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6 Observing sociocultural activity on three planes: participatory appropriation, guided participation, and apprenticeship

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This chapter proposes a sociocultural approach that involves observation of development in three planes of analysis corresponding to personal, interpersonal, and community processes. I refer to developmental processes corresponding with these three planes of analysis as apprenticeship, guided participation, and participatory appropriation, in turn. These are inseparable, mutually constituting planes comprising activities that can become the focus of analysis at different times, but with the others necessarily remaining in the background of the analysis. I argue that children take part in the activities of their community, engaging with other children and with adults in routine and tacit as well as explicit collaboration (both in each others' presence and in otherwise socially structured activities) and in the process of participation become prepared for later participation in related events.

Developmental research has commonly limited attention to either the individual or the environment – for example, examining how adults teach children or how children construct reality, with an emphasis on either separate individuals or independent environmental elements as the basic units of analysis. Even when both the individual and the environment are considered, they are often regarded as separate entities

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rather than being mutually defined and interdependent in ways that preclude their separation as units or elements (Dewey & Bentley, 1949; Pepper, 1942; Rogoff, 1982, 1992).

Vygotsky's emphasis on the interrelated roles of the individual and the social world in microgenetic, ontogenetic, sociocultural, and phylogenetic development (Scribner, 1985; Wertsch, 1985) includes the individual and the environment together in successively broader time frames. Likewise, Vygotsky's interest in the mutuality of the individual and the sociocultural environment is apparent in his concern with finding a unit of analysis that preserves the essence of the events of interest rather than separating an event into elements that no longer function as does the whole (e.g., studying water molecules rather than hydrogen and oxygen to understand the behavior of water; Cole, 1985; Leont'ev, 1981; Wertsch, 1985; Zinchenko, 1985).

The use of "activity" or "event" as the unit of analysis – with active and dynamic contributions from individuals, their social partners, and historical traditions and materials and their transformations – allows a reformulation of the relation between the individual and the social and cultural environments in which each is inherently involved in the others' definition. None exists separately.

Nonetheless, the parts making up a whole activity or event can be considered separately as foreground without losing track of their inherent interdependence in the whole. Their structure can be described without assuming that the structure of each is independent of that of the others. Foregrounding one plane of focus still involves the participation of the backgrounded planes of focus.

By analogy, the organs in an organism work together with an inherent interdependence, but if we are interested in foregrounding the functioning of the heart or the skin, we can describe their structure and functioning, remembering that by themselves the organs would not have such structure or functioning. (See Rogoff, 1992, for further discussion of this issue.) Similarly, we may consider a single person thinking or the functioning of a whole community in the foreground without assuming that they are actually separate elements. "The study of mind, of culture, and of language (in all its diversity) are internally related: that is, it will be *impossible* to render any one of these domains intelligible without essential reference to the others" (Bakhurst, 1988, p. 39, discussing Ilyenkov and activity theory).

Vygotsky's and Dewey's theories focus on children participating with other people in a social order with a seamless involvement of individuals in sociocultural activity. For Vygotsky (1978, 1987), children's cognitive development had to be understood as taking place through their interaction with other members of the society who are more conversant with the society's intellectual practices and tools (especially language) for mediating intellectual activity. Dewey (1916) provided a similar account:

> Every individual has grown up, and always must grow up, in a social medium. His responses grow intelligent, or gain meaning, simply because he lives and acts in a medium of accepted meanings and values. (p. 344)

> The social environment . . . is truly educative in its effects in the degree in which an individual shares or participates in some conjoint activity. By doing his share in the associated activity, the individual appropriates the purpose which actuates it, becomes familiar with its methods and subject matters, acquires needed skill, and is saturated with its emotional spirit. (p. 26)

Without an understanding of such mutually constituting processes, a sociocultural approach is at times assimilated to other approaches that examine only part of the package. For example, it is incomplete to focus only on the relationship of individual development and social interaction without concern for the cultural activity in which personal and interpersonal actions take place. And it is incomplete to assume that development occurs in one plane and not in others (e.g., that children develop but that their partners or their cultural communities do not) or that influence can be ascribed in one direction or another or that relative contributions can be counted (e.g., parent to child, child to parent, culture to individual).

In this chapter I discuss apprenticeship, guided participation, and participatory appropriation (Rogoff, 1990, 1993), which I regard as inseparable concepts reflecting different planes of focus in sociocultural activity – community/institutional, interpersonal, and personal. I conceive of planes of focus not as separate or as hierarchical, but as simply involving different grains of focus with the whole sociocultural activity. To understand each requires the involvement of the others. Distinguishing them serves the function of clarifying the plane of focus that may be chosen for one or another discussion of processes in the whole

activity, holding the other planes of focus in the background but not separated.

The metaphor of *apprenticeship* provides a model in the plane of community activity, involving active individuals participating with others in culturally organized activity that has as part of its purpose the development of mature participation in the activity by the less experienced people. This metaphor extends the idea of craft apprenticeship to include participation in any other culturally organized activity, such as other kinds of work, schooling, and family relations.[1] The idea of apprenticeship necessarily focuses attention on the specific nature of the activity involved, as well as on its relation to practices and institutions of the community in which it occurs – economic, political, spiritual, and material.

The concept of *guided participation* refers to the processes and systems of involvement between people as they communicate and coordinate efforts while participating in culturally valued activity. This includes not only the face-to-face interaction, which has been the subject of much research, but also the side-by-side joint participation that is frequent in everyday life and the more distal arrangements of people's activities that do not require copresence (e.g., choices of where and with whom and with what materials and activities a person is involved). The "guidance" referred to in guided participation involves the direction offered by cultural and social values, as well as social partners;[2] the "participation" in guided participation refers to observation, as well as hands-on involvement in an activity.

The concept of *participatory appropriation* refers to how individuals change through their involvement in one or another activity, in the process becoming prepared for subsequent involvement in related activities. With guided participation as the interpersonal process through which people are involved in sociocultural activity, participatory appropriation is the personal process by which, through engagement in an activity, individuals change and handle a later situation in ways prepared by their own participation in the previous situation. This is a process of becoming, rather than acquisition, as I argue later.

The remainder of this chapter explores the concepts of apprenticeship, guided participation, and especially, participatory appropriation in greater detail. I illustrate them with observations of the processes involved in planning routes, keeping track of sales and deliveries, and

calculating charges as Girl Scouts of America sell and deliver Girl Scout cookies. This activity was chosen for investigation because it allows us as researchers to examine personal, interpersonal, and community processes that we ourselves have not devised.

Apprenticeship

A metaphor that has appealed to many scholars who focus on the mutual embeddedness of the individual and the sociocultural world is that of apprenticeship. In apprenticeship, newcomers to a community of practice advance their skill and understanding through participation with others in culturally organized activities (Bruner, 1983; Dewey, 1916; Goody, 1989; John-Steiner, 1985; Lave & Wenger, 1991; Rogoff, 1990). The metaphor focuses attention on the active roles of newcomers and others in arranging activities and support for developing participation, as well as on the cultural/institutional practices and goals of the activities to which they contribute.

The apprenticeship metaphor has at times been used to focus on expert–novice dyads; however, apprenticeship involves more than dyads. Apprenticeship relates a small group in a community with specialization of roles oriented toward the accomplishment of goals that relate the group to others outside the group. The small group may involve peers who serve as resources and challenges for each other in exploring an activity, along with experts (who, like peers, are still developing skill and understanding in the process of engaging in activities with others of varying experience). Apprenticeship as a concept goes far beyond expert–novice dyads; it focuses on a system of interpersonal involvements and arrangements in which people engage in culturally organized activity in which apprentices become more responsible participants.

Research that focuses on the community plane using the metaphor of apprenticeship examines the institutional structure and cultural technologies of intellectual activity (say, in school or work). For example, it encourages the recognition that endeavors involve purposes (defined in community or institutional terms), cultural constraints, resources, values relating to what means are appropriate for reaching goals (such as improvisation versus planning all moves before beginning to act),

and cultural tools such as maps, pencils, and linguistic and mathematical systems.

I describe Girl Scout cookie sales and delivery in the three sections of this chapter dealing with apprenticeship, guided participation, and participatory appropriation to highlight the point that these different planes of analysis are mutually constituting and cannot stand alone in the analysis of the activity. In this section, description of this activity as apprenticeship – focusing on the community and institutional aspects of the activity – would be impossible without reference to the personal and interpersonal aspects of the endeavor. Likewise, to understand the personal or interpersonal processes that become the focus of later sections, it is essential to understand the historical/institutional contexts of this activity, which define the practices in which scouts and their companions engage and at the same time are transformed by successive generations of scouts. Individual scouts are active in learning and managing the activity, along with their companions, as they participate in and extend community, institutional practices that began more than 7 decades before.

For readers who are familiar with the activity of Girl Scout cookie sales and delivery, information in this plane of analysis may be so taken for granted that it seems unnecessary to state. However, that is in the nature of cultural understanding: It is essential, yet so taken for granted that special efforts are needed to draw attention to important features of the obvious (Smedslund, 1984).

Our team (Rogoff, Lacasa, Baker-Sennett, & Goldsmith, in preparation) chose to study cookie sales because we wanted to go outside the usual institutions of research such as those of schooling and laboratories, which of course also involve interpersonal and institutional contexts, but which are more difficult to study because researchers are more likely to take them for granted. Systems in which one is completely immersed are difficult even to detect. Analysis of the sociocultural nature of social and individual activity is difficult for researchers embedded in educational situations or research traditions that are often seen as the way things must be rather than just one way that things happen to be.

Comparisons across cultures are often useful in drawing the attention of insiders of a community to unnoticed assumptions and practices. Fortunately, the readership of this chapter – an international community of scholars – requires making the cultural/institutional plane explicit, for the practices involved in Girl Scout cookie sales are local to the United States. Historical changes in the practices of this activity provide another tool for becoming more aware of the cultural/community plane of analysis as present generations of scouts and cookie companies continue to contribute to the ongoing, developing cultural process constituting the practices of the apprenticeship. So, what follows in this section is an account of the institutional/cultural plane of the activity, which I am viewing as apprenticeship.

Cookie sales are a major annual fund-raising effort of the Girl Scouts of America, a voluntary organization dedicated to girls' moral education, the development of home, academic, and outdoor skills, and career preparation. The scouts meet on a weekly basis in units called troops, which involve about a dozen scouts and one or two women as leaders. The funds from cookie sales are used to support the troops' activities, regional administration, and girls' participation in day camps and summer camps run by the organization.

The scouts compose the sales force, trained and supervised by the organization, that goes door to door selling to family and friends (or getting their parents to sell cookies at work). Most scouts participate in the sales and take their economic role very seriously; their parents must sign a form agreeing to be responsible for the large sums of money involved. Originally, the cookies were both baked and sold by the scout troops; now the scouts sell cookies provided by large baking companies. Many scouts have older sisters or mothers who themselves sold Girl Scout cookies when they were scouts; older customers are often eager to buy cookies as they remember their own efforts to sell Girl Scout cookies.

Our study involved working with two troops of 10- and 11-year-old scouts in Salt Lake City, Utah. In one troop, we became "cookie chairs" and underwent the training to serve as the troop's organizers of the sale (a role usually filled by a mother of a girl in the troop, which one of us was). In the other troop, we observed the process. The girls became our collaborators and suggested that we give them tape recorders to carry around to record their sales and deliveries, which we did.[3]

The collective activity of planning cookie sales and delivery occurs with the constraints and resources provided by traditions and practices

of the Girl Scout organization and associated baking companies, which set deadlines and provide organizational supports to the girls in their efforts to keep track of sales, cookies, and money, as well as to manage their time and resources. The scouts (currently) take orders on a glossy order form provided by the cookie company and deliver cookies a month later, according to dates set by the regional administration. The cookie order form is color coded in a way that facilitates keeping track of the different kinds of cookie. (For example, customers order Thin Mints by indicating the number of boxes desired in the green column; the number of Trefoils is indicated in the yellow column. The boxes and cases of cookies and other materials maintain this color coding.) The order form is laid out to facilitate calculation of amounts of money, presentation of information to customers, and keeping track of deliveries.

To illustrate focusing on the apprenticeship or community plane of analysis, this section has described Girl Scout cookie sales in terms of institutional organization and evolution of community practices. These, of course, could not be described without reference to the contributions and development of individual girls and their companions in the shared endeavor. Understanding the processes that become the focus at each plane of analysis – individual, interpersonal, and community/institutional – relies on understanding the processes in the background as well as those in the foreground of analysis.

Guided participation

"Guided participation" is the term that I have applied to the interpersonal plane of sociocultural analysis. It stresses the mutual involvement of individuals and their social partners, communicating and coordinating their involvement as they participate in socioculturally structured collective activity (Rogoff, 1990; Rogoff & Gardner, 1984).

The concept of guided participation is not an operational definition that one might use to identify some and not other interactions or arrangements. Rather, it is meant to focus attention on the system of interpersonal engagements and arrangements that are involved in participation in activities (by promoting some sorts of involvement and restricting others), which is managed collaboratively by individuals and their social partners in face-to-face or other interaction, as well as in

the adjustment of arrangements for each others' and their own activities.

The concept does not define when a particular situation is or is not guided participation, but rather provides a *perspective* on how to look at interpersonal engagements and arrangements as they fit in sociocultural processes, to understand learning and development. Variations and similarities in the *nature* of guidance and of participation may be investigated (such as in adults' and children's responsibilities in different cultural communities, Rogoff, Mistry, Göncü, & Mosier, 1993), but the concept of guided participation itself is offered as a way of looking at all interpersonal interactions and arrangements.

The interpersonal plane of analysis represented by guided participation is made up of the events of everyday life as individuals engage with others and with materials and arrangements collaboratively managed by themselves and others. It includes direct interaction with others as well as engaging in or avoiding activities assigned, made possible, or constrained by others, whether or not they are in each other's presence or even know of each other's existence. Guided participation may be tacit or explicit, face-to-face or distal, involved in shared endeavors with specific familiar people or distant unknown individuals or groups – peers as well as experts, neighbors as well as distant heroes, siblings as well as ancestors. It includes deliberate attempts to instruct and incidental comments or actions that are overheard or seen as well as involvement with particular materials and experiences that are available, which indicate the direction in which people are encouraged to go or discouraged from going.

Participation requires engagement in some aspect of the meaning of shared endeavors, but not necessarily in symmetrical or even joint action. A person who is actively observing and following the decisions made by another is participating whether or not he or she contributes directly to the decisions as they are made. A child who is working alone on a report is participating in a cultural activity with guidance involving interactions with the teacher, classmates, family members, librarian and authors, and the publishing industry, which help the child set the assignment and determine the materials and approach to be used.

Guided participation is thus an interpersonal process in which people manage their own and others' roles, and structure situations (whether by facilitating or limiting access) in which they observe and participate

in cultural activities. These collective endeavors in turn constitute and transform cultural practices with each successive generation.

Processes of communication and coordination of efforts are central to the notion of guided participation. New members of a community are active in their attempts to make sense of activities and may be primarily responsible for putting themselves in a position to participate. Communication and coordination with other members of the community stretches the understanding of all participants, as they seek a common ground of understanding in order to proceed with the activities at hand. The search for a common ground as well as to extend it involves adjustments and the growth of understanding. As Dewey (1916) put it, people "live in a community in virtue of the things which they have in common; and communication is the way in which they come to possess things in common" (p. 5).

Communication and coordination occur in the course of participation in shared endeavors, as people attempt to accomplish something. Their activity is directed, not random or without purpose; understanding the purposes involved in shared endeavors is an essential aspect of the analysis of guided participation. As people direct their activity toward implicit, explicit, or emerging goals, they may not be able to articulate their goals. Their goals may not be particularly task oriented (e.g., their aim may be to pass time enjoyably or to avoid an unpleasant task) or held entirely in common with others (e.g., some may resist the direction of others). However, people's involvements are motivated by some purpose (though it may often be sketchy), and their actions are deliberate (not accidental or reflexive), often in an opportunistic, improvisational fashion (see Baker-Sennett, Matusov, & Rogoff, 1992, in press).

The perspective of guided participation, which builds on basic notions of Vygotsky's theory, emphasizes routine, tacit communication and arrangements between children and their companions. However, the concept of guided participation is intended to encompass scenarios of cognitive development that are less central in the Vygotskian account – especially the arrangements and interactions of children in cultural communities that do not aim for school-based discourse and concepts (Rogoff et al., 1993) and the arrangements and interactions of middle-class children in their routine involvement in everyday cognitive activities at home and in their neighborhoods. It also draws attention to the active nature of children's own efforts to participate and observe the skilled activities of their community.

In the study of Girl Scouts selling and delivering cookies, analysis of guided participation involves attention to the arrangements between people, including the availability of particular resources and constraints (e.g., order forms, transportation, deadlines, children's and customers' daily schedules), as well as their close and complex interpersonal involvements. The cookies are usually sold and delivered with a partner – another scout, a sibling, or a parent. Child partners were more common during the sales phase (and some girls noted that younger partners were better because "cute" makes for more sales). Adult partners were common during the delivery phase, when money needed to be collected and bulky merchandise delivered. Usually the management of the money was handled by a parent in collaboration with the scout; often the scouts recruited parents to drive them around with the cookies to make their deliveries, but they sometimes worked with siblings who helped carry boxes or loaned a toy wagon. The balance of responsibility between adults and children in keeping track of money and deliveries often changed over the course of the weeks of delivery.

The means of handling the problems of sales and delivery involved using various strategies developed in the process as well as those borrowed from others and from long-standing cultural traditions. In organizing the individual orders, the girls often bundled the boxes for each order together using a technique that in some cases we could track as being borrowed from scouts with more experience or from mothers (e.g., putting a rubber band around the boxes and labeling the bundle with a Post-it adhesive note with the customer's address and the amount due). In calculating amounts due, the girls had available to them many sources of support: the number system used in their community and school, the calculation box on the order form provided by the organization, discussions with their mothers as they performed calculations for many customers, and talk-aloud calculations by customers at the time of the sale (when they filled out the order form) that demonstrated how calculations on a unit price of $2.50 could be handled – for example, by thinking of a box costing a fourth of $10, rather than by multiplying out each digit.

Guided participation included some arrangements and interactions

that were meant to instruct (e.g., training organized by the national organization), and some that were simply available (e.g., in the format of the order form) or did not have the intent of instruction or assistance (e.g., in the conversations with customers or arguments among partners regarding how to proceed). The girls as well as their social partners were active in borrowing and developing one or another approach and making use of the resources available, as well as in negotiating a balance of responsibility for shared efforts. Their efforts were purposeful, with the general goals of selling cookies, delivering them as promised, not losing any money, and earning incentives (prizes and reduced rates for summer camp) offered by the organization for high sales.

An account of the Girl Scouts' activity illustrates the interpersonal plane of shared involvement and arrangements within cultural activity and at the same time requires reference to the other two planes of analysis. Understanding guided participation in Girl Scout cookie sales and delivery requires understanding the cultural/institutional plane and the individual plane of analysis. The girls and their companions participated in and contributed to intellectual and economic institutions and traditions of their nation and the scout organization (such as numerical systems, accounting, exchange of money and goods), with associated cultural values (such as efficiency, persuasion of others within societal bounds of propriety, competition for achievement, and responsible completion of agreed-upon tasks). The next section focuses on the individual plane of analysis of sociocultural activity, using the concept of participatory appropriation, to examine how individuals change through their participation in cultural activities.

Participatory appropriation

I use the term "participatory appropriation" (or simply "appropriation") to refer to the process by which individuals transform their understanding of and responsibility for activities through their own participation. This notion is a companion concept to those of apprenticeship and guided participation. The basic idea of appropriation is that, through participation, people change and in the process become prepared to engage in subsequent similar activities. By engaging in an activity, participating in its meaning, people necessarily make

ongoing contributions (whether in concrete actions or in stretching to understand the actions and ideas of others). Hence, participation is itself the process of appropriation.

I have used the terms "appropriation" and "participatory appropriation"[4] to contrast to the term "internalization" in discussing how children gain from their involvement in sociocultural activity (Rogoff, 1990, in press). Rather than viewing the process as one of internalization in which something static is taken across a boundary from the external to the internal, I see children's active participation itself as being the process by which they gain facility in an activity. As Wertsch and Stone (1979, p. 21) put it, "The process *is* the product." Or in Dewey's words:

> The living creature is a part of the world, sharing its vicissitudes and fortunes, and making itself secure in its precarious dependence only as it intellectually identifies itself with the changes about it, and, forecasting the future consequences of what is going on, shapes its own activities accordingly. If the living, experiencing being is an intimate participant in the activities of the world to which it belongs, then knowledge is a mode of participation, valuable in the degree in which it is effective. It cannot be the idle view of an unconcerned spectator. (1916, p. 393)

The participatory appropriation view of how development and learning occur involves a perspective in which children and their social partners are interdependent, their roles are active and dynamically changing, and the specific processes by which they communicate and share in decision making are the substance of cognitive development.

My contrast with the term "internalization" concerns the usage that it often receives in information processing and learning accounts, where it implies a separation between the person and the social context, as well as assumptions of static entities involved in the "acquisition" of concepts, memories, knowledge, skills, and so on. The dynamic approach of participatory appropriation does not define cognition as a collection of stored possessions (such as thoughts, representations, memories, plans), but rather treats thinking, re-presenting, remembering, and planning as active processes that cannot be reduced to the possession of stored objects (see Baker-Sennett, Matusov, & Rogoff, 1992; Gibson, 1979; Leont'ev, 1981; Rogoff, 1990.) Instead of studying individuals' possession or acquisition of a capacity or a bit of knowledge, the focus is on the active changes involved in an unfolding event or activity in which people participate. Events and activities are inherently dynamic, rather than being

static conditions to which time is added as a separate element. Change and development, rather than static characteristics or elements, are assumed to be basic (see Pepper, 1942).

Some scholars use the term "internalization" in ways resembling how I use the term "participatory appropriation." Translations of Vygotsky often refer to internalization, but his concept may be similar to my notion of appropriation, at least in emphasizing the inherent transformation involved in the process.[5] Berger and Luckmann (1966) also provide a related account using the term "internalization." Forman (1989) summarized their approach:

> Berger and Luckmann argued that there are three components to the social construction of reality: externalization, objectivation, and internalization. All three components are necessary to their theory and together they explain how social institutions, technologies and knowledge are created, maintained, legitimated, and transmitted through social interaction. They proposed that knowledge begins as a natural by-product of the externalization of human activity. As people try to interact over time with each other, an implicit mutual understanding develops between them. Soon, however, this tacit knowledge becomes objectified in explicit concepts and rules to which language and other sign systems can refer. The final step in the process occurs when this knowledge needs to be internalized by people who were not part of its creation. (p. 57)

I first noticed the word "appropriation" in Bakhtin's (1981) writing, as I was searching for a way to express the difference between my views and the version of internalization involving importing objects across boundaries from external to internal. Bakhtin argued that the words people use belong partially to others, as they appropriate words from others and adapt them to their own purposes.

However, it is important to clarify some ambiguities in the use of the term "appropriation." It seems to have three uses: One use is simply the same as internalization – something external is imported. The second use goes beyond this but in my view is still a version of the concept of internalization – something external is imported and transformed to fit the purposes of the new "owner." An example of this use is Harre's (1983) explicit reference to appropriation as a process that precedes transformation. Newman, Griffin, and Cole (1989) also seem to refer to the internalization of something external in referring to the appropriation of cultural resources and tools (such as systems of language) through involvement in culturally organized activities in which the tool plays a role.

The third use of the term "appropriation" is my concept of participatory appropriation, in which the boundary itself is questioned, since a person who is participating in an activity is a part of that activity, not separate from it. The idea that the social world is external to the individual becomes misleading from this approach. Rather, a person participating in an activity is involved in appropriation through his or her own participation. Appropriation occurs in the process of participation, as the individual changes through involvement in the situation at hand, and this participation contributes both to the direction of the evolving event and to the individual's preparation for involvement in other similar events. In my view, appropriation *is* a process of transformation, not a precondition for transformation. Thus, I use the term "appropriation" to refer to the change resulting from a person's *own participation* in an activity, not to his or her internalization of some external event or technique.

Participation involves creative efforts to understand and contribute to social activity, which by its very nature involves bridging between several ways of understanding a situation. Communication and shared efforts always involve adjustments between participants (with varying degrees of asymmetry) to stretch their common understanding to fit with new perspectives in the shared endeavor. Such stretching to fit several views and to accomplish something together *is* development and occurs in the process of participation. Participants' individual changes in role and understanding extend to their efforts and involvements on similar occasions in the future.

The purpose of my emphasis on participatory appropriation rather than internalization is to distinguish between two theoretical perspectives: The appropriation perspective views development as a dynamic, active, mutual process involved in peoples' participation in cultural activities; the internalization perspective views development in terms of a static, bounded "acquisition" or "transmission" of pieces of knowledge (either by internal construction or by the internalization of external pieces of knowledge; see Figure 6.1). These are, I believe, quite different theoretical views.

An important difference between the participatory appropriation and the internalization perspectives concerns assumptions about time. In the internalization perspective, time is segmented into past, present, and future. These are treated as separate and yield problems of how

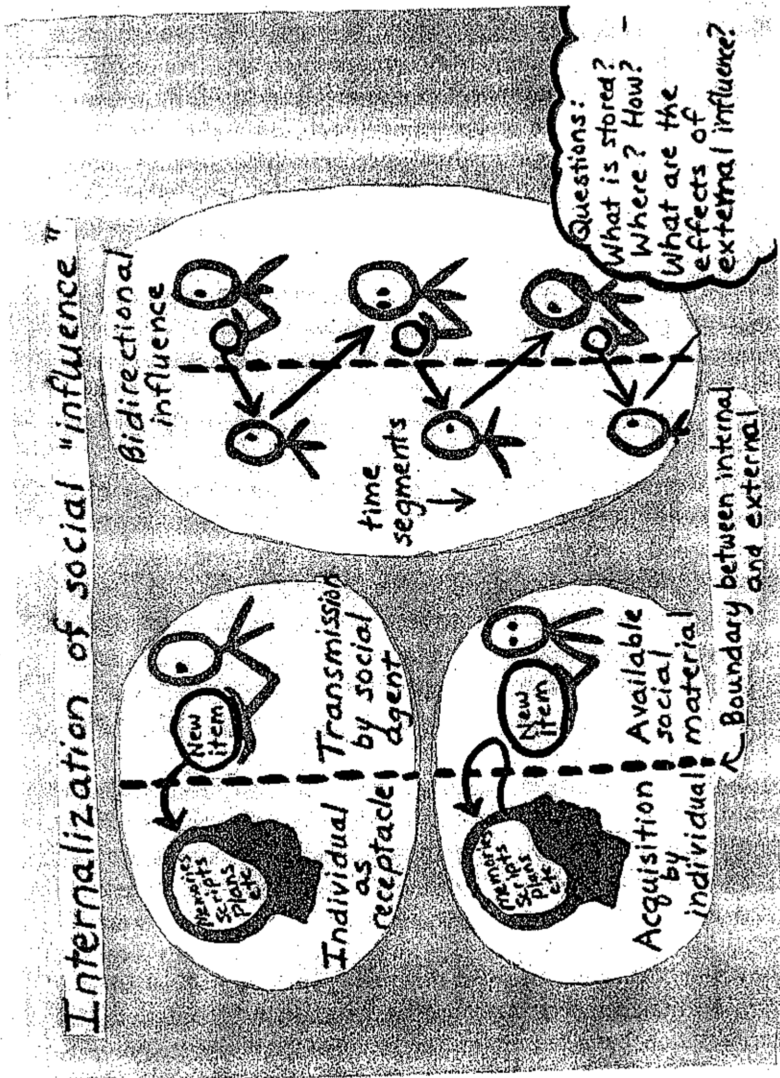

Figure 6.1.

to account for relations across time that are often handled by assuming that the individual stores memories of the past that are somehow retrieved and used in the present, and that the individual makes plans in the present and (if they are stored effectively) executes them in the future. The links between these separate time segments are bridged in mysterious ways to bring information or skills stored at one point in time to use in another. It involves a storage model of mind, with static elements held in the brain, and needs a homunculus or difficult-to-specify executive process to bring the elements stored at one epoch to implement in a later epoch (see Baker-Sennett, Matusov, & Rogoff, 1992). This is the same mysterious executive process that is required in the internalization perspective to acquire, accumulate, and store external pieces of knowledge or skill in the brain.

In the participatory appropriation perspective, time is an inherent aspect of events and is not divided into separate units of past, present, and future.[6] Any event in the present is an extension of previous events and is directed toward goals that have not yet been accomplished. As such, the present extends through the past and future and cannot be separated from them. Pepper gave a supporting example: The meaning of a word in a sentence (i.e., the present) brings with it the previous meanings of that word in other sentences and of other words already expressed in that sentence (the past in the present) and is also directed toward the overall idea to which the word contributes that is not yet fully expressed (the future in the present).

When a person acts on the basis of previous experience, his or her past is present. It is not merely a stored memory called up in the present; the person's previous participation contributes to the event at hand by having prepared it. The present event is different from what it would have been if previous events had not occurred; this does not require a storage model of past events.

Analogies can be drawn from physical and organizational change. The size, shape, and strength of a child's leg is a function of the growth and use that is continually occurring; the child's leg changes, but we do not need to refer to the leg accumulating units of growth or of exercise. The past is not *stored* in the leg; the leg has developed to be as it is currently. Likewise, the current situation of a company is a function of previous activities, but we do not need to account for changes in company direction or policy in terms of accumulated units

of some kind. It is more useful simply to talk about the activities involved in the changes over time.

In this view, there is no need to segment past, present, or future or to conceive of development in terms of the acquisition or transmission of stored units. Development is a dynamic process, with change throughout rather than accumulation of new items or transformation of existing items.

In this view, participatory appropriation is an aspect of ongoing events. A person who participates in events changes in ways that make a difference in subsequent events. Participatory appropriation is ongoing development as people participate in events and thus handle subsequent events in ways based on their involvement in previous events. This contrasts with the internalization perspective in which one would look for exposure to external knowledge or skill, followed by internalization with or without transformation by the individual, followed by evidence of such internalization as the person retrieves the acquired knowledge or skill independently (see Rogoff, Radziszewska, & Masiello, in press).

In some efforts to understand internalization of social events time is used as a tool, but still with the assumptions of a separation between internal and external, of time as independent of events, of boundaries between past, present, and future, and of development as acquisition of static pieces of information or skill. Sequential analyses of social interaction, for instance, may examine change over time by breaking an event into smaller units (of either time or moves made by one person or the other) but often define the contribution of each partner separately in order to look at the impact of one upon the other. For example, a study may examine maternal assistance and child learning by choosing categories of maternal behavior (questions, directives, praise) and categories of child behavior (errors, correct response, off-task behavior) and examining the contingencies between them. Such a sequential strategy is consistent with the internalization perspective, in which time is separate from events, the external and internal events are arbitrarily separated, and development is seen as accumulation (see Figure 6.1).

The participatory appropriation perspective focuses instead on events as dynamically changing, with people participating with others in coherent events (where one could examine each person's contributions as they relate to each other, but not define them separately), and development is seen as transformation. Inherent to the participatory appropriation view is the mutual constitution of personal, interpersonal, and cultural processes, with development involving all planes of focus in sociocultural activity (see Figure 6.2).

The internalization view is based on an assumption that the individual is the primary unit of analysis, with static interpersonal and cultural influences added onto "basic" individual processes. In the internalization model, the individual is either a passive recipient of external social or cultural influence – a receptacle for the accumulation of knowledge and skill – or an active seeker of passive external social and cultural knowledge and skill. In the participatory appropriation perspective, personal, interpersonal, and cultural processes all constitute each other as they transform sociocultural activity.

The transformations involved in participatory appropriation are developmental in the sense that they are changes in particular directions. The direction of development varies locally (in accord with cultural values, interpersonal needs, and specific circumstances); it does not require the specification of universal or ideal end points of development.

The questions to investigate are different if we move from internalization approaches and instead view cognitive development as participatory appropriation through guided participation in a system of apprenticeship. Questions of where memories are stored or how information is taken from external events or how children accumulate knowledge or implement plans all become less relevant ways to study development from this sociocultural approach.[7]

Instead, we begin to examine in closer focus the actual processes by which children participate with other people in cultural activity and the ways they transform their participation. The investigation of people's actual involvement in activities becomes the basis of our understanding of development rather than simply the surface details that we try to get past. The central question becomes how people participate in sociocultural activity and how their participation changes from being relatively peripheral (see Lave & Wenger, 1991), observing and carrying out secondary roles, to sometimes being responsible for managing such activities.

Viewing development as participatory appropriation recasts the clas-

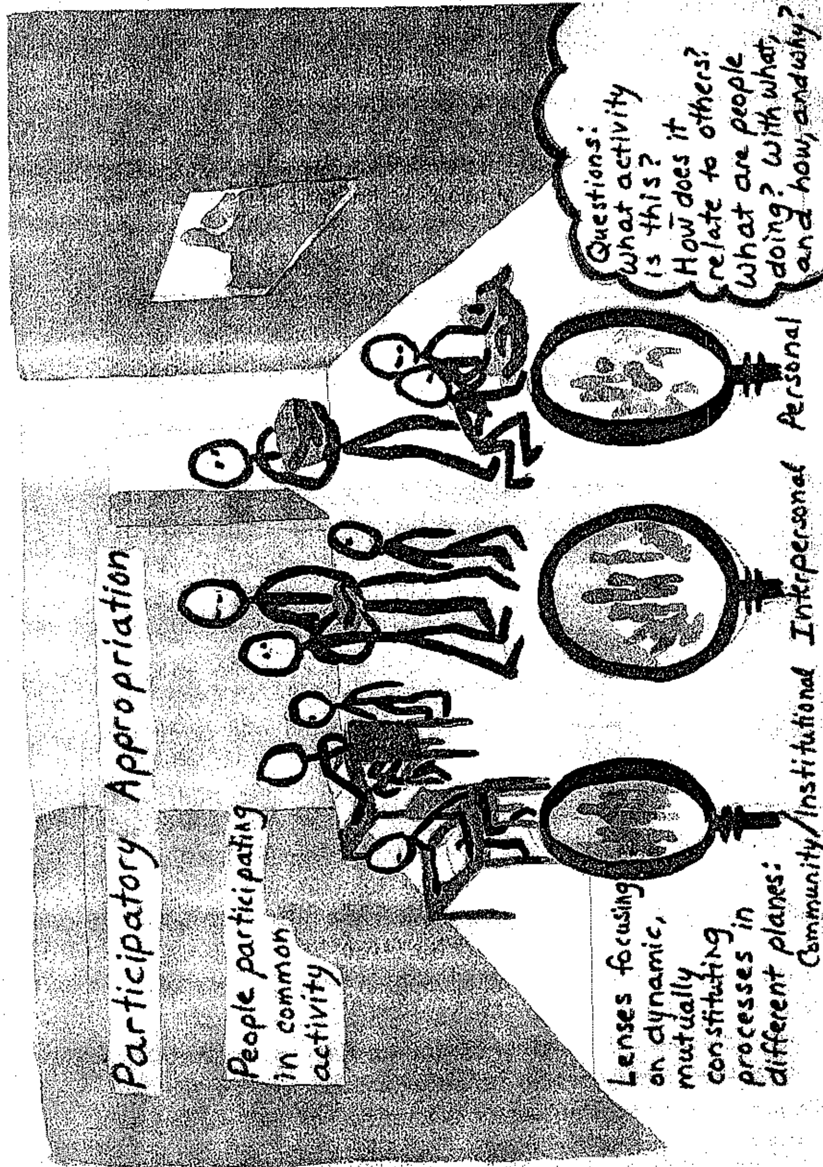

Figure 6.2.

sic question concerning the transfer of knowledge. How an individual approaches two situations has to do with how he or she construes the relations between their purposes or meanings. Hence, the process is inherently creative, with people actively seeking meaning and relating situations to each other.

This creative process, of course, is itself a sociocultural activity. People, by themselves and with companions, puzzle out how to manage a new situation on the basis of their own and their shared history, to reach their own and their shared goals, through subtle and explicit communication indicating the "kind" of a situation in which they are involved. All such communication is at one and the same time particular and general, as reference is made to the here and now in ways that draw on concepts one has met before (Dewey, 1916). For example, to refer to an object with a label (e.g., "This is a chapter") links the present object with a general class of objects of sociocultural import. The ways that objects and events are classified in language and in action are sociocultural generalizations within which we all function and that we extend when we figure out how to handle a thing or event that is somewhat novel to us.

From my perspective, orienting our inquiry by focusing on how people participate in sociocultural activity and how they change their participation demystifies the processes of learning and development. Rather than searching for the nature of internalization as a conduit from external bits of knowledge or skill to an internal repository, we look directly at the efforts of individuals, their companions, and the institutions they constitute and build upon to see development as grounded in the specifics and commonalities of those efforts, opportunities, constraints, and changes.

In the study of Girl Scout cookie sales and delivery, we were able to observe changes in how the girls participated in a number of aspects of the activity.[8] In the calculation of charges to customers, we could track in many cases how the girls took on greater responsibility over the course of the delivery, with their mothers often initially managing the calculations and supervising the girls in keeping track of customers who had paid; in the course of participating in a system that was often set up by the mothers, the girls took on greater responsibility for handling these complicated and important aspects of the activity.

We could also track how the girls, over the course of the activity,

became more familiar with the layout of the routes connecting their customers and often managed their parents' driving as the parents helped the girls deliver. We observed (actually, eavesdropped on) the girls learning to manage the complex planning involved in developing spatial routes with sufficient flexibility to be efficient within the interpersonal and material resources and constraints of the situation.

We could observe how the girls sometimes participated with customers, following the structure provided by the scout organization in the format of the order sheet, which provided the girls with talk-aloud calculations that revealed arithmetic strategies. We followed the process by which the girls made use of and extended cultural tools (writing, calculating, using Post-it notes to remember, developing a common language to refer to places to be visited) that tied their efforts in this activity to practices in other institutions of their culture.

These observations all revealed cognitive developmental processes that occurred as the girls participated in this sociocultural activity. Through the girls' participation, they developed in ways that we could see leading to changed later participation. Their participatory appropriation was an ongoing feature of their guided participation in the apprenticeship system through which we can view the personal, interpersonal, and cultural processes of this activity.

Although it is beyond the scope of this chapter to discuss methodological considerations, the sociocultural approach that I have presented involves shifting such considerations associated with the changes in the conceptual base. The approach does not prescribe the use of specific methodological tools but does emphasize the relation of particular tools to the theoretical purposes to which they are put. An analysis of shifts in the interpretation of data given such a sociocultural approach is available in Rogoff, Radziszewska, and Masiello (in press). The tools that I have used for studying patterns of sociocultural activities emphasize close analysis of events through ethnographic methods, abstraction of generalities based on this analysis, extensive use of graphing of information and application of quantitative methods to check and communicate the patterns discerned through the ethnographic and graphic analyses (see Rogoff et al., 1993, for discussion and examples of these methods).

In sum, I have presented a sociocultural approach that is based on consideration of personal, interpersonal, and community planes of focus

in the analysis of developmental process involved in the participation of individuals with others in cultural practices. The approach emphasizes seeking patterns in the organization of sociocultural activities, focusing variously on personal, interpersonal, or community aspects of the activities, with the other aspects in the background but taken into account. Research resulting from this approach emphasizes observing both similarities and differences across varying sociocultural activities, as well as tracking the relations among aspects of events viewed in different planes of analysis. Such a sociocultural analysis requires considering how individuals, groups, and communities transform as they together constitute and are constituted by sociocultural activity.

Notes

1. The metaphor appears to me to be equally applicable to culturally organized activities that can be regarded as desirable or undesirable. Although my own research focuses on learning to participate in activities valued in the communities studied, I think that the conceptual framework can be well applied to learning to participate in activities censured in the communities studied (such as interpersonal violence and addictive behavior, which raise concern).
2. Such direction/guidance does not simply include facilitation of involvement in certain activities; it also includes restriction or very indirect channeling of the activities in which people participate, for example, the exclusion of children from some adult activities or the message that they are allowed to participate only in certain ways. Guidance is thus direct or indirect structuring of people's possibilities for participation that promotes some particular direction of development.
3. They also suggested that we disguise ourselves as bushes and follow them around, which we did not.
4. These two terms mean the same thing in my account. I add the word "participatory" to emphasize that in my use of the term, appropriation is necessarily through a person's *own* involvement, not an incorporation of something external. This is a point of difference with others who also use the term "appropriation," as I discuss in this section.
5. However, Vygotsky's characterization of internalization as proceeding from the interpersonal to the intrapersonal involves a separation in time of social and individual aspects of the activity, which is at odds with my idea of participatory appropriation, in which a person's participation is at one and the same time a social and an individual process.
6. My discussion of time is greatly influenced by Gibson's theory and Pepper's account of a contextual world hypothesis. I am endebted to Beth Shapiro and Christine Mosier for discussion of these issues.
7. The metaphor of stored mental representation and the characterization of plans,

memories, concepts, etc. as objects of inquiry may still be useful in some scholarly endeavors. I am not arguing for necessarily dropping the metaphor but for recognizing it *as a metaphor*, perhaps useful for communication between scholars, but not to be automatically assumed to characterize the functioning of the people whom we study. It seems more parsimonious to drop it for some research.

8. We focus here on the development of the girls through their participation in this activity; similar analyses could be done of the development of the troop leaders, family members, customers, and researchers through their participation in the activity.

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