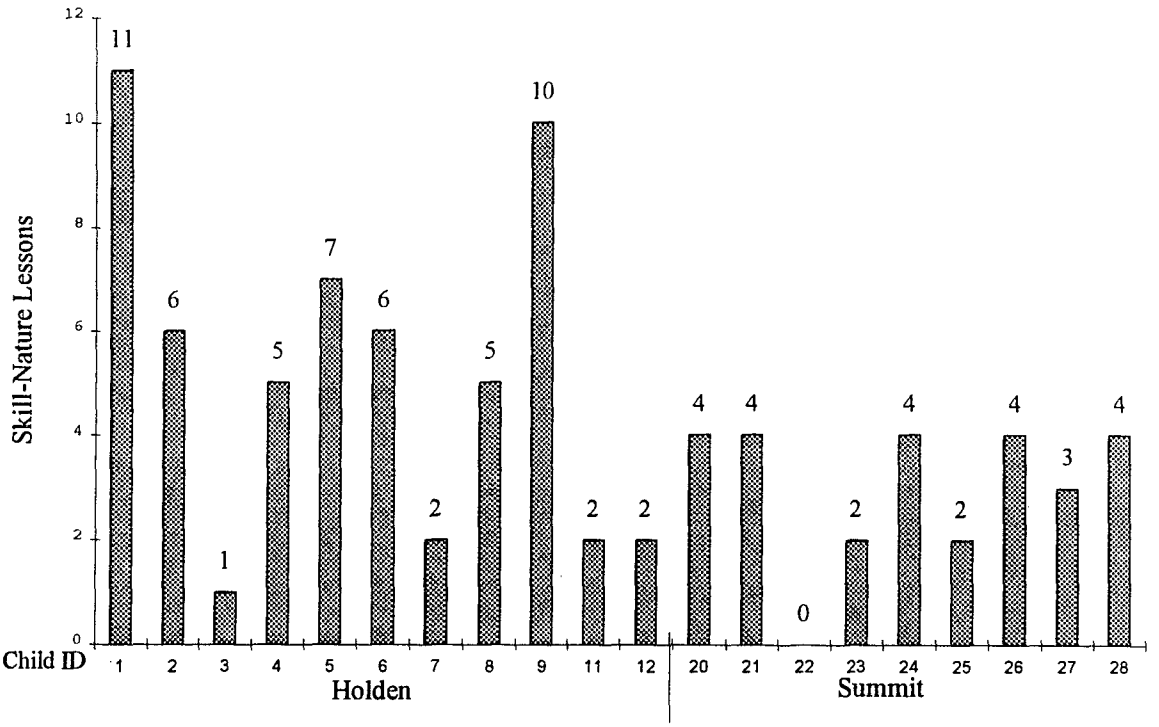


2-3. Middle-class children will be exposed to and engage in more skill-nature lessons than will working-class children.

In addition to academic and interpersonal skills, cultural competence consists of general knowledge: knowing how to do things, how things work, why things are the way they are. These are the kinds of lessons captured by the code "skill-nature lessons." The mean frequency of skill-nature lessons observed in Holden was 5.18 (SD=3.16), whereas the mean number of skill-nature lessons observed in Summit was slightly more than half those in Holden (M=3, SD=1.78).

The Mann-Whitney U-test of the difference between the Holden and Summit communities in the availability of skill-nature lessons was not significant ($Z=1.558<1.645$; $\alpha=.05$ one-tailed). Although the Z-value is quite close to significance, the Mann-Whitney U-test results indicate that the patterns exhibited by academic and skill-nature lessons in these two communities is too mixed to discredit the null hypothesis of identical distributions. As can be seen in Figure 6, there are a number of ties in the frequency of skill-nature lessons, especially in the Summit community, but between Summit and Holden, as well. Ties are indicative of low variance, will minimize the Mann-Whitney U-value, and increase the possibility of Type-II error (i.e., ties increase β).

Figure 6. Frequency of Available Skill-Nature Lessons by Community.



Hypothesis 3. Middle-class children will initiate more academic and skill-nature lessons alone and with a social partner, and will initiate their involvement in more academic and skill-nature lessons alone and with a social partner than will working-class children. Within the middle class, males will initiate more academic lessons alone and with a social partner, and will initiate their involvement in more academic lessons alone and with a social partner than will females.

3-1. Middle-class children will initiate more academic lessons alone and with a social partner than will working-class children.

Hypothesis 3 relates to the values placed on initiative and self-direction in the middle-class versus obedience and conformity in the working-class and to the value placed on academic achievement for middle-class boys compared to middle-class girls. Hypothesis 3-1 examines the relationship between Holden and Summit in the initiation of academic lessons when the child has a role in starting the lesson. Initiation of an activity can occur in three ways: by the child alone, by the child with a social partner, and by the child's social partner alone. A child might initiate an academic lesson by asking her mother to write someone's name or by holding up a crayon and asking, "Is this green?"

Initiation of lessons by the child's social partner was the most frequent form in which initiation of academic lessons occurred; initiation of academic lessons by the child alone were rare. Frequencies of initiation of academic lessons by each of the three possibilities (child alone, child with partner, and partner alone) are presented in Table 6.

As can be seen from Table 6, children who were engaged in more academic lessons were more likely to have had some kind of role in initiating them. Children of this age do not initiate many academic lessons on their own. The average number of academic lessons initiated by a Holden child was .36. The average number of academic lessons initiated by a Summit child was .22. It is when the child is with a social partner that the differences between the two communities begin to sharpen. The average number of academic lessons initiated by a Holden child in partnership with someone else was

Table 6

Frequency With Which Child Alone, Child With Social Partner, and Social Partner Alone Initiated Academic Lessons

Child ID	Child Alone Initiated Academic Lessons	Child With Social Partner	Social Partner Initiated	Total Academic Lessons
		Holden (n=11)		
1	1	3	9	13
2	0	0	1	1
3	0	6	4	10
4	0	2	4	6
5	0	0	1	1
6	0	0	1	1
7	0	0	0	0
8	1	0	0	1
9	0	0	0	0
11	2	0	4	6
12	0	0	2	2
		Summit (n=9)		
20	0	0	1	1
21	0	0	1	1
22	1	1	3	5
23	1	0	0	1
24	0	0	0	0
25	0	0	1	1
26	0	0	2	2
27	0	0	0	0
28	0	0	0	0

1.00 (SD=1.86), compared to .11 (SD=.31) for Summit children in partnership. Holden social partners alone initiated an average of 2.36 (SD=2.60) academic lessons, compared to .89 (SD=.99) average for the Summit social partners alone. The wide variability is illustrated by the standard deviations, which are consistently larger than the means, and by the results of the Mann-Whitney U-test.

Although the Z-value is in the expected direction, the Mann-Whitney U-test of the distributions of initiations of academic lessons by the child alone and with a social partner supports the null hypothesis, ($Z=1.368<1.645$, $\alpha=.05$ one-tailed, not significant).

3-2. Middle-class children will initiate more skill-nature lessons alone and with a social partner than will working-class children.

This hypothesis again looks at initiation of lessons but with the focus on skill-nature lessons. A skill-nature lesson involves conveying or requesting information about the workings of the natural or material world. When a child says, "A snake roars," and the father replies, "Snakes don't roar," for example, a skill-nature lesson has occurred. Another skill-nature lesson was observed as a mother was helping her daughter put on her shoes and told her, "This is your right foot, and this is your left." Such information as why airplanes must have wheels and why the bologna has a red ring around it, time, the seasons, behavior of animals, health, and safety are all in this category. Not surprisingly, these lessons occur more frequently than academic lessons for children in the target age group.

As can be seen from Table 7 of initiation of skill-nature lessons, the social partner alone was the most frequent initiator of these lessons in both communities. The children did not initiate many skill-nature lessons either on their own or with a social partner. The average number of skill-nature lessons initiated by a Holden child alone was .73, higher than the average for academic lessons, but still minuscule. Holden children also

Table 7

Frequency With Which Child Initiated Skill-Nature Lessons Alone, With a Social Partner, and Social Partner Alone Initiated Skill-Nature Lessons

Child ID	Child Alone Initiated	Child With Social Partner	Social Partner Alone Initiated	Total Skill-Nature Lessons
		Holden (n=11)		
1	0	1	10	11
2	1	0	5	6
3	0	0	1	1
4	2	1	2	5
5	1	0	4	5
6	1	0	4	5
7	0	0	2	2
8	1	1	1	3
9	1	5	3	9
11	0	0	2	2
12	1	0	1	2
		Summit (n=9)		
20	0	0	3	3
21	0	0	3	3
22	0	0	0	0
23	0	1	0	1
24	0	0	4	4
25	0	0	2	2
26	0	0	4	4
27	0	1	2	3
28	1	0	3	4

initiated few skill-nature lessons in partnership with another person (M=.73; SD=1.42). The average number of skill-nature lessons initiated by a Summit child alone was .11, whereas the average number of skill-nature lessons initiated by Summit children in partnership with another person was .22 (SD=.42). Holden social partners alone initiated an average of 3.18 (SD=2.52) skill-nature lessons, compared to 2.33 (SD=1.41), the average for the Summit social partners alone.

The Mann-Whitney U test of the distribution of initiations by the child alone and with a social partner of skill-nature lessons yielded support for the hypothesized relationship ($Z=1.824>1.645$; $\alpha=.05$ one-tailed; significant). The analysis indicated that Holden children initiated, alone and with a social partner, skill-nature lessons in a pattern that was significantly different from that of Summit children.

3-3. Middle-class children will initiate their involvement alone and with a social partner in more academic lessons than will working-class children.

3-4. Middle-class children will initiate their involvement alone and with a social partner in more skill-nature lessons than will working-class children.

Initiation of involvement is a different issue from initiation of the activity itself. A child may join an ongoing activity and thus initiate his or her involvement in that activity; a child may participate with a partner in joining an ongoing activity or in becoming involved in an activity they start together; or a social partner may involve the child, willingly or unwillingly, in an activity. There are many different scenarios for starting an activity and for becoming involved in activity.

Hypotheses 3-3 and 3-4 examine initiation of involvement in academic and skill-nature lessons, respectively, as a way of examining whether middle-class children exhibited greater initiative and self-direction than did the working-class children in becoming involved in these activities. Table 8 presents a pattern of initiation of involvement of children in lessons.

Table 8

Frequencies of Initiation of Child's Involvement in Academic and Skill-Nature Lessons: Child Alone, With a Social Partner, and Social Partner Alone

Child ID	Child Alone Initiated Involvement in Lessons		Lesson Initiated by Child With Social Partner		Social Partner Initiated Child's Involvement	
	Academic	Skill-Nature	Academic	Skill-Nature	Academic	Skill-Nature
			Holden (n=11)			
1	6	4	1	0	6	7
2	0	1	0	0	1	5
3*	3	1	5	0	2	0
4	4	4	2	0	0	1
5*	0	1	0	0	1	4
6*	0	1	0	1	1	3
7*	0	0	0	0	0	2
8	1	3	0	0	0	0
9*	0	6	0	1	0	2
11	3	0	0	0	3	2
12*	2	2	0	0	0	0
Total	18	21	8	2	13	26
	M=1.63 SD=2.03	M=1.91 SD=2.02	M=0.73 SD=1.48	M=0.18 SD=0.39	M=1.18 SD=1.82	M=2.36 SD=2.14
			Summit (n=9)			
20*	0	2	0	0	1	2
21	0	0	0	0	1	3
22	3	1	0	0	2	1
23*	1	1	0	0	0	0
24*	0	0	0	0	0	4
25	0	0	0	0	1	2
26	1	1	0	0	1	3
27*	1	0	0	1	5	2
28*	0	2	0	0	3	2
Total	6	7	0	1	14	19
	M=0.66 SD=0.94	M=0.78 SD=0.79	M=0.00 SD=0.00	M=0.11 SD=0.31	M=1.55 SD=1.49	M=2.11 SD=1.10

* Females.

In both communities the social partner most frequently initiated the child's involvement in academic and skill-nature lessons, with the exception of Holden children's initiation of involvement in academic lessons, which they did alone. It is in the comparison of child alone's initiation of involvement in these lessons versus the social partner's involvement of the child in the lessons that there may be a pattern of difference between the two communities. From the frequencies, Holden children appear to have initiated their own involvement in more academic and skill-nature lessons than did Summit children.

However, the Mann-Whitney U statistical analysis of the pattern of initiation of involvement in academic lessons by the child alone and with a social partner supports the null hypothesis of identical distributions ($Z=.988<1.645$; $\alpha=.05$ one-tailed; not significant). The test of hypothesis 3-4 was in the expected direction but non-significant ($Z=1.558<1.645$; $\alpha=.05$ one-tailed).

3-5. Middle-class males will initiate, alone and with a partner, more academic lessons than will middle-class females.

3-6. Middle-class males will initiate their involvement, alone and with a partner, in more academic lessons than will middle-class females.

It has been reported that middle-class parents place a high value on academic achievement (Waters & Crandall, 1964). As indicated by the frequencies in Table 8, Holden children alone, together with their social partners, and their social partners alone

initiated more academic lessons and initiated their involvement in more academic lessons than was true for Summit children and their social partners. (The related question tested in hypothesis 3-1 was non-significant but in the expected direction.) In addition, Kohn (1969) demonstrated that all mothers were likely to regard school performance as important for boys, and good manners as important for girls. Finally, in Bronfenbrenner's person-process-context model, gender constitutes a person variable. Hypotheses 3-5 and 3-6 take the examination of initiation of lessons and of initiation of involvement in lessons one step further to include gender of the Holden children in the analysis.

When the Holden children were divided by gender, the groups were small, as were the number of initiations of academic lessons and initiations of involvement in academic lessons. Table 9 shows the initiation of academic lessons and initiation of involvement in academic lessons by Holden boys and girls.

The frequencies and means in Table 9 reveal a pattern of greater frequency of initiation of academic lessons by the social partners of Holden boys than by the social partners of Holden girls. The social partners of Holden boys also involve their child partners in more academic lessons than do the social partners of Holden girls. In addition, on the average, Holden boys themselves initiated their involvement in academic lessons more frequently than did the Holden girls.

Table 9

Holden Community Frequency of Initiation of and Initiation of Involvement in Academic Lessons, Alone and With Social Partner, by Gender

	Initiation of Academic Lessons			Initiation of Involvement in Academic Lessons			
Child ID	Child Alone	Child With Partner	Partner Alone	Child Alone	Child With Partner	Partner Alone	Total Involvement in Academic Lessons
Holden Males (n=5)							
1	1	3	9	6	1	6	13
2	0	0	1	0	0	1	1
4	0	2	4	4	2	0	6
8	1	0	0	1	0	0	1
11	2	0	4	3	0	3	6
Total	4	5	18	14	3	10	27
	M=0.8	M=1.00	M=3.60	M=2.8	M=0.60	M=2.00	M=5.40
	SD=0.0	SD=1.26	SD=3.14	SD=0	SD=0.80	SD=2.28	SD=4.41
Holden Females (n=6)							
3	0	6	4	3	5	2	10
5	0	0	1	0	0	1	1
6	0	0	1	0	0	1	1
7	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
12	0	0	2	2	0	0	2
Total	0	6	8	5	5	4	14
	M=0.0	M=1.00	M=1.33	M=0.8	M=0.83	M=0.67	M=2.33
	SD=0.0	SD=2.24	SD=1.37	SD=3	SD=1.86	SD=0.75	SD=3.50

The Mann-Whitney U-test of the pattern of initiation of academic lessons by the Holden boys alone and in partnership with another person supported the null hypothesis of identical distributions (U=7.5; within range 1-29; α=.05, one-tailed; not significant),

as did the test of involvement in academic lessons by Holden boys alone and with a social partner (U=9; within range 1-29; α=.05, one-tailed; not significant). The small sample sizes and wide variability contributed to the non-significant findings.

Hypothesis 4. Although a preponderance of interpersonal lessons is expected for all children of this age, girls will be engaged in more interpersonal lessons than will boys and in more interpersonal lessons than any other type of lesson, regardless of social class group. Across social class, boys will be engaged in more academic lessons than will girls.

4-1. Across social class, females will be involved in more interpersonal lessons than any other type of lesson.

Interpersonal lessons are those lessons which address the behavior of the child in terms of what is appropriate behavior, etiquette, or values. These are the only lessons that do not always require curricula. Reminding a child to say "please" or "thank you" was considered to be an interpersonal lesson, as were telling a child not to eat food which has been on the floor because the floor is dirty, "It's not nice to show your temper" said to a child who was throwing her toys in anger, telling a child to chew each bite of food and not to stuff it all in his mouth at once, and urging a child to say "Hey, Joey" and wave at a neighbor. Frequencies of engagement in lessons by girls and boys are shown in Table 10. Considering the ages of these children, interpersonal lessons were very important. Yet, these frequencies appear to support the idea that they are considered more important for girls than for boys.

Table 10

Frequency of Engagement in Types of Lessons By Gender

Child ID	Academic	Inter-personal	Skill-Nature	Religious	Child ID	Academic	Inter-personal	Skill-Nature	Religious
Holden Females (n=6)					Holden Males (n=5)				
3	10	6	1	0	1	13	6	11	1
5	1	4	5	0	2	1	4	6	0
6	1	8	5	0	4	6	3	5	1
7	0	4	2	0	8	1	1	3	0
9	0	5	9	0	11	6	5	2	0
12	2	4	2	1					
Total	14	31	24	1	Total	27	19	27	2
	M=2.33	M=5.17	M=4.00	M=0.17		M=5.40	M=3.80	M=5.40	M=0.40
	SD=3.49	SD=1.46	SD=2.71	SD=0.47		SD=4.40	SD=1.72	SD=3.14	SD=0.49
Summit Females (n=5)					Summit Males (n=4)				
20	1	10	4	0	21	1	9	3	0
23	1	3	1	3	22	5	3	0	2
24	0	4	4	0	25	1	1	2	0
27	0	6	3	0	26	2	7	4	0
28	0	3	4	0					
Total	2	26	16	3	Total	9	20	9	2
	M=0.40	M=5.20	M=3.20	M=0.60		M=2.25	M=5.00	M=2.25	M=0.40
	SD=0.49	SD=2.64	SD=1.17	SD=1.20		SD=1.64	SD=3.16	SD=1.48	SD=0.87

The number of different kinds of lessons required that this hypothesis be tested with the Kruskal Wallis statistic. Because the initial results were influenced by the scarcity of religious lessons (25.7722>6.25, df=3; α=.05, significant), the test was computed again but without religious lessons. Results of the Kruskal Wallis test of comparing engagement by girls in interpersonal lessons to their engagement in academic or skill-nature lessons were significant (14.029>4.60, df=2; α=.05, significant).

4-2. Within each social class, males will be engaged in more academic lessons than will females.

A distinction was made between availability and engagement in an activity under hypothesis 2. Availability of academic lessons by community was illustrated in Figure 5. Engagement in academic lessons is included in Table 10.

The mean frequency of academic lessons in which Holden boys were engaged was 5.40 (SD=4.40), whereas the mean number of academic lessons in which Holden girls were engaged was 2.33 (SD=3.49). By comparison, Summit boys were engaged in an average of 2.25 academic lessons (SD=1.64), and Summit girls were engaged in an average of .40 academic lessons (SD=0.49). In the case of girls in both communities, the standard deviations are larger than the means. In both communities, boys were observed engaged in more than twice as many academic lessons as girls. Holden boys engaged in twice as many academic lessons as any other group of children observed.

However, Mann-Whitney U-tests of engagement in academic lessons in both communities supported the null hypothesis of identical distributions of engagement in

academic lessons. As might be expected from the means, both U values were close to the significant values. However, the small sample sizes and wide variability contributed to the non-significant findings. In the Holden Community, U equaled 8 (within range 1-29; not significant at α=.05, one-tailed), and the Summit Community, U equaled 2 (within range 0-25; not significant at α=.05, one-tailed).

Systems theory emphasizes the changing, dynamic nature of events. The lessons coded are frozen moments, isolated from the ongoing flow of activity. Like a photograph of a cell, they are artificial in the sense that they do not reveal the fluctuation that is occurring. Like a cell, the child-in-activity within socio-cultural context is in protoplasmic, sensitive, living motion.

Transformation of Lessons

In order to examine the transformation of the ongoing flow of activity into and out of a lesson, the field notes were transcribed and presented in table form in Appendix C.

Lessons consistently occurred during activities with older individuals. Academic lessons for children in this age group most frequently occurred in the context of play with academic objects. Skill-nature lessons were the only lessons observed being supplied by older children as well as by adults. These lessons occurred in the widest variety of environments (outdoors on the swing, while putting together a toy, during conversation while dressing or looking at pictures, while washing the car, in the course of making

cookies). Interpersonal lessons were provided by adults and were the most ephemeral of the lessons. Religious lessons were very rare in these two communities.

Transcripts of Lessons

The ease with which lessons were provided for some children and not for others is illustrated in the transcripts, presented in Appendix D.

Children eagerly participated in the lessons available to them. The co-constructive nature of the activity is born out in these detailed transcripts of the social interactions around lessons. While some children found their partners to be willing participants in lessons, others encountered resistance to their attempts to initiate a lesson or even unwillingness of their social partners to engage them long enough to provide a lesson. The interest the children exhibited in learning about the world was met with enthusiasm and interest by some partners and apathy or lack of awareness by others.

CHAPTER V

DISCUSSION

A child's environment provides the circumstances for the construction of learning about how the world works, why things are the way they are, how to behave in different circumstances, what is important and not important, what others expect from and how they see him or her. From observing everyday life (for example, the number of lessons, what kind they were, how they started, what else was occurring around them) we get a glimpse of the process whereby much of this learning occurs. Without direct observation, this information is hidden from the social scientist.

It is probable that only well-functioning families would permit an observer in their home for such an extended period of time. The families, selected from one city to reflect the dominant social-class divisions, were, to all appearances, "ordinary." They appeared to be fairly well-adjusted, fairly happy, and their children were reasonably well-behaved. None of the interactions would be considered remarkable in the larger arena of American society. The observations, made wherever the child was and in the context of whatever events and activities the child was experiencing, were valid representations of the children's lives. In every case the children and their social partners became comfortable in the presence of the observer. The magnitude and variability of these data can be used as a glimpse of the typical and the extremes in child activity within these two communities.

The expectation was that Holden families would structure the environment around the child in such a way as to encourage independent action on the child's part, and that this would not be consistently true in Summit. In fact, in terms of frequencies, Holden children did spend more of their time in child-modified environments than did Summit children, and the variability was smaller in the Holden community. Only two of the eleven Holden children were observed in child-modified environments in their family premises less than 26% of the time, compared with six of the nine Summit children at this end of the scale. On the other hand, five Holden children were observed in child-modified own environs more than 35% of the time, compared to only three Summit children. The three children with the smallest proportions of observations in their own environs characterized as child-modified were all living in Summit. Very little or none of their own environment was structured on their own physical scale or to encourage their independent action.

From the point of view of the observer, Holden children had considerable private personal space. They typically had their own separate bedrooms and frequently an additional playroom, filled with toys. Some of these children had private baths. Some of their bedrooms and playrooms were elaborately decorated in childlike themes and furnished on the child's scale. Most Holden homes had a child-sized chair in the living and/or dining room and a step-stool in the bathroom.

This pattern of encouragement of independent action and a sense of control over their activity was repeated in the initiation of lessons and in the initiation of the

children's involvement in lessons. Only one of the hypotheses testing initiation was significant (hypothesis 3-2), but five other hypotheses relating to initiation, either of lessons or of involvement in lessons, approached significance. The Holden children were consistently (even if not significantly) more likely than their Summit counterparts to start a lesson by asking a question or to join an ongoing lesson.

Academic lessons and play with academic objects also showed different patterns in the two communities. From Figure 3 of the frequencies of play with academic objects in their own and their school environs, it appears that both communities of children engaged in play with academic objects more frequently in their own than in school environs. When in their own environs, Holden children engaged in significantly more play with academic objects. In Figures 2 and 3, Holden children appear to have consistently engaged in more play with academic objects, both at home and in school, than did Summit children. Furthermore, as Table 4 shows, most Summit children spent almost all of their waking days in a school environment. Given the proportion of time they were in preschool, it is remarkable that Summit children not only played less frequently with academic objects but were exposed to significantly fewer lessons than Holden children. Except for two discrepant Summit children, Summit children engaged in very little play with academic objects in any context. The quality of the experience in their own environs was different for these children, but the importance of the amount of play with academic objects in one's own environs seems clear.

The parallels between the experiences children in each community had at home and at school and the differences between the two communities were striking. In a reflection of Bronfenbrenner's mesosystem, the children attended child care centers or preschools in which the interactions were much the same as at home. Home and school appeared to operate under the same constraining beliefs and values in regard to children's learning. As shown in Table 4, child care arrangements in the two communities were given different names. Most Holden children attended "preschool" and only on a variable schedule, which required that their mothers take them and pick them up. These mothers typically had a car pool system with other mothers of children in the same preschool (in which the observer rode more than once), so that they were not required to drive the child every day. Only two Holden children were reported by their parents to attend day care. By contrast, only two Summit children were reported to attend "preschool," the other seven attending "day care," going to a baby sitter, or being cared for by a relative while their parents worked. Although there was no attempt to empirically measure the quality of the preschools or day care centers attended by the children, it was impossible for the observer not to form some conclusions about the relative quality of the learning environments experienced by the Holden children, who attended private preschools, and the Summit children, who attended either large day care centers or smaller neighborhood centers. The distinction between "day care center" and "preschool" may be best related to the functional indications of the terms. "Day care" alleviates the problems parents who must work have in caring for their young children

during working hours. "Preschool," on the other hand, is intended to enhance the young child's intellectual development and prepare them socially for entering school (see Scarr & Weinberg, 1986, on the history of this distinction). The availability of play with academic objects and of lessons appears to support this distinction and reflect the differing qualities of the two learning environments.

Some children frequented other environments in which they found academic objects available. Child 7, who engaged in more play with academic objects than any other child when all environments were combined (see Figures 2 and 3), was a frequent visitor to the public library. (Public space was not included in Figure 3.) This child's mother took her to the library twice during the week of observations, once while the observer was present. It is unlikely that a Summit parent would be able to take his or her child to the library on a Tuesday afternoon for the library's story hour for children. Although it may be that the trip to the library was planned for the benefit of the observer, the familiarity of the child and her siblings with the library and the library staff indicated that a trip to the library was not unusual. In addition, a parent's understanding of what would be an appropriate or respectable activity is culturally constructed. In contrast to this Holden parent's library excursion, a Summit parent took his daughter to the bowling alley during observations.

In all contexts, Holden children had significantly more lessons available to them. When lessons were broken down by type, there was a tendency toward more available

academic and skill-nature lessons in Holden than in Summit, and the social partners of Holden children consistently initiated more of these lessons.

Gender was another important part of the picture. Of the four different kinds of lessons, interpersonal lessons were the ones in which girls were most frequently involved. It may be that three-year-old boys remember their manners more often or naturally engage in more acceptable behavior than three-year-old girls do and so require less correction than do girls, but there is no evidence for this. A more plausible explanation is that the cultural construction of gender is such that there is a higher value on good manners for girls than for boys. Kohn (1969) found that working-class mothers wanted their daughters to be "little ladies" and their sons to be manly. Although he found that middle-class mothers made little or no distinction on the questionnaire between what is desirable behavior for boys and for girls, the results of the present study appear to indicate that the adults in working- and middle-class settings made more efforts to teach the girls good manners. The results are consistent with the sex-typing behavior found by Jacklin, DiPietro, and Maccoby (1984) in which boys were expected to test limits and break rules, so that inappropriate behavior was seen as normal and acceptable for them but not for girls. Three-year-old Holden and Summit girls were more frequently prompted to say "please" and "thank you" and to do such things as ask after the health of a great uncle (see Appendix C, example 5) than were the three-year-old Holden and Summit boys. These results appear to support the idea that, regardless of social class, girls are expected to be pretty, pleasing, and passive.

There was considerable variability within the two groups. It may be that larger groups or higher frequencies of lessons would diminish the within-group variability and give the statistical test more power. The Mann-Whitney U-test, with its sensitivity to within-group variability, has a tendency toward Type II error with small groups. Were the groups larger, these Summit children would not carry the statistical weight that they do in a group of only nine, and the larger group could more easily be characterized as engaging in very little play with academic objects and lessons. The small frequencies of lessons could be related to a number of factors, including the youth of the participants, the requirement that these lessons be explicitly didactic, and the fact that lessons were ephemeral and thus less likely to occur within the 30-second window coded every 5 1/2 minutes. These limitations meant that the lessons captured were necessarily rarer than were all learning opportunities. Although the observations extended over 20 hours, the coding period constituted only a small portion. The activities captured in the 30-second windows represent less than 13% of actual observations, or 90 minutes.

However, the kind of variation seen in these small communities of children is important in socio-cultural terms. For these individuals, these differences are important. Although the actual frequencies of lessons and play with academic materials observed were small, frequency is powerful in the individual's experience. The activities coded were <u>everyday</u> activities; they were small samples of the actual activities available to the children. What is seen in the analyses was repeated many times outside the coded windows. It is this repetition which is important in shaping cultural competence.

In the experience of a child, 29 episodes of play with academic objects within the observation period is different from 15 episodes, and certainly different from 9 or 3 such events. Child 20's engagement in play with academic objects in school appears to triple the amount of this kind of play, thus school is an important source of this kind of activity for this particular child. Child 22 engaged in more play with academic objects in own environs than any other child. Indeed, child 22 also ranked high in child-modified own environs and had more available academic lessons then any other Summit child. (With 5 available academic lessons, this child ranked fifth in the pooled groups, behind four Holden children with from 13 to 6 academic lessons). Note that child 22's five academic lessons comprised half of all the lessons available to him (see Figure 4).

Frequency is important. In socio-cultural terms, frequencies more faithfully reflect the individual child's experience. Even though a child who plays with an academic toy or looks through a book only once may have the same kind of experience with the object (although this is doubtful) as another child who plays with academic toys or looks at books 21 times, the more frequently a child engages in play with academic toys, the more opportunities that child will have to learn from them and to create new and different ways of interacting with them. In the search for general statements about abstract and formal cultural processes, the particulars of the individual's experience can easily become lost. To any but the trained scientist, this may not come as a surprise.

Culture as a constraint system which organizes human cognition and conduct is inseparable from the higher mental functions emerging in ontogeny. The ways in which

adults and older children guide young children in activity, the activities available and the ones deemed suitable and important for young children, the partners available, and the roles taken by the various actors are organized by culture. For the child's part, the zone of proximal development is created when two or more people interact in activity (except for the special case of play). The child actively seeks as much participation as possible. Because the children are motivated to learn about the world, they will learn whether an adult makes an effort to operate within the child's zone of proximal development or not. The child will extend him- or herself to learn, and his or her social partner can powerfully influence that learning by being sensitive or not. In Appendix D, an example is given of child 20 attempting to initiate a skill-nature lesson with her father. The father has come home from a day of work, bringing dinner for his daughter from a fast food restaurant; he is tired and does not want to play. He successfully rebuffs her attempts to engage him in interaction with the Tupperware bowls on the table. One can imagine a different response in which he talks with her about the material from which the bowls are made, lets her feel the puff of air and hear the sound as he pushes on the lid, or engages her in a discussion of mother's business in Tupperware sales. In short, one can imagine him enjoying talking with his daughter, sensitively guiding her awareness, and encouraging her interest in the things around her. The non-interactive style of this same father is represented again in Appendix C example 24. Another transcript is presented in Appendix D of child 25 attempting unsuccessfully to initiate a skill-nature lesson. The inability or unwillingness of this mother to interact with her son is very apparent.

Other examples in Appendices C and D illustrate parents and siblings participating in lessons with the children within the child's zone of proximal development. As these examples show, when an adult makes the effort to sensitively guide the child, the child will respond by making an effort to stretch further than he or she could alone. Operating within the zone of proximal development in partnership with a more competent individual is motivating, especially when there is a strong emotional bond with the social partner.

It has earlier been stated that it is by examining the limits of variability that cultural constraints can be inferred. These data represent a series of snapshots of particular contexts and activities which were present in these two communities at a particular time. In order to construct an argument that these snapshots represent pictures of differences between two social classes, many more children would have to be observed or many more activities analyzed. The construction of social class is based on abstraction, yet the parents in this study seemed to have very different conceptions of their influence over their children's lives.

Kohn found that parents have different goals for their children based on social class values, personal preferences, and personal value systems. As they structure the child's world, interact with their child, and go about their own daily lives, they communicate their values by the choices they make. Perhaps, if child 20's father knew the power of his interactions with his daughter, he would expend the effort required to interact with her. Repeated expressions of lack of interest in her on his part, as compared

to repeated expressions of interest and joy in what she brings to the interaction, will communicate very different things to her about her worth, ideas, and abilities. Although this Summit father undoubtedly loves his daughter and wants the best for her, he behaves as if he does not believe that he has any influence on her future. He does not appear to take delight in her developing mind. By contrast, Holden parents behave as if they believe they have considerable power over their children's lives and take delight in their children's accomplishments (see children 03, 06, and 09 in Appendix D). Parenting appears to have a different meaning in these two communities. In Summit, parenting may mean providing a home, clothing, food, a safe environment, and discipline. In Holden, parenting appears to go beyond these basics to influencing the child's self-worth and nurturing his or her abilities.

The patterns of findings and frequencies related to the different hypotheses are strikingly similar. Some individuals consistently have many more of the experiences of interest; some have many less. Children with more of these experiences tend to come from the same community. That the patterns are closely allied with but not exactly along social class lines supports a view of the transmission of culture as multidirectional and multilevel. Cultural forces have a role to play in constructing the constraint system but do not determine the interactions.

Cultures are differentiated by value and belief systems which construct the activities, amount of self-directedness, and conceptions of reality within any society. Sub-cultures are also differentiated by the systems of constraints constructed along the

lines of the values and beliefs of the sub-culture. However, individuals are not passive recipients of culture. Each individual constructs mind and consciousness in a unique way through internalization. Learning is not a unidirectional transmission but a process of transformation.

The tension between the general and the particular in this study comes out of a Vygotskian theoretical base that views the part of culture that is inherited from the past as a patterned scheme of things out of which volitional, intentional people construct their lives. People, social institutions, values, conceptions, goals, judgments, and ways of doing things were already there when the child was born. Out of these people, social institutions, values, conceptions, goals, judgments, and customary ways of doing things the active, intentional person constructs mind, will, understanding, and action.

The coding scheme was based on an etic model, that is, the intent was to design a scheme for coding activity which could be used in any cultural setting without bias. Yet, the small number of participants in this study make the results necessarily ideographic in nature. This is, in essence, an anthropological study of the lives of young children in two cultural communities. The method was primarily unobtrusive, nonreactive, and naturalistic. The behaviors were not reported by the participants; they were observed as they occurred. Fundamentally, these analyses aim to be sensitive to the phenomena from the standpoint of context, the social situation, and the culture. As such, the results are generalizable to the two communities studied. It is also hoped that these results show us something about the way in which social class in general has been constructed.

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APPENDIX A

PROCEDURAL DOCUMENTS

Introductory Letter

Dear :

We would like to invite [child] and you to participate in a study looking at the daily activities of young children. Your names and address were selected from the list of all parents in your community who had a baby in 1987 and 1988, and we hope that you are interested in this study of children in different parts of the world (Western Samoa, Nepal, Kenya, and the Soviet Union in addition to the United States). Surprisingly little is known about how young children spend their days, yet this information would be valuable in helping scientists understand how children develop the behavior, skills, and values that we expect them to use and understand.

The study is being conducted by Dr. Jonathan Tudge of the Department of Child Development and Family Relations at the University of North Carolina at Greensboro, and his assistants, Sarah Putnam and Judy Sidden. We would like to list [child]'s day-to day activities by following her wherever she goes--in the home, day care, shopping, playground, and so on. In order to hear [child]'s activities without hovering over her, we will ask her to wear a wireless microphone tucked in a belt-pack. Since we are interested in documenting an entire day, we would like to observe her for a total of 20 hours distributed throughout the course of one week. If you have no objections, we would like to videotape the final 2 hours of observation. This is optional, and if you would prefer that [child] <u>not</u> be taped we will not do so. Moreover, should you want any portions of the tape erased, we will erase them. You will receive a copy of the tape.

There is no need for your family members to alter their routines; indeed, we want everyone to do exactly what they normally would do while observation is taking place. If an observation is scheduled at a time that is inconvenient for your family, we will schedule another day; we will of course respect family members' requests for privacy.

We realize that families lead very busy lives, and to express our appreciation to the participants we will offer a $250.00 saving's bond in [child]'s name ($10.00 per hour, plus $50.00 for completion). This saving's bond will be issued approximately 2 weeks after completing the study. In the event that you decide not to complete the study (you may withdraw from it at any time) you will receive a $10.00 bond for each completed hour.

We will contact you by phone in 3 or 4 days to find out if you would like to take part in this study. If you decide to participate, we will schedule to meet the entire family and ask you a few questions about [child]'s daily routine. At this meeting we will also familiarize you and [child] with the procedure. All information collected will be handled confidentially, and will be used for research purposes only. We will send you the findings of the study when it is complete.

Your participation in this important work on young children's activities is critical, since your family is part of a small sample representing your community. We hope that you will agree. If you have any questions about the study, please feel free to call us at 334-5307.

Sincerely yours,

Jonathan Tudge PhD
Assistant Professor

Sarah Putnam
Research Assistant

Judy Sidden
Research Assistant

Telephone Protocol

Toddler Ecology Project

The telephone protocol will not be read verbatim in order to accommodate individual differences in style of communication. However, all callers will provide the same basic information and ask the same questions.

Hello, this is _____ calling. Is this Mrs. (Mr.) _____?

I'm a graduate student at UNC-G working with Dr. Jonathan Tudge and I'm calling to follow-up a letter which we sent to you recently about our study of toddlers. Is this a good time for you or do we need to arrange another time to talk?

[If answer negative]: That's fine; when would be a good time for you?

[If answer positive]: Fine. Did you receive our letter?

[If no]: I'm sorry; we sent you a letter [n] days ago in which we gave you a brief overview of the study we are going to be conducting here in Greensboro. I'll just run over the points that we made there. [Then continue as below.]

[If yes]: Fine. What I'd like to do is take a few minutes to tell you some more about our study and ask you a few questions. We are carrying out a study of toddlers, children aged from between 2 1/2 to 3 1/2, looking at how they spend their time. We will be studying toddlers in five different countries, and the children in the United States will be from here in Greensboro. What we're really interested in is what a typical day is like for toddlers. Although there is a lot of popular knowledge about toddlers, in fact we really know very little about how they spend their time, who they spend that time with, and the kinds of things they do. And one of the questions that interests us is in what ways does a toddler's typical day in the U.S. differ from that of toddlers in other countries and in what ways is it the same. Basically, we'd just like to observe your child in [his/her] everyday activities.

For now, however, I'd like to ask you a few questions just to get some information about your family's schooling, residence, and work. Is that all right?

1. Does [child] live with you? ___yes ___no ___sometimes

2. What is your occupation? _____

3. What is your spouse's occupation? _____

4. What is the highest level of education you have completed?
   ___less than high school, ___high school, ___some college,
   ___Bachelor's, ___some graduate school, ___Master's, ___PhD

6. How long have you lived at your current residence? _____
6a. [If less than 1 year]: Did you move from within the same community or from some different community? _____

7. Were you born in the U.S.A., or in some other country? If other, where?
husband_____ wife_____

8. Does [child] attend day care? ___yes ___no

9. Do you have any other children? ___yes ___no
9a. [If yes]: What are their names and ages?

Okay, that's all the questions I have. Do you have any questions for me?

[If asks for more information]: As I said, what we want to study is a typical day in the life of toddlers. This means that we wouldn't want you to change anything you normally do. What we would do, if you choose to participate in the study, is to come to your home and observe [child]'s various activities, [his/her] daily routines, who [s/he] spends time with, and so on. If [child] goes to day care, we'd like to observe there, too. Basically, we'd like to go everywhere she/he does, so as to get the most accurate picture we can of everyday life.

[If family does not fit criteria for this part of study]: Thank you for your time. May we keep your name on our list of people who might participate at a later time?

[If family meets criteria]: If you think you are interested in participating in the project, could we schedule a time when we could get together with you and the other members of your family to introduce ourselves, get to know [child], and answer any more questions you might have?
[If declines to participate, ask reasons.]

Initial Home Interview

Toddler Ecology Project

There are three goals for the first meeting with the family; to become acquainted with all family members, begin their acclimation to the researcher's presence, and to obtain some information. Present at this initial interview will be all researchers who will be in direct contact with the family. The interview will take place in the family's home. Approach the interview in a relaxed, sociable manner, beginning with introductions and social niceties.

Interview

To give me an idea of a typical week in [child]'s life, could you tell me what typically happens--for example, the time s/he usually gets up, whether s/he does to day care and if so when, do some people come regularly to the house to spend some time with [child], and so on. I'd also like to know about typical evening activities, what time s/he goes to bed, etc.

Thanks, that's really useful. There are another few points I'd like some information about--[prompt for the following if they haven't come up spontaneously]:

waking time _____

regularly scheduled nap times _____

bedtime _____

daycare schedule _____

regularly scheduled trips (shopping, visit friends, etc.) _____

people coming regularly to the house (relatives, friends, child-minder or baby sitter, etc.)

_____

[If the child goes to daycare]:

Obviously, we'll need to get permission from [child]'s day care for me to be able to observe him/her there. Do you have the name, address, and phone number?

_____

Are there any other places s/he is likely to go that might require permission in advance?

_____

When you take [child] shopping or to day care, do you typically walk or drive? [If drive]: Will there be room in the car for me to accompany you?

How are the weekend days different from weekdays for [child]? ___

OK, thanks for all that information. Let me tell you a few general things about what will happen. First, I want to be as unobtrusive as possible, not hovering around [child] all the time. Think of me as a fly on the wall, if at all possible! But it's also important to be able to hear what [child] is saying. So I'd like [child] to wear a small wireless transmitter in one of these packs. [Get out a number of packs and show to the child.] Do you like these? Which is your favorite color? Like to try it on for size? [To parents:] [Child] can keep it once the study is over, but I'd like him/her to wear it while I'm observing, because in it there'll be a tiny transmitter, and I'll attach a mike. That way, I won't have to be too close but will still hear what s/he's saying.

Could I take a brief tour of the house? I'd like to draw a plan of the layout, so that I'll know where [child] is going, whether there's any other way out, and so on.

Let me stress that I'd really appreciate it if you would not change your plans or do anything differently from what you would normally do in order to accommodate me. We really are interested in getting as accurate and natural a picture as we can of a complete day in [child]'s life. So treat me as if I weren't here, if you can manage that. Of course, there may be some things that you would prefer to be strictly private; for example, you may prefer me not to observe while [child] is using the bathroom. Feel free to tell me not to observe, and I won't. And if you go into a room with [child] and shut the door behind you I'll treat that as an indication that you would prefer me not to observe. Finally, please don't include me in any meal plans, or anything like that--I'll bring a little snack with me.

As we wrote in the letter you received, [child] will receive a savings bond for participating in the study. When we purchase it, we'll need to have his/her social security number, and the number of another family member.

Finally, here's a consent form for you to sign, assuming that you would like to participate in the study.

Family Consent Form

Participants' names (please print):

Date:

I hereby consent to participate in the research project entitled: "Socio-cultural contexts of children's activities." The aim of this research project is to describe the daily activities of your child by observing him or her for 20 hours over the course of one week. Observations will be conducted I the morning, afternoon, and evening in 2 2-hour blocks and 4 4-hour blocks, the last of which will, if you agree, be videotaped. Your child will be watched wherever he or she goes-at home in child care, in the playground, or shopping. The researcher will respect family members' requests for privacy. Videotapes will be seen only by researchers involved in the project-if we wish to show any portions of the tape at scientific meetings or to anyone who is not a member of the research team we will only do so after receiving written permission from you. If you wish us to stop videotaping we will do so upon request, and any portions of the videotape that you wish erased will be erased. The data will be destroyed after coding and analyses have been completed.

To express our appreciation to the participants we will offer a $250.00 saving's bond in your child's name ($10.00 per hour, plus $50.00 for completion). This saving bond will be issued approximately 2 weeks after completing the study. In the event that you decide not to complete the study (you may withdraw from it at any time) you will receive a $10.00 bond for each completed hour.

An explanation of the procedures to be followed and their purpose, including any experimental procedures, was provided to me by Dr. Tudge. I was also informed about any benefits, risks, or discomforts that I might expect. I was given the opportunity to ask questions regarding the research and was assured that I am free to withdraw my consent to participate I the project at any time without penalty or prejudice to myself or my child. I understand that I will not be identified by name as a participant in this project. I also understand that any new information that developed during the project will be provided to me if that information might affect my willingness to continue participation in the project.

I have been assured that the explanation I have received regarding this project and this consent form have been approved by the University Institutional Review Board which ensures that research projects involving human subjects follow federal regulations. If I have any questions about this, I have been told to call the Office of Research Services at (919) 334-5878.

__I would like a copy of the results of this study.
____I would like a copy of the videotape.
Child is ____years old, and unable to sign.

Parents' Signatures
Witness to Presentation and Signatures:_____ Date:

Preschool/Child Care Consent Form

_____, the child care setting where ____ attends hereby grants permission for _____ to be observed by Dr. Tudge or a member of his research team. We are aware that _____'s parents have knowledge of this study and have also grated their permission for him/her to be observed in this center. Further, it is agreed and understood that failure to participate in or complete this stud will in no way affect the services this center provides to the family, nor would it affect any services that this family or center might now or in the future receive from the University of North Carolina at Greensboro.

Center Director's signature

Date

Parent's signature

Date

Witness of parental signature

Video Tape Consent Form/Demographic Questionnaire

Please check one of the following statements, and sign below.

____ I have no objections with you showing any portions of the videotape that was made as part of the Cultural Ecology of Young Children project, with the following provisos: First, anonymity will be preserved by not showing any sections in which people are referred to by name, and second, that portions will only be shown at scientific meetings or for research-related purposes.

____ I have no objections with you showing some portions of the videotape that was made as part of the Cultural Ecology of Young Children project, with the following provisos: First, anonymity will be preserved by not showing any sections in which people are referred to by name, and second, that portions will only be shown at scientific meetings or for research-related purposes. The portions that you may not show are listed below (please indicate the times of the sections that you do not want shown):

___ I do not want you to show any portions of the videotape that was made as part of the Cultural Ecology of Young Children project.

Signed: _____ Date: _____

Please indicate below the number of years of full-time education since age 14 for you and your spouse, and your occupations:

Husband: Years of full-time education after 14 ____.
Occupation:

Wife: Years of full-time education after 14 ____.
Occupation:

Please indicate below your approximate annual family income:

___ Less than $10,000
___ Between $10,001 and $25,000
___ Between $25,001 and $40,000
___ Between $40,001 and $55,000
___ Between $55,001 and $70,000
___ Between $70,001 and $85,000
___ More than $85,001
___ I would prefer not to answer this question

Finally, please sign the following statement (if you have not done so previously):

I _____, the legal guardian of _____, hereby acknowledge that I received savings bonds (face value of $250.00) from Jonathan Tudge (purchased by the University of North Carolina at Greensboro), and that I understand that these bonds will be subject to IRS 1099 reporting requirements as income to my child.

Signed _____ Date _____

Many thanks for your help!

APPENDIX B

CODING MANUAL

The Cultural Ecology of Young Children

Coding Manual

(September 1994 edition)

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DEFINITION OF ACTIVITY

The unit of study is the child in activity. The focal child, any partners, and roles of all participants are coded as they relate to the activities under consideration. There are four "focal" activities: lessons, work, play, and conversation; in addition, other activities are coded, but in less detail. The focal child's activities and the activities going on around him or her are monitored continually (apart from the time taken to enter the codes), but are not continually coded. Rather, the coding is of the focal activities that occur during a timed "window". The window is open for 30 seconds in every 6-minute period. For an activity to be coded it must either (a) be engaged in or observed by the focal child or (b) be potentially available to the child by virtue of being (1) within easy ear- or eye-shot and (2) a focus of attention by another person during this 30-second window. (An exception to this rule, is that when the TV, radio, or related things are going on "under their own steam" within easy ear- or eye-shot of the focal child, they can be coded as potentially available even if no-one is focusing attention on it.)

Write down, briefly, the significant activities, roles, partners, etc. that are going to be (or just have been) coded (i.e., those on-going during the window) in the space at the bottom of the coding sheet. In addition, non-window activities (those occurring outside the 30 second window) may be noted at the side of the coding sheet if they are deemed interesting/relevant. The window notes and the non-window anecdotal notes will be the equivalent of field notes, and will serve to furnish examples of the activities, roles, etc. that go on--the "flesh" to cover the bare bones of the raw codes.

To be coded, an activity need only occur for a portion of the window; that is, if it has been the focus of attention prior to the window and continues into the window, even if by only a second or two, it should be coded. Similarly, if an activity gets underway a short time prior to the closing of the window and continues afterwards, it should be coded.

Any activity can change over the course of the 30 seconds, for example from generic pretend to emulation of an adult role. Code whichever appears to have occupied the greatest time during the window.

For an activity to be considered a focus of attention, it must be more than a momentary activity, or a shift in attention. Compare the following examples:

> Sarah, a toddler, is helping her mother prepare food during the window. Her attention and that of her mother are clearly focused on that activity. During the window, Sarah's mother moves a knife out of her easy reach, but says nothing and Sarah pays no attention. There is no sense that either participant were focusing their attention on the movement, and so "lesson" should not be coded.

Contrast this with a second example:

> Jonathan, a toddler, is helping his mother prepare food during the window. His attention and that of his mother are clearly focused on that activity--"work." During the window, Jonathan tries to pick up a knife. His mother says: " That's not a good knife to use: it's too sharp and will cut you" and she moves it out of his reach. Despite the brevity of the comment, it constituted a focus of attention and should be coded as "skill/nature lesson."

Similar points can be made with regard to observation of an activity. Again, momentary shifts in attention do not qualify as a focus. For example:

> Judy is playing with some toys. Her mother is working nearby. Judy looks up momentarily to see what her mother is doing, but continues to play and does not appear to have focused attention on her mother's work. Code "play", and Judy's role in it, and code "work" but give Judy no role in it.

Contrast this scenario with another:

> Sarah is playing with some toys prior to the window opening. As the window opens, and for all of the 30 seconds she is looking at her mother working, however, and only goes back to her play

after the window has closed. As her attention is focused on her mother's work, code "work" and Sarah's role as "observer" or "eavesdropper" (see role codes).

If, on the other hand, Sarah had returned to her play even if only for a few moments before the window closed but continued playing thereafter, both activities could be coded and Sarah would have a role in each. Play can be coded because it was occurring prior to the window opening and because it continued after the window closed. So, although it did not occupy much time during the window itself, knowledge of the broader context of Sarah's activities allow us to realize that this is an activity on which Sarah is focused.

Suppose that Judy is playing, and looks up at what her father is working on during the window. Play is coded, as is work, and Judy has a role in play. However, the decision must be made about whether the "look up" is sufficient for Judy to be coded as a partner. A decision must be made about whether or not Judy was really focused on her father's activity. Look for non-verbal cues that suggest that she is doing more than simply gazing around before giving her a role (as eavesdropper or observer) in work.

Coding the focal activities

For one of the focal activities to be coded, it clearly does not have to be engaged in by the focal child. If he or she is not engaged in it, she is given no role (code 0) and the participants are not coded at all. The activity must be "available" to the focal child, however. That is, it must be an activity that is on-going within easy ear- or eye-shot of the focal child; it is something upon which the child could focus attention or in which she could participate (or try to participate). The only exception to this is if the focal child is asleep, in which case code on-going focal activities, participants, etc., even though the child could not actually participate.

Coding the non-focal activities

If the child has a role in any of the focal activities, but is also engaged in one of the non-focal activities (sleep, eating, bodily functions, idle, or "other"), simply provide the code for that activity but do not code the child's role, the partners or their roles for that non-focal activity.

If the child has no role in any of the focal activities, but is either engaged in one of the non-focal activities or is observing someone who is engaged in one of them, code the activity, the partners, and the respective roles in the same manner as for the focal activities.

If people other than the focal child are engaging in non-focal activities, do not code them--they are available as people but their non-focal activities can be ignored.

If the activities are really un-codable (following in car and can't tell what's happening, or if you've "lost" the focal child), code "Other" as 5 and indicate the problem in the window notes. Then go on to next window.

ACTIVITIES

Lessons

To count as a lesson, there must be an attempt to impart information (albeit implicit) or to receive information (in the case of a child asking a question). Note that lessons may be shorter-lived than other activities, and that interpersonal lessons may be implicit.

1. **academic A**

Information that relates to schooling or pre-school skills, abilities, etc. This includes labeling colors, getting the child to count, help read a story, more/less information, clear attempts to get the child to remember some event (where the goal is not for the partner to get information, but rather to help the child develop memory skills). Note that the focus must be on trying to impart or receive information; playing a game with academically related objects (where there is no such focus) would be coded under "play with academic object."

2. **interpersonal I**
   Conveying or requesting information about culturally appropriate behavior, etiquette, values, etc. Getting a child to say "please" or "thank you" counts, as does commenting on poor eating habits, not interrupting other people, spitting, etc. Note that simple discipline commands ("stop," "don't do that" etc.) should not be coded, but "stop that; it's not polite" when it's clear that the person speaking is commenting about appropriate etiquette, values, etc. would be coded as an interpersonal lesson.
3. **skill/nature lessons S/N**
   Conveying or requesting information about the workings of the material or natural world--lessons on how to tie shoe laces, use a mortar and pestle, how to sew clothes, weave, operate a TV or computer, etc., or information about the natural world, seasons, time, behavior of animals, etc. The focus here is upon a skill to be learned or facts about nature. Include here lessons on health and safety.
4. **religious/spiritual lessons R**
   Conveying or requesting information on matters of religious or spiritual affairs, or rituals associated with these matters. If simply participating in such rituals, with no lesson involved, code under "religious/spiritual activities" (other--code 6).

Work

Tasks, errands, chores which may be assigned to children, but also work that typically is not done by children--ironing, washing dishes, fixing the car, saddling a horse, caring for a child (but not the focal child), shopping, washing clothes, using the computer to write (rather than play), etc. In general, activities that either have economic importance or contribute to the maintenance of life. Note the difference between "play-emulation of adult role" and "work"; the latter must at least be intended to be of economic or subsistence-related importance, even if an adult has assigned it as a task when it would be easier for the adult to do it him/herself.

1. **transparent or no technology**
   Transparent technology is technology the workings of which are clear to the child--sweeping with a broom (but not with a vacuum cleaner), fixing a torn page with tape (but not fixing a car), etc. No technology includes such things as running an errand, undressing a child, etc.
   1. **child-modified Tc** (Transparent, child-modified)
      some technological device is being used, but it has been purposefully modified for use by a child--a miniature hammer, broom, etc.
   2. **adult Ta** (Transparent, adult)
      some transparent technological device being used, but not modified for use by a child.
   3. **not applicable N/A**
      where no device is being used at all
2. **opaque technology**
   Where the mechanics of the tool being used are not likely to be understandable by the child
   1. **child-modified Oc**
   2. **adult Oa**

Play, exploration and entertainment

Activities that being engaged in for fun, their own sake, or to master some skill--but not because they have economic value or contribute to the maintenance of life, which would be "work."

1. **pretend/role play**
   Any play activity that has the child assuming the role of another, whether other person, thing, creature.
   1. **generic pretend or role play Pg** (Pretend, generic)
      Any pretend or role play not in 2 below.
   2. **emulation of adult roles Pem** (Pretend, emulation)

Role play in which typical roles from normal human situations are adopted, and in which at least one of the participants is taking on a more competent role--playing mother/father, whether working or not, mother/baby, teacher at school, etc.. Do not include playing heroic roles (Batman, etc.) which are not "typical" adult roles. To be included here the role being taken must be clear.

2. **non-pretend play and exploration**

Play or exploration that does not feature taking on a role. Play with objects is not well distinguishable from exploration, so do not try to distinguish them.

1. **with academic object AC**

Learning is inherent to both play and exploration; hence include play with academic object here. Academic materials include anything typically used in school or preschool and that have been designed for learning purposes; leaves, etc., may be used but have not been designed for academic purpose, and so do not code here. Include here reading a story, if the focus is not on naming objects, colors, filling in the missing words, etc.

2. **with child-oriented (non-academic) object CO**

Any object that is designed, modified, or prepared with the child in mind except objects that have been designed with an academic purpose. Include blocks, tea-sets, balls, dolls, cars, miniature versions of adult tools (unless better coded as "work"--in which case there must be a clear attempt to accomplish something of economic or subsistence-importance). Look for evidence that the object has been either brought in or prepared in some way for a child to use (painted, cleaned, no sharp-edges) rather than has been simply discarded and the child is playing with it.

3. **with adult-oriented object AD**

Any object from the adult world that has not been designed, modified, or prepared for children (if so prepared, should be coded as child-oriented). Include materials that have been taken by children (unbeknownst to adults) or discarded from the adult world--old tires, pieces of machinery, etc.

4. **with natural object NAT**

Any natural object--sticks, mud, sand, plants, etc. irrespective of where they are found (i.e., even if inside the classroom). Include in this category animals (pets, etc.) If using any child-modified object in addition to the natural object (such as a shovel in the sand), code under "child-modified".

5. **with no object NO**

Any play (except role play) that does not involve the use of an object--games of chase, etc. Include here word or verbal play, if it's being done for sense of pleasure--rather than noises to bother someone.

3. **spectator of performance**

Any activity in which the individual is watching or listening to a performance, for entertainment or relaxation. Movies, plays, videos, puppet plays, listening to music or the radio or on tape, watching (not participating in) sports events, etc. would be counted. If singing along, or being a more active spectator, code role as participant. If simply watching a performance, code as eavesdropping on it.

1. **academic Sac** (Spectator, academic)

Performances (non-TV) that have clear academic (school or preschool) material--a focus on counting, letters, etc.

2. **child-oriented Sch** (Spectator, child-oriented)

Performances (non-TV) that are produced with children (<10) in mind, but which do not have an academic focus at the time of watching. Look for programs that have a predominance of child or puppet actors, or adults deliberately speaking to children.

3. **adult-oriented Sad** (Spectator, adult-oriented)

Performances (non-TV) that do not have children in mind, even if the content may appear childish. Look for a targeted population > 9.

4. **TV academic TVac** (TV, academic)
   Performances that have clear academic (school or preschool) material--a focus on counting, letters, etc.
2. **child-oriented TVch** (TV, child-oriented)
   Performances that are produced with children (<10) in mind, but which do not have an academic focus at the time of watching. Look for programs that have a predominance of child or puppet actors, or adults deliberately speaking to children, such as cartoons (with the exception of some adult-oriented cartoons), Sesame St., Mr. Rogers, etc. If there is a mix of academic and non-academic parts embedded within a child-oriented program, code "academic" if that portion is a focus during the window.
3. **adult-oriented TVad** (TV, adult-oriented)
   Performances that do not have children in mind, even if the content may appear childish. Look for a targeted population > 9.

Conversation

To code this, conversation must be the focus of activity, and it should not be talk about some on-going activity. Look for 2 or 3 exchanges, that are sustained or focused--and the focus must be clear. That is, if people are talking about something that they are doing at the time (whether play, work, etc.) this does not count as conversation--it's part of the on-going verbal accompaniment to the action. However, if people are engaged in one task (playing bridge) but talking about something unconnected with that immediate activity (the fact that they like bridge better than tennis, how poorly a mutual friend plays bridge or something totally unconnected--what they're going to eat for dinner) both play and conversation can be coded. If, on the other hand, they are talking about their bidding, this is part of the activity of playing, and conversation should not be coded. If two people are talking, but you can't detect what they're talking about don't code as conversation--it could be talk about work, play, be a lesson, etc.

1. **child-child (<10) conversation only CC**
   Count "peers" (<6) and "children" (6-9-year-olds) as children for the purposes of conversation.
2. **child-adult conversation CA**
   Include youths (>9) as adults for the purposes of conversation.
3. **adult-adult conversation AA**
   Include youths (>9) as adults for the purposes of conversation. Moreover, if the child is not engaged in conversation, but both adult-adult conversation and child-child conversation are available to the child, code the adult-adult conversation.

Other

1. **Sleep S**
   If the focal child is sleeping, code the other activities going on (that would have been potentially available to the child were s/he to be awake) and the people engaged in them, but do not code the child as having a role in them.
2. **Eating E**
   Do not include here food preparation (which should be coded as "work"), but code this if the focal child (or a potentially available partner) is eating food or engaging in related meal-time activities.
3. **Bodily functions B**
   Code this if the focal child is getting or being dressed, using the toilet, being washed/bathed. Giving a child medicine, putting a band-aid on, etc. Note, however, that if another person is being bathed, etc., and the focal child is watching or

participating in this activity, code as "Work" and give the focal child and all participants roles as would normally be the case

4. **Idle, hanging out I**

   No focus of attention on any activity--gazing into space, walking round kicking dirt, etc. Also code transition times if the child is not on his/her way to do a new activity--in which case code the activity the child is going to. However, if the child is simply unfocused, taking a time-out from the previous activity and has not yet fixed on a new one, you may code as "idle/hanging out."

5. **Other or Uncodable O**

   Anything that cannot be fitted into any other activity, activities that cannot be made sense of, or cases in which the focal child has been "lost" (for example, when following him/her by car, and can't tell what's happening) or when the child is engaging you at the window. In this case, simply code 5 under "other" and write notes on why it was uncodable.

6. **Religious/spiritual R**

   Participating in any religious or spiritual ritual, for example prayers, ancestor-related rituals.

ROLES, INITIATIONS, AND PARTNERS

FOCAL CHILD'S ROLE

If the role changes over the course of the activity, and each constitutes a "legitimate" role (i.e., not momentary) choose in the order (1, 2, or 3) before 4, and these before 5 or 6.

0. **no role 0**

   Activity simply available to the child, who has no part in it.

1. **trying to manage or direct the activity M**

   Look for evidence of <u>actively</u> trying to keep an activity going or impel it in a certain direction. Note: this is more than simply initiating the activity, and it's more than just participating in it; there must be evidence of trying to keep it going or change it in some clear way. Look for evidence of the person occupying this role trying to overcome the inertia of the person being managed.

2. **trying to prevent, discontinue, or avoid an activity A**

   The opposite of 1, above--<u>actively</u> trying to stop an activity or prevent it from happening, or trying not to engage in an activity. If there is evidence of trying to direct it in some way (rather than stop it altogether), code 1.

3. **facilitating F**

   Look for evidence that the person being coded is trying to make it easier for the other participant (whether focal child or other person) to be actively involved in the activity, helping him or her to hold a knife, pushing on the swing set, etc. Look for evidence that the person occupying this role is altering the activity or altering the situation in such a way so as to make possible what otherwise would be difficult or not be possible at all for the person being helped to do alone. (For example, pulling up a chair to allow a child to observe, encouraging the child to bring up the chair to allow her to see, bringing the mortar and pestle down to the child's level, etc.) The person being helped <u>must</u> be actively involved, for person being coded to be coded as facilitating.

4. **participating P**

   There must be evidence of active involvement in the activity--more than observing it. If watching a performance, look for singing along, answering the performer's questions, etc.

5. **observing Ob**

   A less active type of participation--watching or listening to an activity which is being done by a partner who is clearly aware of child's presence or is modifying in some way the activity to allow the child to observe. This degree of modifying on the part of the partner does not count as facilitation. Look for evidence that the person engaged in the activity is open to the child's participation (at least as an observer).

6. **eavesdropping E**

   Watching or listening to an activity which is being done by a partner who is either unaware of the child's presence and is in no way modifying the activity. If the partner is clearly modifying the activity to allow the child to see or listen, code the child as "observing". Examples of watching or listening as an eavesdropper include watching TV, listening to the radio. or watching some spectator sport.

WHO INITIATED THE ACTIVITY?

The activity in question is the one that is currently being coded--if a lesson is embedded within play, code the person who initiated the lesson, not the play. If the activity continues over several "windows" continue to code the original initiator unless the child moves away from the activity for an appreciable time (sufficient for the intervening activity to be counted as a focused activity). When the child returns to the former activity you need to make a new decision about who initiated it--it could be the original initiator (who is still involved) or the child could now constitute the initiator.

0. unknown **?**
1. target child **C**
2. child with other person (include person's ID, for example **C+M** (for child + mother, or 2-1121 for child with nuclear adult female single person) **C+[part]**
3. other person (include person's ID) **[part]** (put partner's code)

WHO INITIATED CHILD'S INVOLVEMENT?

as for initiator of activity

0. unknown **?**
1. target child **C**
2. child with other person (include person's ID) **C+[part]**
3. other person (include person's ID) **[part]**

PARTNERS IN ACTIVITY WITH FOCAL CHILD

Partners are people who are actively engaged in the activity that the focal child is engaged in. A person can be involved for only a portion of the window to be counted as a partner. For example, a sibling who contributes to an interpersonal lesson after it began can be counted as a partner. Coding is slightly different when the focal child's role is "eavesdropping" in which case code the partners as those who are engaged in the activity being eavesdropped on, their roles in that activity, etc. If one or more people are also eavesdropping and are doing so in conjunction with the focal child (that is, it is clear that the group or dyad members are mutually involved in this activity), they may also be coded as the focal child's partners. **See over page for relevant letter codes**

1. **related nuclear**

   Count mother, father, siblings, and include surrogate nuclear family here.

2. **related non-nuclear**

   Grandparents, cousins, uncles/aunts, and people who are considered to occupy a "related" position in the family. If uncertain, ask an informant.

3. **non-related**

   Anybody else.

cross with
1. adult (16 and above)
2. youth (10-16)
3. child (6-9)
4. peer (1 1/2 -5)
5. infant (0- 1 1/2)
    cross with
    1. male
    2. female
    3. mixed gender
        Only to be used in cases when partners of different genders are occupying precisely the same role and are being coded together (see next section).
        cross with
        1. single
        2. 2 or more (if 2 or more people of same age occupying same role as child).

LETTER CODES FOR PARTNERS

Members of nuclear related

Father **F**; Mother **M**; Brother (provide age) **B [+age]**; Sister **S [+age]**

Members of non-nuclear related

Grandfather on Father's side **FF**; Grandfather on Mother's side **MF**;
Grandmother on Father's side **MF**; Grandmother on Mother's side **MM**;
Uncle **Un**; Aunt **Au**; Cousin, male **Csm [+age]**; Cousin, female **Csf [+age]**

Non-related people

Adult (male, female) (16 and above) **A (m)** or **A (f)**
Youth (male, female) (10-16) **Y (m)** or **Y (f)**
Child (male, female) (6-9) **Ch (m)** or **Ch (f)**
Peer (male, female) (1.5-5) **P (m)** or **P (f)**
Infant (male, female) (0-1.5) **I (m)** or **I (f)**

If a group of same age partners, signify with a **G** in front. If a group of males, signify with **(m)**, if a group of females, with a **(f)**, and if a group of mixed gender, with a **(mf)**. So, a group of adult males would be **GA(m)**; a group of female children **GCh(f)**; and a mixed group of peers **GP(mf)**.

PARTNER'S ROLE

As for child's role, except no 0.

PARTNER'S OTHER ACTIVITY

0. no other focused activity **No**
1. yes **Yes**
    Partner is simultaneously dividing attention between target child and someone or something else. The partner may be shifting focus back and forth between two or more activities, or simultaneously engaged in two or more activities.

PARTNERS POTENTIALLY AVAILABLE

Within easy eye or ear-shot and within child's social space. Social space is determined by a sense that the child could, if he or she wanted to, engage that person; it could be a teacher on the other side of a room, it could be a child working within ear-shot. The person must be within easy eye- or ear-shot. To code this requires attending to what the focal child is focused on. For example, if the focal child is

looking around a classroom or playground, and people are spread throughout, the social space is necessarily much larger than if the child is intently focused on one particular thing. Note that if the people around are strangers to the child, look for evidence of any prior indication that the child considered them to be available as partners (had previously engaged them in some way) before coding them as available.

Need to also focus on what the other people in the environment are doing, to ascertain whether they are behaving in some way that appears to make them available to the child. For example, a teacher may be aware of what is going on in the classroom or on the playground and would be ready to engage the child or intervene in some activity even if she is not particularly close to the child and the child does not appear aware of her presence. Similarly, other children in the classroom may be walking by the focal child, looking at what he is doing, and thereby could be coded as being in the child's social space, even if the child does not engage them.

Note that this code is designed to pick up people who could be partners of this child during this window but who are not in fact taking on that role during the window. Do NOT code the observer as potentially available, despite all indications to the contrary.

1. adult
   1. one 2. two 3. three 4. four 5. five or more
2. youth (as above)
3. child (as above)
4. peer (as above)
5. infant (as above)

LOCATION

1. **own environs Own**
   In own home, car, or yard, or in any other place that is the private domain of the child's family.
2. **other's environs Oth**
   The private domain of another individual, family, or organization (except school--see below). "Private" means not accessible to the public for use or visit without some form of permission. Family day care should be coded here, but if the child is in family day care write this in the field notes.
3. **school S**
   Any institutional place that has been explicitly set up for school-related purposes, whether public or private.
4. **public space P**
   Any area accessible to the public without some form of permission, or to which entry is possible by payment.
   cross with
   0. **not modified for child's care or entertainment no**
   1. **modified for child's care or entertainment mod**
      Location modified for the child, either in its entirety (building or room designed for the child, with children's pictures, things at child's level, etc.) or the part of the area which the child is using--sitting in a high chair, on a swing set, etc.

MOTHER'S LOCATION

0. **not within hailing range no**
1. **within hailing range yes**
   Could be called for. Note that this distance is further than "available".

FATHER'S LOCATION

0. **not within hailing range no**
1. **within hailing range yes**

Could be called for. Note that this distance is further than "available".

WEATHER AND APPROXIMATE TEMPERATURE (in Fahrenheit)

1. sunny
2. cloudy
3. rainy
4. snow/ice
5. dark

DAY

1. Monday
2. Tuesday
3. Wednesday
4. Thursday
5. Friday
6. Saturday
7. Sunday

ACTIVITIES

Lessons

1. academic **A**
2. interpersonal **I**
3. skill/nature **S/N**
4. religious spiritual **R**

Work

1. transparent or no technology
    1. child-modified **Tc**
    2. adult **Ta**
    3. not applicable **N/A**
2. opaque technology
    1. child-modified **Oc**
    2. adult **Oa**

Play, exploration and entertainment

1. pretend/role play
    1. generic pretend and imaginary **Pg**
    2. emulation of adult roles **Pem**
2. non-pretend play and exploration
    1. with academic object **AC**
    2. with child-oriented (non-academic) object **CO**
    3. with adult-oriented object **AD**
    4. with natural object **NAT**
    5. with no object **NO**
3. spectator of performance
    1. academic **Sac**
4. TV acad **TVac**
    2. child-oriented **Sch**
5. TV child **TVch**
    3. adult-oriented **Sad**
6. TV adult **TVad**

Conversation

1. child-child (<10) **CC**
2. child-adult (>9) **CA**
3. adult-adult (>9) **AA**

Other

1. Sleep **S**
2. Eating **E**
3. Bodily functions **B**
4. Idle/hanging out **I**
5. Other **O**
6. Religious/spiritual **R**

FOCAL CHILD'S ROLE

0. no role **0**
1. trying to manage or direct the activity **M**
2. trying to prevent, discontinue, or avoid an activity **A**
3. facilitating **F**
4. participating **P**
5. observing **Ob**
6. eavesdropping **E**

WHO INITIATED THE ACTIVITY?

0. unknown **?**
1. target child **C**
2. child with other person (include partner's ID) **C+part**
3. other person (include partner's ID) **part** [put partner]

WHO INITIATED CHILD'S INVOLVEMENT?

0. unknown **?**
1. target child **C**
2. child with other person (include partner's ID) **C+part**
3. other person (include partner's ID) **part**

PARTNERS IN ACTIVITY WITH TARGET CHILD

1. related nuclear **Can use: F M FF FM MF MM**(parents/grandps)
2. related non-nuclear **B (age) S (age)** (siblings)
3. non-related **Un Au Cs (m age) Cs (f age)** (other rels)

cross with

1. adult (16 and above) **A (m) A (f)**
2. youth (10-16) **Y (m) Y (f)**
3. child (6-9) **Ch (m) Ch (f)**
4. peer (1 1/2 -5) **P (m) P (f)**
5. infant (0- 1 1/2) **I (m) I (f)**

cross with

1. male **GA (m) GA (f) GA (mf)** (group of adults)
2. female **GY (m) GY (f) GY (mf)** (group of youths)
3. mixed gender **GC (m) GC (f) GC (mf)** (group of children)

cross with
1. single
2. 2 or more

GP (m) GP (f) GP (mf) (group of peers)
GI (m) GI (f) GI (mf) (group of infants)

PARTNER'S ROLE
[as for child's role, except no 0]

PARTNER'S OTHER ACTIVITY
0. no other focused activity **No**
1. yes **Yes**

PARTNERS POTENTIALLY AVAILABLE
1. adult [code 1, 2, 3, 4, or 5+]
2. youth [code 1, 2, 3, 4, or 5+]
3. child [code 1, 2, 3, 4, or 5+]
4. peer [code 1, 2, 3, 4, or 5+]
5. infant [code 1, 2, 3, 4, or 5+]

LOCATION
1. own environs **Own**
2. other's environs **Oth**
3. school **S**
4. public space **P**
   cross with
   0. not modified for child's care or entertainment **no**
   1. modified for child's care or entertainment **mod**

MOTHER'S LOCATION
0. not within hailing range **no**
1. within hailing range **yes**

FATHER'S LOCATION
0. not within hailing range **no**
1. within hailing range **yes**

WEATHER (Include approximate temperature, in F)
1. sunny **S**
2. cloudy **C**
3. rainy **R**
4. snow/ice **SN**
5. dark **D**

DAY
1. Monday **M**
2. Tuesday **Tu**
3. Wednesday **W**
4. Thursday **Th**
5. Friday **F**
6. Saturday **Sa**
7. Sunday **Su**

Coding Sheet

Case # _____ Day _____ Sheet ___

Case # _____

COMMUNITY _____ CHILD'S ID _____ OBSERVER _____ DAY ___ DATE _____ WEATHER _____ TEMP ____

	lesson	work	play	conv.	other	lesson	work	play	conv.	other
TIME										
Avail activities										
Child's role										
Initiator of activ										
Init of child inv.										
Partner #1										
P #1 role										
other activity										
Partner #2										
P #2 role										
other activity										
Partner #3										
P #3 role										
other activity										
Partner #4										
P #4 role										
other activity										
Partner #5										
P #5 role										
other activity										
Avail adult (>16)										
Avail youth (10-16)										
Avail child (6-9)										
Avail peer (1.5-5)										
Avail infant (<1.5)										
Location										
Mother's location										
Father's location										

NOTES HERE

NOTES HERE

APPENDIX C

TRANSFORMATION OF LESSONS

The following abbreviations are used for individuals.

Relationships are stated in reference to the focal child.

P = participant (the focal child)

M = mother

F = father

Z = sister

B = brother

FM = father's mother (paternal grandmother)

FF = father's father (paternal grandfather)

MMM = mother's mother's mother (maternal great grandmother)

MFBW = mother's father's brother's wife (great aunt)

MZS = mother's sister's son (male cousin)

Lesson Number Child ID Day/ Sheet	Academic Lessons		
	Setting, Previous Window Activities, Between Windows Notes	**The Lesson and Action Within The Window**	**Post-Window Activities**
1. 26 5/19	P is on daycare center playground. Boy asks P to push him in swing. He does. Teacher praises P.	Teacher initiates a counting game with children, counting with the other children as she pushes P in swing.	P leaves the swing and begins to play on the slide by himself
2. 26 4/9	P is in his bedroom at home, sitting at a chalk-board table. He asks M to draw a clown. M draws a clown with chalk on board. M asks what the clown needs. P: "A nose". M: "What else does he need?" P: "A face."	M writes P's name on the chalkboard. He says the letters aloud.	Father announces that he is leaving to go to the gym. P and M watching Bart Simpson cartoon.
3. 25 2/7	P at home in kitchen chair drinking juice, glances briefly at TV. M making list of people to whom to send Z's school pictures. Z is in room. F can be seen through door to living room, essentially in the same space.	Z starts shuffling Uno cards and humming. P watches her closely. Z tells him to count. He counts to 28.	M tells him to say his ABC's. He does. Z asks F to play Uno with them. P & Z pull up small chairs. WINDOW AFTER: Playing Uno with Z and F. Sitting in his own small rocking chair.
4. 23 3/16	P, M, and Z are in the living room. P is sitting in a small chair at the coffee table, tracing a cookie cutter with pencil on a piece of paper. M reading. Z is lying on couch.	P begins to write her name, asks M how to write observer's name. M tells her.	Z becomes angry with B. M scolds Z for saying, "I'm not your best friend, B." M tells P & Z to go clean up their room.

Lesson Number Child ID Day/ Sheet	Interpersonal Lessons		
	Setting, Previous Window Activities, Between Windows Notes	**The Lesson and Action Within The Window**	**Post-Window Activities**
5. 20 3/8	P is on a shopping trip with mother. They are meeting MFBW, whom she calls "meema" at the mall. P and M are in a store in a shopping mall, watching people come into the store, waiting for MFBW to arrive. P says MFBW is coming because she saw MFBW's silver car. MFBW comes in. P hugs her. M introduces observer to MFBW.	MFBW tells P "You didn't ask me how papa was." P does not respond. MFBW repeats. P responds.	They go browsing through the store. MFBW asks P about sore on her hand. M shopping.
6. 20 3/12	In shopping mall, eating lunch with mother and MFBW. M and MFBW talking. All eating.	M tells her not to reach for the food on the floor, because it is dirty. M:"That's not the way we eat. Put it down, P. Do it right."	
7. 28 3/14	P is out on screened back porch. Her mother is in the house making a phone call. P is in her toy car. P driving her car and singing. "I'm driving to the store with my new friend, Millie." P blows doll's nose.	P throws toys. M tells her "It's not nice to show your temper." P throws more toys, then starts to play with them.	P puts pretend cookies in oven and decides to call grandma on play phone. P pretends to talk to grandma on phone. M playing with Play Doh and pretending to listen to phone call.

8. 28 3/18	P points to something on M's shoes. M: "That's Play Doh." P: "I'll get it off." M: "Thank you." P drinking juice. M and P pretending P has come for a visit.	M: "You have to watch where you're walking, so you don't walk on people's feet." P & M talking about drinks different people like. P drinking juice.	P goes out to jump rope; M holding end of rope.
9. 26 5/15	P at daycare center sitting at table coloring. Teacher talking with children about their pictures. P gets up and goes into other room. P upset because a boy is being put in time out.	P asked teacher what the boy did. She says "He pinched Keith's foot and pushed him. Then he tried to hit Nate. We don't hit do we?" P shakes his	Teacher tells children to line up to go outside.
10. 26 5/16	see lesson 9	Teacher tries to get them to be quiet, not push, stand still, etc.	All go outside to the playground. P begins to climb on the bars, then runs to the back corner of the playground.
11. 26 3/14	P in back yard at home in afternoon with M and friend, J. P and M playing badminton. J pushing a toy lawn mower around. F wakes up from nap and comes outside.	M tells P to say "Hey, Joey," and wave at neighbor boy. P does as told.	P begins pushing gravel with badminton. F leaves. P and J begin beating rhododendron with the badminton rackets as M watches them.
12. 26 3/6	P in living room at home with M and friend, J. P asks M to make "a crayon" out of Play Doh. M tells him to go into the kitchen to play with Play Doh. P goes into kitchen to play with Play Doh. J stays in living room watching video of One-Hundred-and-One Dalmatians. M begins to make sandwiches for them.	P & J eating slices of chicken in living room and watching video. P asks M for another piece. She tells him to chew it all up, not to stuff it all in his mouth at once.	P and J are sitting in small chairs. P and J eating slices of chicken, watching video. M cooking in kitchen.

13. 26 1/8	P at home. Friends of adolescent older sister are visiting. P is in Z's bedroom, asks for a cookie. Boys looking at Z's yearbook; girls on floor; P on bed eating cookies. F making supper. M is in P's bedroom, putting things away.	P gets on his toy motorcycle and runs into observer. M: "Uhn-uhn, don't run over people."	M puts P's food on a small chair in living room. F tells P to eat, not to run over observer with his motorcycle. F watching TV. P begins to eat as he spins the wheels of his motorcycle.
14. 26 1/4	P at home in evening with F. He and F are in living room. P puts on 101 Dalmatians video tape.	P blows "raspberries" at F (also called a Bronx cheer: a spluttering noise made with the tongue protruding from the lips). F tells him to stop or he will have to go to bed.	P and F watch video tape. P is bored and puts in another tape. F: "You're going to let this one play all the way to the finish, and then we'll cut it off."
15. 26 3/2	P is at home in backyard with M and friend, J. P has a bucket over his head, walking around growling like a monster. P talks into the bucket, listening to the sound. He throws down the bucket. J picks it up.	M is putting on her shoes. P wants the bucket back. M tells P that he has to share the bucket.	They all go inside. M gives them Play Doh. P and J begin to play with Play Doh on the kitchen table.
16. 25 2/4	P, older Z, and M at home in morning. M is sitting at kitchen table, filling out a television-watching survey. Z is standing at kitchen table, coloring. P is eating Captain Crunch cereal out of the bag and drinking juice. P goes into M and F's bedroom and closes the door. (He is shutting the observer out.) Observer opens door. Z follows P into the room; they begin to play with the covers on parents' bed.	Z picks up P and carries him screaming out the room and drops him in front of observer. M comes out of the kitchen and says, "You and Sis quit fighting."	P goes into his room and gets a bag of blocks. Z takes the bag away from him. P goes to M crying. Z: "Put this truck back if you're going to play with them."

17. 24 5/5	P is at home in kitchen with M, FM, FZS. They have been "bowling" in the kitchen with plastic softdrink bottles and a basket ball. P kicks FM. FM grabs her foot and won't let go. P calls to her mother. M: "Are you going to kick Mimi any more?" FM says she will take P home and "straighten her up. She'll come home with a red behind." P screams. FM calls her "mouth of the South." M tells FM how cute P looked at church. P and FZS go into living room.	FZS asks P to read the book to him. P threatens to hit him with the book. M: "Don't you hit him with that book. Show him the dirty puppy." FZS: "How did they get dirty?"	FF in living room watching TV. P asks M for model of gun hanging on the wall. M gets it down for her. P "shooting" at FZS, FM, M, and FF. FF "shoots" her back with his finger.
18. 24 4/19	P at home with M and F. M making lunch in kitchen. F and P in living room, watching TV. P goes back and forth between kitchen and living room. P and F talk about TV program. P asks F for some of his sandwich. F refuses; "Go tell Mommy to make another one." She goes into kitchen and asks. M gives her ice cream. F comes into kitchen to get ice cream, too.	M getting ice cream out of freezer. P wants to help. M asks if she wants chocolate syrup or Cool Whip. P: "No." P takes bowl. M: "What do you say?" P: "Thank you."	P takes ice cream into living room to eat. F brings his ice cream to living room. P decides she wants chocolate syrup (F has syrup). F: "Go ask Momma." P goes into kitchen and gets syrup.
19. 24 3/7	P at home with F and M. P in her bedroom with M. F is sleeping. P slams her toy dishes. M: "P, that's ugly." P: "Cry!" M: "I'm not going to cry." P: "Cry." M: "No." P insists that M play with her. P: "You play; you play! You play." M: "I don't like the way you're acting." P: "You play." M: "I won't play if you're going to be ugly." M suggests P go to wake F.	P goes into M and F's bedroom and tells F to "get outta here, you lazy butt." F: "P, don't talk like that." M: "P!"	P climbs up on her bed, switches a musical light switch, and jumps on the bed. She gets into her toy Volkswagon and pulls off the steering wheel.

20. 23 2/9	P in car with M, FM, B, Z, and neighbor boy. M is driving to restaurant for dinner. P listening to M and FM's conversation. Then she begins to talk with B.	B tells P to say "If you're happy you'll fart." P says it. M scolds B.	M and FM continue talking about the new road.
	Skill-Nature Lessons		
Child ID Day/ Sheet	**Setting, Previous Window Activities, Between Windows Notes**	**The Lesson and Action Within The Window**	**Post-Window Activities**
21. 28 2/1	P at home playing on screened back porch. M home. F at work.	P in toy car. M: "Don't run over your toys; you might break them."	M begins to play with Play Doh. P playing with pull-toy dog. P goes over to play with Play Doh with M.
22. 26 1/3	P at home with F, Z, and FM. F is in the kitchen eating supper. P has been in the living room and goes into kitchen. Z makes a corn dog for P to eat. Z shows F her photograph in the yearbook. She has a snake around her neck in the photo.	P asks to see the picture. Z takes yearbook and looks for picture. P tells F that "a snake roars." F: "Snakes don't roar."	F and P eating. Z leaves to go to her friend's house. P: "There was a bug on my shirt." F: "There was?" P: "Yes." F: "What happened to him?" P: "He went down."
23. 20 3/3	P putting on little, plastic, play shoes; goes over to watch M put dishes in dishwasher. M tells her to put her tennis shoes on. M gets her tennis shoes and calls her over. P pulls out a chair and sits down. M helps her put her shoes on, tells obvserver than she and F try to teach P about the "real world," to protect P by telling her how it "really is out there, because it's rough."	P has shoe in her hand. M asks her to tell her address, phone number, M and F's names, which is left and right foot. They continue putting on the shoes.	M goes out front door to check for mail in the mail box, tells P to put her toys away. P begins stacking toys. M tells her to come brush her teeth.

24. 20 2/7	P at home in back yard with older friend. M and F inside the house. There is a swing set with slide and a sand box. Also F's workshop, pickup truck with large trailer, and a stack of wood, storage shed, and a dog pen are in back yard. Friend tries to get P to swing. P is playing in sand box. Friend: "The bus is leaving; you won't get to go; ...bye...see you later." P: "See you later." P takes sand toys to swing. They pretend to drink from them on the "bus."	P goes back to sandbox. Friend tells her how to swing high. P is watching her. Friend says to stretch your legs out high on the forward swing and then back on the back swing to swing higher.	F comes out to get wood for the stove. Friend begins to dig in the sand. P gives F a "cake" (sand in plastic container). F goes back inside.
25. 28 6/9	P at home with M and F. F is scraping the outside of the house, preparing it for painting. M and P are washing the car. M has a hose with a sprayer on it and a large sponge. P has a cloth. P scrubs the car with her cloth.	M rinsing the car with the sprayer. P begins washing the street. M: "Don't put it on the sidewalk, honey. It will get gravel in it and scratch the car."	M washes off her shoe. P pulls up her wet dress, because it is sticking to her and chases the cat.
26. 28 3/20	P and M at home in back yard. There is a sand box. M carries a small, plastic slide out to a concrete slab for P to play on. P sliding. M watching and cheering.	P starts to go down the slide head first. M: "Be careful sliding on your head; there's cement down there, and you might get scratched up."	MMM arrives. P continues to slide as M and MMM watch. M asks MMM how to say a rhyme MMM used to say when M was a child.

27. 28 1/8	P at home with M and F. F is in the living room, watching TV. P and M are in the kitchen. P is eating fruit snacks. P asks for candy when the fruit snacks are gone. M gets fruit cocktail, puts it on a tray, and takes it to the living room so P can sit in front of TV to eat. P asks for more to eat, and M gets bologna.	P asks why there is a red ring on the bologna. M explains that bologna comes in a big, long roll, and they have to cut it into pieces.	P goes into her room to put on her pajamas. M and F watching TV news.
28. 26 4/1	P has been with FM to the airport to watch planes. They have just arrived back home. M is home. F is asleep. P has a small, balsa airplane model kit FM bought for him. M begins to put it together.	P watching M put together airplane model. She is putting on wheels. He asks why. M: "The plane's got to have wheels to land on. Do you remember seeing the planes land at the airport?"	P begins to play with the plane. M begins to put together a helicopter. P watches. Z comes in. P begins to take the plane apart.
29. 26 3/18	P is home with a friend, J, and M. They are in the kitchen. P and M are playing with Play Doh. P and J go into the living room where a toy parking garage is set up. P asks J to put the ramp on the parking garage.	J puts the ramp on upside down. M comes in and corrects it. She tells P not to step on the toy or he will break it.	M suggests they play with crayolas and coloring books.

30. 25 5/1	P is at home with M. Z is at school. F is sleeping. M is sweeping the front walk to the house. P is outside on the porch. He wants in but can't open the door. M comes to let him in the house. P asks for a drink; she gets it. They go back outside.	M points out a bird, sitting under a bush. P stands looking at the bird. He is within 4 feet of it. He asks why it doesn't fly. M: "There must be something wrong with it." She continues sweeping the walk.	M goes to back yard with a weed eater. P crawls to within about a foot of the bird, making cooing sounds. S: "The other bird flewed away." He watches the bird, then goes to back and asks M if he can pick it up. M: "Just leave it. It might bite you."

APPENDIX D

TRANSCRIPTS OF LESSONS

All names given below are fictitious.

Participant 02 (P) is a 28-month-old male. He is in the den with mother (M), 3-month-old infant sister (Mary), two dachsunds (named Jodi and Katrina), and a cat.

Skill-Nature Lesson: How to hold his infant sister. 5:08 (0:10:23)
M: "You wanna hold her?"
P: "Yeah."
M: "Jodi (to dog), get down, sweetie."
M: "Okay. Remember. Have to hold her head up, okay?"
P: "Yeah."
M: "Good boy. She's gettin big, isn't she? Mommie weighed her today, honey. She weighs a lot. She weighs 14 and a half pounds. She's a little tank. I'm not sure if you were the same size or not. Easy."
P: "Ooooh."
M: "Easy, honey. If you squeeze her too much, she'll spit up."
P: "Hi, baby."
M: "It's okay, Mary. It's okay. It's okay. Mmm, you're not sure what he's going to do. Is she heavy?"
P: "Yeah."
M: "Do you want me to move her?"
P: "Yeah."
M: (laughs) "Poor Mary. Ah-hah-hah."

Skill-Nature Lesson: Not to try to take a bone from the family dog. 5:13 (0:11:15)
P: "Want that."
M: "What is what?"
P: "I want that."
M: "Picture?"
P: "Want that."
M: "What, tha... what they have? Oh, they have bones. But don't try and take them, sweetie. Don't ever try and take the dogs' bones. They.."
P: "These. These.."
M: "I know. That's Katrina's. She might bite. Okay? Let's go wash your hands."

Participant 03 (P) is a 45-month-old female. She is at her aunt's birthday party in her aunt's house. There are lots of relatives around.
P, her 15-year-old sister (Z), and two cousins (male and female) are sitting on the stairs, drawing with markers on paper big sister is holding on her lap. 5:09 (07:08:00)

Academic Lesson: Writing P's name and names of letters.
Boy: "Hey, I can't see. I can't see, Annie. ... Annie, move; you're messing me up. Move; I can't see."
P: (holding up crayola to sister) "Is this right?"
Z: (nodding) "Yes, that's your left hand. [unintelligible] Whoa; you're left-handed aren't you?"
P: "I'm going to do it with the right hand."
Z: "Why?"
P: "'Cause I want to."
Z: "But you don't draw with your right hand. Your hand looks funny like that. ... You'll draw better with your left hand. Try. Write your name."
Boy: "Look at my car."
Z: "Wow. That's very good, Andrew."
Boy: "You didn't write your name."
Z: "Okay, I'll write .. Can you write your name?"
P: "I..I can write my name. I can do it. I want to give you a L."
Z: "Your name doesn't have an L. I'll show you. This is an A. This is an N. Then another N, an I, and this is an E. And you both have an A. A for Annie and A for Andrew."

Skill-Nature Lesson: Z shows P and female cousin how to draw a balloon. 5:19 (0:09:41)
Z: "You can make [ ] and lots of hearts. You know what you should make? You can draw some balloons."
P: "You. I can't do it."
Z: "They're easy. You make a circle. You color it in, then you draw a string. You can do that."
P: "Okay. I'll do it."
Z: "There you go."

Participant 06 (P) is a 42-month-old female. She is home with her father (F) and 5-year-old brother (B).
Father makes lunch. 11:56 (0:24:10)
Children eat in kitchen while father eats his lunch standing in kitchen and serves them. 12:04 (0:32:07)
Father sits in living room watching television. 12:11 (0:39:35)

While eating lunch, P spills her drink, and both P and B appear scared that they will get into trouble. They whisper to each other and begin to look around. 12:16 (0:44:26)
B: "Martie spilled her drink." (loudly to F, in the next room)
F: "Clean it up." 12:17 (0:45:12)
They try to clean it up. 12:17 to 12:27 (0:44:26 to 0:55:04)

Skill-Nature Lesson: How to clean up spill rather than make it worse.
Work is going on as P and B are wiping up the spill. P wipes up some liquid, then squeezes what she has wiped up back out onto the floor. 12:20 (0:48:13)
B: "Don't do that."
P: "Am I making a mess?"
B: "Yes."
Work becomes play. 12:24 (0:52:26)

Participant 09 (P) is a 30-month-old female. She is in the living room with her 6 ½-year-old brother (B) and her father (F), who is working on an upholstered headboard.

Skill-Nature Lesson: Thumb tacks are sharp. 10:22 (0:11:59)
P: "What's this, Daddy?"
F: "Yeah, that's a thumbtack and that's very sharp. That'll hurt you."
P: "Yeah."
F: "Okay. See, it's got a sharp tip? (holds tack up) See that little point?"
P: "Yeah."
F: "That could hurt you."
B: "It's not sharp to me, but it'll be sharp to you. Right, Dad?"
F: "Yeah. I think it would be sharp to you, too."
B: "No, it doesn't even hurt." (presses point of tack against finger)
F: "No? Well. Let's not play with it, because that will give Ruthie the idea that it's okay to play with it, and I don't want .. uh, I don't want you kids playing with it."

Participant 07 (P) is a 41-month-old female. She and her mother (M) are making banana muffins. 4:59 (0:02:48) through 5:18 (0:21:27)

Skill-Nature Lesson: You need to wash your hands when you cook 4:59 to 5:01 (0:03:04).
M: "Okay, wait a minute. You know what? What have you been playing in? Sand? Here let's wash your hands. You don't want sand in your muffins."
P "No."
P stirs batter and puts it into the muffin tins. M watching tv and guiding P's activity with muffin batter.

Skill-Nature Lesson: To use a hard surface when writing. 6:26 (1:29:06)
M: "Write on the book; put the paper on the book, ... so you won't get it on the couch. It'll be easier to write, Andrea, if you put it on the book."

Participant 20 (P) is a 42-month-old female. She is in the kitchen with her father (F), sitting at the dining table eating supper. Example is a lesson which she tries to initiate but does not occur.

Attempt to initiate a Skill-Nature Lesson
P repeatedly attempts to initiate a skill-nature lesson in taking lids off tupperware containers which are sitting on the table; F resists teaching the lesson. 6:25:03 p.m.
P: (looking at tupperware on the table) "Hey, get those lid offs. Show me how to get those lid offs." 6:25:03
F: "No, you eat and we'll look at it a little later." (F picks up a container.)
P: "Hey, get it ups and I'll get it off." 6:25:25
F: (lifts edge of lid and places tupperware container on table in front of P) "Want me to wrap that taco up and eat it later?" 6:25:32
P: "Yeah." (picks up a tupperware container)
F: "Okay. I'll put your Pepsi in the refrigerator."
P: "Ooop." 6:25:50
P. "Hey, guys, I got it off." 6:25:56
F: "Sure did."
P: "Hey, look what I did, Sarah [observer], I got it off."
F: "Let me put it back on there. Why don't you go in the den and work one of your puzzles?" 6:26:03
P: "No. Why don't you show me how to get this out and this out and this out?" (gestures to a series of tupperware containers)
F: "Well, no. Let's don't play with that stuff right now. Okay? Let's go in the den. Come on." 6:26:13

Participant 21 (P) is a 39-month-old male. He is with his 12-year-old brother, 6-year-old sister (Z), mother (M), and father. During filming they eat dinner at the Pizza Hut, ride home in car, then pursue various activities at home (including coloring in printed coloring books and watching tv) until bedtime. At bedtime, M tries to get him to say his prayers.

Skill-Nature Lesson: How to flush the toilet. M, Z, and P are in the women's bathroom in the restaurant. P observes M tell Z how to flush the toilet.
Z: (flushes toilet) "It won't go down."

M: "Flush it harder. You gotta hold it down." 7:48:09 (0:14:59)

Academic Lesson: Identifying color. 8:27:00 (0:14:05)
M is watching the Olympics on tv during the interchange. M and P are coloring in coloring books.
M: "Green. No, I need the green crayon. I want to finish my picture. ... Which one's green? No, that's yellow."
P: "I use yellow."
M: "Well, I'll use the yellow but find me the green crayon. You've got it right there." (P holds up a crayon.)
M: "That's black."
P: "Uh, huh."
M: "Where's the green?" (M picks up the yellow crayon.)
P: "Hey, I had that one first."
M: "Yeah, I know, but where's the black cray.. uh, the green crayon?"
P: "I had it."
M: "You found it. Yeah, you've got it right there. ..." (P starts to scratch himself.)
M: "Do you itch?"
P: "Yeah."
M: "Well."

Academic Lesson: Counting the crayons, initiated by P. 8:50:10 to 8:50:52 (0:14:50)
P: "I'm dumping them out."
M: "Why are you dumping them out?"
P: "'Cause. I'm not through."
M: "You're not through?"
P: "No. Wha wha .." (hands a crayon to M and laughs)
M: "Thank you."
P: "That's yours."
M: "Yeah. What are you doing now? I've got several don't I?"
P: "Two."
M: "Yeah, that's right. I have two ... and one in my hand. That would be three."

Religious Lesson: Saying nighttime prayer. 9:26:39 (0:15:39) to 9:28:34 (P resists going to bed. Throughout the following interaction, he is alternately lying down and jumping up again.)
M: "No. Now, please say your nighttime prayer. And you know it."
P: "Okay."
M: "Okay. Start it out."
P: "Good night .."[singing]
M: "What it that?"
P: "A song."

M: "Oh, I didn't know you had a song. You sing it at Lucy's (P's childcare)?"
P: "Yeah."
M: "Yeah. What do you sing at Lucy's?"
P: [singing]
M: "Now I know you say a prayer....Now I lay me.."
P: "down to sleep. No, no.."
M: "You finish it."
P: "No."
M: "Okay." (inhales)
P: "Not you."
M: "Okay, I'm listening."
P: "God is great.."(laughs)
M: "Okay." (getting up) "I got to go."
P: "No, no."
M: "Are you going to say it?"
P: "Yes."
M: "All right... Come on."
P: "Ahhhhh. Wha"
M: "Shall I count to three?"
P: "Tt"
M: "One.."
P: "two.. (inhale) You say it."
M: "You say it."
P: "Na"
M: "I'll say part, and you say part."
P: "Gaaaa"
M: "Now I lay me.."
P: "dow.. no."
M: "Okay." [starts to get up]
P: "Down to sleep. I pray the Lord go to sleep. I pray the Lord I wake up and eat breakfast"
M: "Then what else?"
P: "eat donuts"
M: "Eat donuts?"
P: "Yeah."
M: "And then what do we do? Who do we go to..?"
P: "Go to Lucy's."
M: "And go to Lucy's. And then what do we do? And then we come home. Now, who do you say God bless?"
P: "All my family; all my brothers...."
M: "Lay.."
P: "all my families"

M: "Thank you. Now, lay down."
P: "All my cousins and all my..."
M: "And all your cousins and everybody, right? Under the covers."
P: "I want ....."
M: "No. Good night. Give me a kiss."
P: "No, no, no."
M: "Nah-ah."
P: "No, no."
M: "Good night."

Participant 25 (P) is a 34-month-old male. He is with 6-year-old sister (Z), father (F), and mother (M).
No skill-nature lesson in safety occurs when mother could have easily given one. P, Z, and M are outside their house on the driveway. 7:09:52 (0:17:33)

Attmpt to initiate a Skill-Nature Lesson
P: "We're running around. Mama. Mommie."
M: "What?"
P: "We're running around."
M: "Huh?"
P: "We're running around."
M: "You're running around?"
(P and Z run)
Z: "Let's get around the car, Zack. I'll try to get you. Let me see if I can get you."
P: (screams)
M: "You're going to get both skint knees."
Z: "Try to get me."
M: "You're going to trip and fall"
P: "Here? When I trip right here like this?"
M: "Yeah, when you trip and fall down right there."
Z: Zack.
M: "And you'll be crying."

Academic Lesson: Counting. P is playing cards with M and F. 7:39:55 (0:18:25)
P: "You got to draw two cards."
F: "You got seven this time."
P: "Nah-uh. I going to turn over another one."
M: "Let's see how many you got. No. Lay 'em down one at a time. Say, one.. Lay 'em down. You've got to count the same ones over again."
P: "I got one, two, three, four.."

M: "Count .... Lay 'em down one at a time. (P begins to lay the cards down, one at a time, on the hassock.)
M: "One..." (One slides off onto the floor.)
M: "No, I didn't say slide it off. One, two, three, four, five.."
P: (picks up the card from the floor) "I did count 'em."
M: [unintelligible]
F: [unintelligible]
P: "I did count 'em."
M: "Lay 'em down."