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CHAPTER THIRTEEN

Developmental Transitions in Children's Participation in Sociocultural Activities

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In this chapter, I argue that questions about transitions (such as the 5 to 7 shift) can fruitfully be examined from a sociocultural perspective that asks how children's involvements in the activities of their community change, rather than focusing on change as a property of isolated individuals. It is commonplace in developmental research to attribute change to the properties of individual children without regard to their environments or to include environmental "influences" on children's behavior, with children and environments conceived as separate entities. In contrast, in the sociocultural perspective that I discuss, the changes of individuals are assumed to be inseparable from their involvements in sociocultural activity. So the changes are neither exclusively in the individuals nor exclusively in their environments, but a characteristic of individuals' involvements in ongoing activity.

I argue that the central question is not a matter of determining the onset and course of developmental changes in individuals examined separately from their environments, but of characterizing the nature of the shifts in people's roles and responsibilities in the activities in which they participate. Understanding shifts requires studying how individuals' roles and responsibilities relate to the also-shifting roles and responsibilities of their companions and to changes in community constraints, opportunities, supports, and institutional arrangements. Thus, research cannot focus on the imaginary "generic" 5-year-old, but must focus on particular 5-year-olds involved with their companions in activities of their communities. Transitions cannot be characterized independently of individuals' (or an age group's) activities in their communities.

From a sociocultural perspective, it is thus essential to examine the ongoing processes of children's involvement in particular activities, not simply to assume that their involvement in any particular activity can necessarily be generalized to all. I assume that children's involvements in some activities relate to

their involvement in others, but not in an automatic or all-encompassing way. A key empirical question is, How does involvement in some activities relate to involvement in others?

In this chapter, I describe the transitions in my work that have led to this view. I begin by discussing initial work that investigated whether the 5 to 7 shift that White (1965) had abstracted from the research literature involving mostly children in the United States was characteristic of the roles and responsibilities of children around the world. After describing the dilemmas revealed by that work, I turn to a discussion of how the assumptions of a sociocultural approach reorient our questions regarding transitions in development. The question of transitions is an important one for sociocultural research, for it focuses our attention on the changing contributions of people to the activities in which they participate. Developmental research seems to have difficulty in getting beyond exclusive attention to individuals, to attend to social and cultural processes, without *overlooking* individuals in studying social and cultural phenomena. Finally, I describe findings of a study that takes a sociocultural perspective to examine cultural variation in the ages of children's assumption of responsible roles, focusing on young children's coordination with and responsibility to others.

Efforts to Study the Universality of the 5 to 7 Shift

Two decades ago, we extended the evidence of an important transition at age 5 to 7 years in children's learning that White had collected from psychological research and from a few historical accounts by systematically examining ethnographic reports from around the world (Rogoff, Sellers, Pirrotta, Fox, & White, 1975). The study involved examining ethnographies from the Human Relations Area Files (HRAF) of 50 communities around the world to see if at the ages of 5 to 7 years there was a shift in the onset of responsibilities and roles and expectations of the children. (Analysis of the ethnographies collected together in the HRAF is facilitated by the HRAF's indexing system, which locates sections dealing specifically with child development and socialization practices.) We made ratings of age of transitions in 27 categories involving cultural assumptions regarding responsibility or teachability in children or assignment of a more mature social, sexual, or cultural role. Inspection of the 27 histograms obtained from the ratings suggested that for 16 of the 27 categories there appeared to be a modal cultural assignment of social responsibility in the 5 to 7 year age range. We (Rogoff et al., 1975) concluded, cautiously, that it looked like there was something happening about that age range:

> It appears that in the age period centering on 5–7 years, parents relegate (and children assume) responsibility for care of younger children, for tending animals, for carrying out household chores and gathering materials for the upkeep of the family. The children also become responsible for their own social behavior and the method of punishment for transgression changes. Along with new responsibility, there is the expectation that children between 5 and 7 years begin to be teachable. Adults give practical training expecting children to be able to imitate their example; children are taught social manners and inculcated in cultural traditions. Underlying these changes in teachability is the fact that at 5–7 years children are considered to attain common sense or rationality. At this age also, the child's character is considered to be fixed, and he begins to assume new social and sexual roles. He begins to join with groups of peers, and participate in rule games. The children's groups separate by sex at this time. Concurrently, the children are expected to show modesty and sex differentiation in chores and social relationships is stressed. All of these variables indicate that at 5–7 the child is broadly categorized differently than before this age, as he becomes a more integral part of his social structure. (P. 367)

We accompanied these conclusions with caveats calling for caution in interpretation, pointing out that age estimates in ethnographic literature are unreliable. Most of the communities we included did not categorize children by years or even keep track of time since birth, so ethnographers made age estimates that are likely to be biased by their own expectations. We also pointed out that even in the variables in which an age shift was readily apparent, shifts did not fall into the modal period in a noticeable number of cultures. For most of the 16 variables showing a modal shift in the 5 to 7 range, about 40% of the cultural communities had shifts that fell outside of the modal ages, with ranges of 9 to 15 years. Thus, even for variables with a modal shift at age 5 to 7, in many communities the shifts appeared, for example, at age 2 or 11. We concluded with the hope that these variations could be explained by an understanding of the structure of the cultures.

After that initial study, several of the authors went off to do fieldwork and returned with the impression that the paper on the 5 to 7 shift was an incomplete account—there seemed to be something happening at 8 to 10 years that was very important. We believed that what was happening at 5 to 7 in the ethnographic literature was the beginning of children's being responsible and teachable, but that at 8 to 10, parents could count on children to understand and to help—which was more important to the parents we had talked with.

Sellers (1975) reviewed 19 ethnographies of childhood in rural communities of Mexico and Guatemala and concluded that "although in earlier years children have been exposed to and participated in household work, at ten . . . competence, independence, and responsibility are required in most of the chores delegated to children of this age" (p. 31). Rogoff (1978) observed 100 Mayan

children between the ages of 1 and 14 years and found that they began doing chores in the 5 to 7 range, but not until age 10 did they leave behind a period of play combined with supervised apprenticeship in simple chores to assume independent responsibility for some important tasks. These observations are not inconsistent with the earlier study, which focused on *onsets* of responsibilities or changing roles and ignored information regarding the attainment of competence.

We looked at the developmental research literature—in *Developmental Psychology, Child Development,* and *Journal of Experimental Child Psychology*—to see if the literature had information on an 8 to 10 shift and found a fair amount of evidence that something was happening at 8 to 10 as well (Rogoff, Newcombe, Fox, & Ellis, 1980). We noticed that many studies reported the shifts that they observed at ages 8 to 10 as part of the 5 to 7 shift, concluding that the 5 to 7 shift was a little bit late, or that behaviors observed were evidence of the 5 to 7 shift.

That paper also ended cautiously because our conclusion was not that something is happening at 8 to 10 that is more important than changes at 5 to 7, but that if we looked at any age period, we would probably find some important transitions. The research of that era that made age comparisons had focused on ages 4 to 9 or 10, making the 5 to 7 shift quite apparent. Something important may be happening at 5 to 7, 8 to 10, 3 to 5, 11 to 15. Surely 10-year-olds are not the same as 3-year-olds.

However, in order to characterize shifts in development, most approaches seem to have assumed that the shifts are *in* the children and are general across tasks and across communities. Researchers have assumed that the few tasks that have been done are generalizable to something broader and more important than the particular tasks in which the observations have been made. The assumption of generality is being increasingly questioned, owing to observations that infants can be seen doing things that have previously been thought to be only possible for older children, to observations that performance is quite uneven as the same child does different tasks involving logically similar operations, and to observations across cultures that various skills are observed at quite different ages (Feldman, 1980; Fischer, 1980; Flavell, 1977; Gelman & Meck, 1983; Rogoff, 1982).

There are some very compelling examples of variations across communities in the ages at which children are expected to be competent to carry out complicated culturally valued activities. For example, although U.S. middle-class adults often do not trust children below about age 5 with knives, in the Efe community in Zaire, infants routinely use machetes with safety and some skill (D. Wilkie, personal communication, 1989; Figure 13.1)

Another example is the age at which children seem to be responsible enough to take care of themselves or to take care of other children. In middle-class U.S.

Figure 13.1 This 11-month-old Efe child from the Ituri Forest of Zaire cuts a fruit with a machete, with a relative supervising in the background. (Photograph courtesy of David Wilkie; © by David Wilkie.)

families, children seem not to be regarded as capable of beginning to tend themselves or another child until perhaps age 10 (or later in some regions of the United States), but in many other communities around the world, children begin to take on responsibility for tending other children at ages 5 to 7 (Rogoff et al., 1975), and in some places even younger children begin to assume this responsibility. Watson-Gegeo (1990) described the roles of young Kwara'ae children in Oceania:

> Three year olds are skilled workers in the gardens and household, excellent caregivers of their younger siblings, and accomplished at social interaction. Although young children also have time to play, many of the functions of play seem to be met by work. For both adults and children, work is accompanied by singing, joking, verbal play and entertaining conversation. Instead of playing with dolls, children care for real babies. In addition to working in the family gardens, young children have their own garden plots. The latter may seem like play, but by three or four years of age many children are taking produce they have grown themselves to the market to sell, thereby making a significant and valued contribution to the family income. Thus for

> Kwara'ae children, work and play are often fused, and the leading activity of productive work does not follow chronologically after schooling. (P. 87)

Likewise, Sorenson (1979) noted that Fore (New Guinea) infants handled knives and fire safely by the time they are able to walk. Sorenson stated that he "continued to be surprised that the unsupervised Fore toddlers did not recklessly thrust themselves into unappreciated dangers, the way our own children tend to do" (p. 301). Young children in that community were trusted to be responsible and able to take care of themselves in a way that children in U.S. middle-class communities would not be.

In some cases child development experts in the United States react to accounts like this with the idea that the adults in those communities are irresponsible because we all know that children "can't do such things." But instead, it is reasonable to ask, How do such children become responsible enough to take care of themselves in those ways? It is interesting to note that middle-class U.S. families expect children to be able to do some things that are unexpected or even regarded as dangerous in other places, such as to sleep by themselves from as young as the first months of life (Morelli, Rogoff, Oppenheim, & Goldsmith, 1992) or to engage in school-like discourse or to begin to learn to read in the toddler years (Heath, 1983).

My general point is that some activities that we may regard as having a "natural" point of transition are only natural given the assumptions and the material circumstances and organization of our community. That brings me to a discussion of how a sociocultural perspective changes the ways that we can conceive of transitions in development.

Developmental Transitions in Sociocultural Perspective

The dilemmas that I have mentioned in the previous section have been an impetus for me to reexamine the assumptions on which the field has based research on age transitions in development.[1] The sociocultural approach changes the unit of analysis for observations of development from the individual to the activity (Leont'ev, 1981; Zinchenko, 1985).

The usual unit of analysis has been the isolated individual, with research attempting to extract the individual from the milieu in order to determine what happens within the individual and then to consider which influences on the outside must be added. Differences in development are often considered to be differences in rate along some kind of a natural developmental time course, sped up or retarded by various environmental circumstances.

The sociocultural approach takes as the unit of analysis the activity, which includes the contributions of individuals involved with other individuals, material circumstances, and cultural traditions. The sociocultural approach discards the idea that one can fruitfully study development by searching for the characteristics of the "basic" child and then adding external influences. According to Vygotsky (1987):

> The fundamental aspiration of the whole of modern child psychology . . . [is] the wish to reveal the eternal child. The task of psychology, however, is not the discovery of the eternal child. The task of psychology is the discovery of the historical child, of what Goethe called the transitory child. The stone that the builders have disdained must become the foundation stone. (P. 91)

From a sociocultural perspective, developmental processes are not just within individuals but in group processes and community processes. Hence, individual children are not regarded as developing with everything else static, on the one hand, nor everything else as developing with individuals staying static, on the other. Individual, interpersonal, and community processes are all developmental. Individuals cannot be excised from their involvement in activities to evaluate individual change; rather, individual change is studied as it constitutes and is constituted by interpersonal and community processes in sociocultural activities.

That does not mean that we have to study development in all aspects of activities at once. We can examine the contributions or transitions involving individuals as the focus of the moment, but we must take into account the other aspects of the activity as background information, not separate information (Rogoff, 1995). Individual, interpersonal, and community processes can be analyzed as different "planes" of analysis, but focus on one or another is analytical—that is, the focus is for the purposes of study and communication. The three planes cannot be isolated, and none is primary except with regard to being the current focus of attention when we can focus on one or another, keeping the others in the background for our analysis.[2]

When using activity as the unit of analysis, the emphasis for understanding individual development is on the concept of changing participation in sociocultural activities. Several developmental approaches call attention to the concept of participation for understanding learning and development. I have used the notions of guided participation and participatory appropriation to discuss interpersonal and personal processes (Rogoff, 1990, 1995); Lave and Wenger (1991) have offered the related idea of legitimate peripheral participation; White and Siegel (1984) referred to child development as widening participation in communities of thinkers. In each of these three approaches, the emphasis is on participation in both face-to-face interactions and in indirect interpersonal arrangements of cultural activities (which include times that people are by themselves participating in sociocultural activities).

If we take seriously the idea of participation, we cannot consider the indi-

vidual to exist in isolation or out of cultural context because participation requires a description or an explanation of how people participate in sociocultural activities that are not formed by individuals alone, but by individuals with other people and in cultural communities.

The way that we have traditionally gone about understanding children's development places a boundary between the children and whatever it is they are learning or the sociocultural world (Figure 13.2), and that boundary is what I am questioning in the idea of participation. If a person is participating in an activity, it is inconsistent to consider the person as separate from it; participation inherently means involvement. Therefore, it is unnecessary to wonder how it is that external information crosses a boundary to be stored internally, a mysterious process that is often referred to as internalization, with either the individual or the environment as the active agent responsible for moving new materials across the boundary (Rogoff, 1995).

Figure 13.3 represents an alternative conceptualization using sociocultural activity as the unit of analysis, with individual, interpersonal, and community

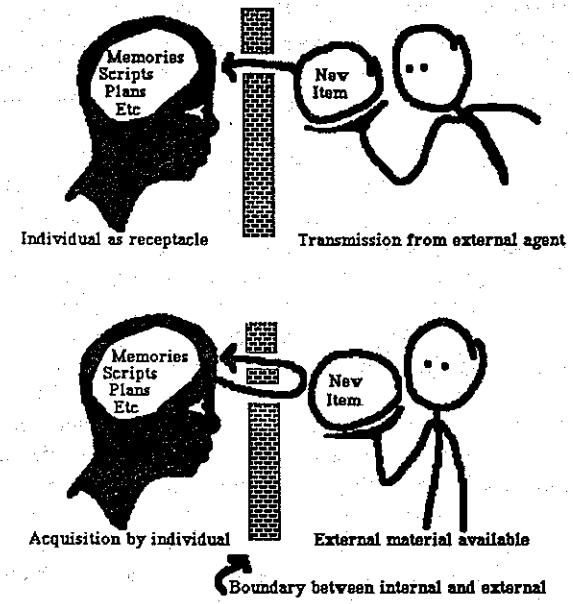

Figure 13.2 Two versions of an internalization model, both with boundaries between individual and external world. One portrays the individual as active, constructing knowledge from a passive environment; the other portrays the environment as active, filling up the individual as a waiting vessel.

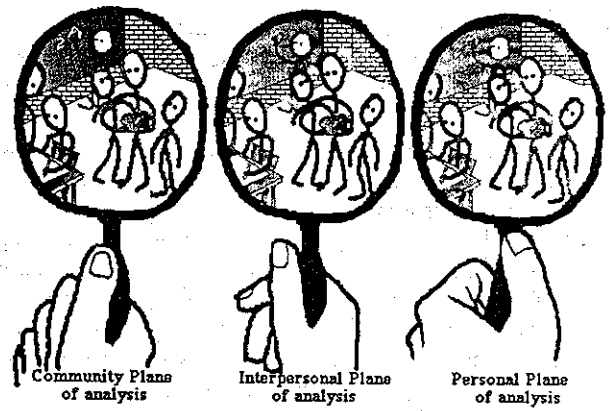

Figure 13.3 Lenses focusing on dynamic processes of participation. A model of participation as individuals contribute, along with others, to using and transforming community practices, in a dynamic sociocultural activity.

planes of analysis portrayed as three lenses in the foreground of the figure. In the whole activity, individuals participate in shared endeavors with some commonality and complementarity of purpose to define the nature of the activity. For example, you and I are engaging in an activity defined by the purpose, at least in part, of communicating understanding within academic traditions. We have complementary purposes as I attempt to write in a fashion that is clear and as you attempt to understand my writing. Of course, we all have other purposes that connect this moment to other activities, such as my attempt to complete this activity in order to meet a deadline so as not to make the editors angry and to do so in a way that fits the canons of academic writing, and your purposes in looking at this chapter to get through a reading assignment or to make use of the ideas to build your own in agreement or disagreement. Hence, the activity in which we are presently collaborating is defined in terms of our shared, complementary, and conflicting purposes.

The role of individual contribution is accessible by focusing on it, with interpersonal and community processes appearing in the background in our lens. The whole activity is still there when one plane of analysis is in focus; in fact, it must be part of the field of vision because without any consideration of the other planes of vision nothing is even visible in the plane that is in focus (the "negative" spaces forming the background around objects are necessary for us to perceive the objects themselves).

In any particular study, one plane of focus can be primary; over the course of a line of research it is necessary for the other planes of focus to take primacy in other studies in order to have a balanced view. Scholarly understanding is

itself a sociocultural endeavor, rather than being complete in the accomplishments of an individual study or an individual investigator. A mathematician who solves a problem that has been unsolved for 350 years is participating in an endeavor involving collaborators who devised the problem centuries before and people who in the meantime have ruled out other strategies for finding the solution, as well as participating in an activity constituted by changing cultural and institutional arrangements for the work of scholars.

In the study of human activity, it is not necessary for each participating scholar to address all possible planes of analysis (though the other planes need to play some role for the plane in focus to make sense); however, the overall endeavor of understanding human activity requires the collaboration of scholars using the focus of other planes of analysis. In the social sciences, this collaboration is greatly impacted by sociocultural processes such as those in institutions of learning that solidify boundaries between disciplines, thus making interdisciplinary sharing of information more difficult and forcing narrow specialization of individual scholars who come to regard the disciplines as separate and even in competition for the Truth.

In a sociocultural approach with an emphasis on participation, the emphasis shifts from trying to understand the acquisition of capacities or skills or mental objects to understanding the processes of participation. This contrasts with the internalization perspective in which individuals' development must be explained in terms of purely individual changes (e.g., maturation) or in terms of outside influences (e.g., social "effects"), separately or in interaction. From a participation perspective, individuals are seen as inherently changing through their lifetimes, through their involvement in inherently changing events. Thus, development is inherent in participation, in contrast with being seen as a change of states in the internalization model.

The two models of Figures 13.2 and 13.3 yield different central questions. In the internalization model of Figure 13.2, the central questions are the following:

1. How and where and when is information stored internally?
2. What is the relative importance of the contribution of the individual and the external world?
3. What produces change?
4. How does the external world influence the internal workings of the individual?

In the participation model of Figure 13.3, the central questions are quite different:

1. What activities occur and what is the nature of their transformations?
2. Why and with whom and with what are people engaging in the activity at hand?
3. How do people participate in activities—what are their contributions and how do these change over time?
4. How does the current activity relate to others? Other activities that relate to the activity being studied may be concurrent (such as relating the discourse patterns used in a home activity to those used in school activities), embedded (such as relating discourse patterns in the writing of an article to political issues in the structure of academic institutions), historical (such as relating performance on a test to involvement in prior classroom activities), or future-oriented (such as relating performance on a test to intended involvement in other institutions for which tests serve a preparatory or gatekeeping function).

The internalization model casts development as the acquisition of mental objects such as plans or memories or reading skills and so on (see discussion in Kvale, 1977; Rogoff, Baker-Sennett, & Matusov, 1994). Dropping the internalization model's question of where and how mental objects are stored in the head relates to changes in assumptions regarding how to conceive of developmental transitions.

In a participation model, the focus is on examining transformation in people's actual involvement in activities rather than in attempting to determine which mental objects have or have not yet been acquired. Thus, the effort to infer internal competence (conceived as acquisition of mental objects) from observations of actual performance becomes an uninteresting diversion from attempting to understand the structure of people's developing involvement in inherently changing sociocultural activities. Instead, we would examine how children actually participate in sociocultural activities to characterize how they contribute to those activities cognitively, socially, emotionally, and so on.

Note that in this sociocultural view, boundaries do not exist between cognitive, social, emotional, and motivational processes. Such boundaries may be tied to a model of human functioning that assumes the acquisition of objects in the head that need to be named separately in order to treat them as objects. With a focus on processes of participation in sociocultural activities, one can look at events as involving cognitive, social, emotional, and motivational processes as a function of the focus of the researcher's questions, without assuming that these are "really" separate faculties. This view is profoundly different from much of developmental research, in which cognitive and social processes are regarded as separate (and their influence on each other sometimes examined).

The emphasis changes from trying to infer what children *can* think to interpreting what and how they *do* think. Of course, determining what and how people think is still inferential and is not simply a matter of recording simple aspects of behavior or of people's responses to questions or cognitive tasks; neither the view of observers nor of people themselves is a "true" window on cognitive processes. Researchers should take advantage of whatever evidence is available from their own observations as well as from the reports of other observers and the people involved to create a plausible account that advances understanding among a community of investigators about the phenomenon under study. (See Kvale, 1977, for a discussion of this point.)

In the sociocultural perspective for which I am arguing, we would observe the changing participation of children in sociocultural activity rather than aim to understand what pieces of knowledge or skill they have already "acquired" and "stored." This is not a suggestion to abandon cognitive research, but rather an argument that cognitive research can benefit by questioning the assumption that it is necessary to search for imaginary mental objects stored in the head. I am arguing that cognitive processes can be well understood through a more direct examination of processes of thinking, planning, remembering, solving of problems, and so on, as people engage in them. Meisels (this volume, chap. 18) makes compatible recommendations for the assessment of children's intellectual progress by observing children in the context in which they are trying to puzzle things out and observing that directly.

Dropping the search for assessment of acquisition of mental objects or competence also recasts the question of onset. The question of when a person *begins* to have plans or problem-solving skills or perspective-taking skills or social skills treats transitions as if they were contained in the child, who either has the skill in question or does not. The onset question in developmental psychology generally searches for the earliest time one can find evidence of the skill or knowledge in question, yielding continual efforts to demonstrate that the child has it at an age earlier than that asserted by Piaget or some other scholar (see Elbers, 1991).

Earlier "attainment" has generally been cleverly demonstrated by changing the nature of the task situation (in ways that receive insufficient attention) while continuing to assume that the competence sought is unitary and contained in the individual, awaiting a pure assessment. From a sociocultural view, no assessment is "pure." All observations involve people participating in one or more sociocultural activities. The question from a sociocultural participation view becomes understanding the transformations that occur in children's participation in particular kinds of activities, which are themselves transforming—how do children get from this kind of participation to that kind of participation, and how are the activities in which they participate changing with the children's involvement along with that of other people?

The question becomes one of understanding children's changing roles as they participate in communities of thinkers. For example, in understanding learning to read, the question would not be focused on identifying the onset of reading skill. Rather, it would examine transformations in how children make sense of letters in certain kinds of texts with specific kinds of social and cultural organization of the reading activity (such as the kind of social support provided for the child's participation in reading and the purpose of the reading effort) and relating similar observations together. There wouldn't be just a child reading (with some inferred level of competence), with those other aspects of the activity treated as potential confounds or features that need to be controlled. The other aspects are inherently part of the process of reading. This involves a larger perspective on what it means to understand text, how texts for children and others are constructed, and how children enter and are brought into communities of readers.

In the participation model, the relation between processes in different activities is a matter for investigation. Processes are not automatically assumed to be general, nor are they assumed to be so particular that we cannot extend from any particular observation to others.[3] Rather, researchers can observe in situations that we want to understand, and they can look to see how those relate to other situations. A key example is the question of how practices in families and in schools relate to each other—some may relate closely, and others may not resemble each other. It becomes essential to try to characterize the relationships among different kinds of activities in which children are involved—the changing participation of children in sociocultural activities such as comprehending texts or studying for a spelling test in school, learning to run a computer program for entertainment with siblings at home, or taking care of younger children.

The question of relating activities to each other is a recasting of the classic question of transfer or generalization. It differs in that the focus is on determining how activities relate to each other and how people move from one activity to another, rather than on determining how mental objects are transferred (as if they existed in isolation in the head) or how physical similarities in the materials elicit transfer (as if the materials carry meaning outside of their use).

In the next section, in order to illustrate how developmental transitions can be studied from a sociocultural perspective, I describe a study focusing on age differences in children's responsible roles. The research does not separate individual processes from interpersonal and community processes but focuses on individual contributions to the whole activity, which includes interpersonal and community processes as background. Explanation focuses on transformations in roles rather than on possession of competence. And variation across communities is taken as an opportunity to see how children's roles everywhere are socioculturally constituted and at the same time constitute the social and cultural processes in which the children participate.

Community Variation in Young Children's Becoming Responsible

One aspect of development that has been identified in the age range 5 to 7 in the research literature is the "capability" to decenter and to take alternative perspectives both with physical objects (like Piaget's three-mountain problem) and with other people (in outgrowing egocentrism). Decentration is a key aspect of the onset of concrete operations in Piagetian theory. As such, it has been challenged over the years, with demonstrations that younger children exhibit perspective taking under some circumstances. For example, U.S. children as young as 2 years turn an object so that it is visible to a viewer (Flavell, Botkin, Fry, Wright, & Jarvis, 1975) and at age 4 they modify their speech in speaking with a toddler (Shatz & Gelman, 1977).

The field has struggled with how, conceptually, to accommodate such variation in age of onset (see Donaldson, 1979; Light, 1986). Piaget's (1971) solution—to refer to the age slippage as *décalage,* owing to varying "friction" in the tasks—is little more than a label for the phenomenon. *Décalage* poses deep problems for the assumptions that development consists of the acquisition of competences in the individual.

The sociocultural participation view that I have outlined in the previous section recasts the perspective-taking findings in terms of understanding developmental transitions that characterize these children's management of these problems as the children participate in sociocultural activities that require investigation to understand the pattern of findings.

Transition to a responsible role requires perspective taking as young children learn to take others' wishes into account. Cultural expectations of when children can take the perspective of a younger child may underlie the assignment of children to be responsible for younger children. Although the modal age in the cultures sampled in the HRAF study (Rogoff et al., 1975) was 5 to 7, in some communities child-care responsibilities were given at age 3 and in others not until age 10. Rather than assuming that Kwara'ae children (for example) are precocious in this skill and U.S. middle-class children (for example) are retarded in it, a sociocultural perspective leads us to examine closely the ways in which responsibility for younger children is structured in each community.

In a Mayan town in the Highlands of Guatemala (San Pedro), 3- to 5-year-olds show responsibility toward 1-year-old siblings, subordinating their own wishes to those of the toddler, in a way that 3- to 5-year-olds from a middle-class U.S. city (Salt Lake City) do not (Mosier & Rogoff, 1995). In order to understand why 3- to 5-year-olds in Salt Lake City do not show such responsibility toward their siblings, and 3- to 5-year-olds in San Pedro do, it is necessary to understand the social organization of family roles and cultural expectations of childhood in each community.

It would be inappropriate to conclude that Salt Lake City 3- to 5-year-olds are less competent, as might occur if we considered skill to be an acquisition of individuals without regard for how the individuals participate in sociocultural activities composed also of interpersonal and community processes. However, such a conclusion is the usual one in developmental research that compares across cultures or across ages: Those who do not demonstrate the "skill" in question are judged to be less competent, not to have "acquired" the skill, or to be slower along an imaginary timeline of individual development.

The two communities differ in ways that appear related to differences in the children's responsibilities: San Pedro children are learning to become cooperative interdependent members of the community; middle-class Salt Lake City children are encouraged to assert individuality and competition. There are also differences in the conception of early childhood that are related to the differences in the two communities. The 3- to 5-year-old siblings in San Pedro responsibly gave over whatever they had or wanted to their younger sibling. If the baby asked for something, the older siblings were expected to respond to the younger sibling by giving something over, and they often did so on their own, seldom needing prompting. In the middle-class Salt Lake City families, the older siblings negotiated and tussled with the baby over whatever they had or wanted, and mothers frequently intervened as judges and more powerful negotiating resources.

Expectations for what can be and should be expected of children in the two communities were very different. The 1-year-olds in Salt Lake City were assumed to be ready to learn to follow the rules of sharing and able to understand the consequences of their own actions, and parents treated them by the same rules as their older siblings to enforce sharing and learning to negotiate. The 1-year-olds in San Pedro were assumed not yet to understand how the social world works or how their actions impact others, and they were allowed a special status, exempt from following rules of fairness. Given the San Pedro toddlers' assumed lack of understanding, their self-interest is assumed to be characteristic of not being ready to be a cooperating member of a group, rather than being a willful antagonist. However, observations of the social interactions of toddlers from both communities suggested that if there was a difference between them, it was the San Pedro toddlers who appeared more aware of and in tune with the actions and meanings of the group (see Rogoff, Mistry, Göncü, & Mosier, 1993).

In San Pedro, it is an important social value not to force compliance on any other person, so forcing an infant to cooperate would go against this value. San Pedro caregivers thus treat toddlers with respect for their autonomy, even though toddlers do not yet understand responsibility. Although they encourage toddlers to participate in responsible relations, they do not try to force them to

follow other rules of the group. Salt Lake City caregivers, who assume that toddlers understand the consequences of their actions, attempt to make them follow the rules.

The expectations for older siblings in the two communities vary in line with these differences. Children of ages 3 to 5 in both communities are expected to understand the consequences of their actions and to follow the rules of the group. However, in San Pedro, one of those rules is to respect others' autonomy and not force others; children are expected to act interdependently with the group and to understand that toddlers do not yet understand the rules of the group. So San Pedro 3- to 5-year-olds are expected to treat toddlers' wishes with responsibility. They do so without being forced to, giving a desired object to the toddler without prompting, even if they are sorrowful about giving it up.

Treating toddlers' wishes with respect for their autonomy and expecting them later to grow into a voluntarily cooperative role (without being forced) may have something to do with those younger children's moving from a role in a system in which they are treated with respect for their own autonomy into very early responsibility for others. They have not been treated adversarially themselves; they have been treated in a way that gives them a chance to observe what is going on around them and to respect their own and others' autonomy. The 3- to 5-year-olds may act in a socially responsible way with regard to the toddlers in part because that is the way they themselves have been treated. Their transition is that they are no longer the ones who are the object of it; they are no longer the ones who are given the leeway but are already part of the system in which responsibility to other people and respect for each other's autonomy is an inherent part of human relations.

The Salt Lake City middle-class 3- to 5-year-olds follow cultural values in asserting their own rights. Their skillful negotiation and use of adversarial roles is something in which they have participated since infancy, and their treatment of their own toddler siblings is part of a system in which their roles may assist the toddlers in learning to stand up for their own self-interests in an individualistic model of family relations. Perhaps learning to be responsible for others comes later, as it needs to develop with suspension of competition and a stress on individuality. Hence the middle-class Salt Lake City children's apparent "failure" to take a responsible role with regard to nurturing an infant can be reinterpreted in the context of their participation in sociocultural activities with structure different from that of the interdependent, cooperative model of the San Pedro community. Focusing on the 3- to 5-year-olds in isolation would be misleading; they are participants in and contributors to a sociocultural system.

Of course, not only are children making transitions in understanding responsible roles in their communities, but communities themselves are making transitions. Some communities in the United States are seeking ways to encourage children to work well together, using techniques such as reducing age-grading

in school and structuring cooperative groups in classrooms. In the Mayan setting, changes involve many more young people leaving the community, especially to go to school, and opportunities for children to serve as caregivers is reduced by increased years of schooling separating children aged 5 and up from others of different ages. The communities and interpersonal relations are continually changing, as are the individuals who participate in sociocultural activities.

Reconceptualizing Transitions

Although some researchers regard focus on "basic" individual processes as a necessary simplification, with addition of interpersonal and cultural processes imposing unwanted complexity, the study of cultural variation in children's responsibility illustrates how interpretation of individual behavior without regard for interpersonal and cultural processes yields a false oversimplification (i.e., that U.S. middle-class 3- to 5-year-olds do not have competence for perspective taking or responsibility to others).

From a sociocultural perspective, parsimony is to be found in recognizing and studying the existing richness of structure of human activity with regularities in terms of how people participate in cultural activities. This contrasts with the separate study of individual, social, and cultural factors and subsequent search for their interactions (the approach followed if the individual is treated as the unit of analysis, Rogoff, 1990). The search for interactions between separately defined individual, social, and cultural factors yields infinite and unanalyzable interactions, leading to "a hall of mirrors that extends to infinity" (Cronbach, 1975, p. 119). Those who become concerned that the study of cultural processes and contextual issues leads toward chaos are likely to be considering those infinite interactions rather than to be aware of the regularities and simplifications of patterns available when sociocultural activity rather than the individual is taken as the unit of analysis.

For example, a researcher attempting to understand the development of children's responsibility for others as an interaction between separate individual and environmental factors would consider the findings in terms of "predictions" of this outcome from characteristics of the individuals (age, gender, birth order, perspective-taking skill, IQ, ethnicity, nationality, social class, etc.) and of the environment (e.g., caregivers' encouragement to share, age of child partner, availability of younger children, presence of attractive novel objects, structure of the society, modernity, climate, presence of formal schooling, technology available). Testing the interactions would be an endless process; reuniting the variables that have been separated out in this way would be a daunting task. Subsequent studies would proceed by varying the identified variables one at a time or (endlessly) including some new ones.

However, when sociocultural activity is taken as the unit of analysis, a coherent account can be discerned in terms of children's transformations of roles having to do with their participation in community practices, which are structured (e.g., in terms of the roles that people play in family responsibilities and public institutions). The account includes reference to something like the "variables" used in the interactional approach, but instead of attempting to define them separately, researchers acknowledge mutual reference to personal, interpersonal, and community planes of analysis. The previous section's account of cultural variation in children's responsibility refers to the relative age and birth order of children and of their partners; to cultural assumptions regarding the development of understanding and responsibility that can be discerned from the inseparable inter-actions of the children and their siblings and caregivers (and researchers); and to cultural values regarding interdependence, autonomy, and fairness that are constituted by the participants together, with changing roles as each person, and his or her relations and community, develop. The resulting account of children's participation suggests principled extensions of the research to examine whether the patterns of regularities observed in these two communities are observed in others and how the children and their caregivers manage the transition in San Pedro from receiver to giver of cooperative respect for autonomy as a responsible member of a community and how they manage the transition in Salt Lake City from defender of individual rights and fairness to nurturant caregiver responsible for others at a later age.

My sociocultural perspective on development as participation thus goes beyond calling attention to the necessity of considering cultural processes in order to understand development; it leads to reconceptualization of some of the central questions of development. A reply to the four organizing questions of this volume (listed here as direct quotations) thus requires recasting of the questions, as they appear to be based on assumptions that individual and environment are separate:

"1. Do 7-year-olds (or environments of 7-year-olds) behave differently than 5-year-olds (or environments of 5-year-olds)?" Yes, but the difference would not be attributed in an either/or fashion to the children or their environments but to differences as a property of the changing involvements of children *in* community activities.

"2. If so, are the differences quantitative or qualitative?" Both. Children begin to do some things more frequently or more skillfully or faster or more deliberately as they and their ongoing activities develop. They also change their roles as activities develop, so they are doing different things and different aspects of things.

"3. If quantitative, are they continuous (i.e., linear) or discontinuous (i.e., nonlinear)?" Sometimes continuous and sometimes discontinuous, depending both on how their involvement is observed (e.g., with what frequency) and how their involvement is structured (e.g., with what periodicity).

"4. If qualitative, are they the result of the emergence of new behaviors or the reorganization of prior behaviors?" Qualitative changes in children's involvements in activities entail (but are not the "result" of) the emergence of new roles and contributions to activities. Emergent roles and contributions themselves involve the reorganization of prior roles and contributions of the children as well as the reorganization of the activities in which children participate.

In sum, this chapter argues that transitions in development can fruitfully be studied as transitions in people's participation in sociocultural activities, building on and further revising community traditions. Expanding our view beyond the individual to the activity as the unit of analysis allows us to understand deeper regularities in children's development and sociocultural processes. Research strategies and questions change with a shift in the unit of analysis (see also Rogoff, Radziszewska, & Masiello, 1995), realigning how we think about developmental transitions. Of course, research done according to other perspectives is still of interest, but its contribution may require an interpretation different from that within which it was carried out. In large measure, attention turns from trying to determine when a competence that is assumed to reside within an individual first appears or how it transforms, to studying how the nature of individuals' participation in sociocultural activities changes as individuals, groups, and communities all develop.

Notes

1. Although age comparisons are commonly used in this endeavor, the more interesting questions remain (as Piaget pointed out) those having to do with sequences of transitions and possible variations in organization of transitions, rather than questions of age per se. A focus on age as an aspect of individual identity is itself a somewhat local concern, as may be apparent from the fact that in many communities people do not keep track of age.

When I began fieldwork in a Mayan community years ago, I was surprised to note that upon meeting a child, adults' next question after "What is your name?" was not "How old are you?" but "What are your mother's and your father's names?" Instead of a focus on identity as defined by individuals' progress on a timeline (as is habitual in the U.S. middle class), the Mayan questions suggest a focus on identity as defined by social relationships or place in the community.

2. Although biological processes are not the focus of my attention here, it would be

consistent with the sociocultural perspective to consider phylogenetic changes as well as brain development as other planes of analysis, without which understanding is incomplete. In a sociocultural approach, biology and culture are not in opposition; rather, phylogenetic and physical developmental processes are regarded as essential but at a different grain of analysis (see Rogoff, 1990; Scribner, 1985).

3. The query of "Baffled in Buffalo" to Ann Landers (1993) and Ann's rejoinder express the dilemma of assumptions of generality: "Dear Ann Landers: A friend of mine who is considered a pretty dim bulb (she ends almost every sentence with 'you know') can sit down and work out a crossword puzzle in nothing flat. How come?" Ann's response: "Dear Baff: Practice makes for proficiency. Crosswords are games, and people who work at them learn the tricks of the trade. It's as simple as that."

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