

Implications of Sibling Caregiving for Sibling Relations and Teaching Interactions in Two Cultures

JACQUELINE RABAIN-JAMIN
ASHLEY E. MAYNARD
PATRICIA GREENFIELD

ABSTRACT *This article explores the social and cognitive implications of sibling caregiving among the Zinacantec Maya of Mexico and the Wolof of Senegal. Ethnographic video data of sibling caregiving interactions were collected, focusing on children ages three to 13 years interacting with their two-year-old siblings. Sibling relations in both cultures reflect a system of multi-age play, the children's sensitivity to age and gender hierarchies, and the older siblings' role as teachers of their younger siblings. Differences in the two groups include more verbal exchanges and wordplay with the two-year-old Wolof children and more overt efforts by older Zinacantec siblings to incorporate the two year olds into their group activity. The data indicate an overall pattern of cultural transmission by which older siblings teach younger ones in the context of caring for them. The pattern is nuanced by each group's social organization and rules for social interaction, exhibited in the children's play.*

A recent body of research suggests that anthropological theories relative to the socialization of the child tend to emphasize the control exercised by adults in the processes of transmission. By concentrating on the final state that the child has reached and on the influence exercised by adults to reach this objective, many studies have neglected the capabilities of children and the impact they have on their own development. Hirschfeld (2002), supporting the work of Corsaro (1997) and Goodwin (1990), underlines the fact that, while sharing the space of the parents, the children create and maintain cultural

environments that are appropriate for them. They develop social practices and networks of relations in specific social spaces. Symbolic play is one of these very specialized activities in which adults are usually widely excluded and remain peripheral spectators to the children's actions.

There is a growing body of work examining the ways that siblings in particular socialize each other into cultural activities. Siblings are usually close in age, and are often emotionally close, and thus they can be very effective at socializing each other into cultural activities (Maynard 2002). Zukow (1989a), presenting a body of research focused on the domain of sibling interactions all over the world, concludes that siblings are effective at socializing each other and that a cross-disciplinary approach to the study of siblings adds a great deal to our understanding of development, play, language socialization, and culture. The present article adds to this literature by using theory and methods from anthropology and psychology to examine the specific case of discourse in guided transactions in two contexts in which siblings are caregivers for one another, and in which the sibling caregiving is characterized by many episodes of play.

Specifically, we will examine guided transactions among siblings in which learning and action are inseparable. This approach, inspired by the work of Vygotsky (1978), Lave and Wenger (1991), and Rogoff (1990), is based on both theory and findings that indicate that learners progress in their understanding of procedures by participating in work activities with the guidance of more experienced partners (Ingold 2000). In this view, the notion of transmission is being replaced more and more by that of "guided transaction," and the part each subject takes in these totally or partially asymmetrical interactions plays an active role (Verba 1993).

What are guided transactions like for children in cultures in which sibling caregiving is the norm? The present article will address these questions in two complementary ways. The first is to study teaching processes in cooperative play among children, particularly the role of guidance provided by older siblings through verbal and nonverbal behaviors. Many studies in European and American societies have demonstrated the important role played by mothers in the appropriation of knowledge and the acquisition of communication skills by young children. Other studies have emphasized the importance of the cognitive or verbal contributions made by peers or siblings (Dunn 1988; Mannle et al. 1991; Maynard 2002; Piaget 1965; Woollett 1986; Zukow 1989b). We will examine these processes by looking at interactions among children in societies in which child-to-child interactions are socially emphasized through child caregiving practices and the existence of an age hierarchy governing sibling relationships (Weisner and Gallimore 1977). More specifically, our idea is to try to show—for two different populations, the Zinacantec Maya of Mexico and the Wolof of Senegal—that the ability of older children to teach and guide, and

the ability of younger children to cooperate and participate, develop in parallel during joint play activities among siblings, especially in cases of symbolic play. In both cultures, sibling caregiving is a crucial part of the "developmental niche" (Harkness and Super 1996; Super and Harkness 1986). As they play together, children not only acquire informal skills and know-how by cooperating with other children of different levels of expertise, they also learn to master a relational space, define interaction rules, and develop ways of expressing things through language, the instrument of social action (Vygotsky 1978).

Our second facet is to study a behavior that both counteracts and complements cooperation, namely, opposition. Child play includes not only cooperative behavior but also "adversative episodes" (Eisenberg and Garvey 1981). Handling opposition among interacting partners requires not only an understanding of social situations and an awareness of the existence of shared meanings but also the appropriation of rules about how to use language and the ability to grasp the needs and feelings of others. Here we look specifically at reactions to oppositional behavior in teaching episodes within the sibling group.

LANGUAGE SOCIALIZATION IN SIBLING INTERACTIONS

We take a perspective from language socialization research that language practices organize the process of becoming an active, competent participant in any particular community (Ochs 2001). In this perspective, language and behavior are learned at the same time during interactions with other members of the culture (Schieffelin and Ochs 1986; Zukow 1989c). Knowledge, emotion, and social action develop as people with varying degrees of experience interact together (Ochs 2001). Thus, language socialization research depends greatly on ethnographic methods, in which comprehensive ethnography comprises the first step and more topic-focused ethnography follows (Watson-Gegeo and Gegeo 1989). This is the approach used to collect data for the present study.

A number of language socialization studies in African, Mesoamerican, or Pacific societies (Brown 1998; de León 1998; Maynard 1999, 2002; Ochs and Schieffelin 1984; Watson-Gegeo and Gegeo 1989; Zukow 1989c) have demonstrated the important role played by relations between siblings in the socialization of the youngest child. Child caregiving practices put older siblings in charge of babies at an early age, and the seniority principle that governs all social relations in those groups officially grants older children authority over their younger siblings. Adults encourage the oldest child who is present to take an interest in the youngest child and his or her activities, and to make sure the youngster is contented and comfortable.

Do these features of social organization have an impact on the ways children interact with each other?

In everyday activities, sibling rivalry and sibling cooperation are assumed to play crucial roles in societies worldwide. Children must learn to assimilate the perspectives of others. Thomas Weisner (1993) emphasized that conflicts and disagreements observed in South Asia and in other non-Western societies are just as lively as those observed in North American families. However, the shared knowledge children have about sibling roles and obligations are different in the two types of contexts. Whereas North American cultures promote sibling independence, the South Asian cultural setting puts strong emphasis on complementarity of sibling roles in the family, sibling interdependence throughout life, and sibling co-ownership and control of resources, which is crucial for survival and reproduction (Weisner 1993). For Weisner, children growing up under such circumstances do not develop the same "negotiated rationalizations" as those Dunn noted in Western children (Nuckolls 1993:27). Rehearsal of rules, reasons, rationales, and arguments is not as elaborate, and there is less overt conflict. However, these claims need to be confirmed by additional data. A question that arises in societies like these, where child caregiving and fraternal solidarity are promoted, is whether the authority and control older children have over younger ones, and cultural expectations of closeness and support among siblings, are responsible for the lesser prevalence of overt conflict. What means are employed to obtain cooperation, cope with opposition, and reduce conflict?

Societies differ in how they deal with conflict, and whether and how they "soften" refusals. The types of refusals found depend both on the formal characteristics of the language and on the cultural characteristics of the social group. Several authors have emphasized the solidarity values and mutual obligation rules in a great number of African societies (Egner 1988; Fassin 1992). The price paid for the absence of solidarity among the members of a kinship group is shame and pressure to verbalize one's agreement and good feelings is a testimony to how important it is to be united (Ortigue and Ortigue 1984).

The questions addressed in this article relate to how sibling caregiving is expressed in several arenas of sibling relations: apprenticeship, social hierarchy, and conflict/harmony. Through microanalytic discourse analysis in two different cultures in two different languages and two different geographical areas, we can begin to understand the commonalities in the interactional processes that are socialized in each. Equally important, we can, in a preliminary way, add to current understanding of the interactional differences that can arise from other cultural differences that are separate from the common feature of sibling caregiving. Qualitative discourse analysis was used more than quantitative analysis in order to elucidate

interactional processes rather than compare normative frequencies of indexical phenomena (Greenfield 1997).

THE DATA

The two societies studied here, the Zinacantec Maya of Mexico and the Wolof of Senegal, are examples of cultures in which sibling socialization is much more important than in the authors' home contexts in France or the United States. The Zinacantec data were collected in the community of Nabenchauk in highland Chiapas, Mexico, about thirty minutes by road from San Cristobal de las Casas. The Wolof data were collected in two Baol villages in Senegal about one hundred kilometers from Dakar. The data in both settings were drawn from naturalistic video ethnography. The researchers in each case were well known in the village over more than a single season of fieldwork.

Both data sources address the issue of the cognitive and communicative contributions of older siblings to a younger sister or brother's development and vice versa in the context of sibling caregiving. Field data were collected in the two cultures during play activities involving children of different ages. We deliberately selected and centered the comparison on situations of play, those in which a structured activity takes place, directed to a purpose and occupying a specific temporal space. Our purpose was to make more striking, in a sense to maximize, the major features of the interaction through which knowing how to complete tasks and knowing how to speak are passed on, and common to, both cultures. The expected similarity concerns the activities of teaching of elder siblings and the forms of expression that they use according to their ages. Therefore, we do not claim to be able to report all the possible sibling caretaking situations. In most of the selected episodes of play, the elder sibling does not have an explicit charge of taking care of the baby while the mother is absent. The adults are not very far from their children in these instances; the mothers were usually occupied with various domestic tasks or involved in some conversation. We did not systematically examine caretaking situations in which the elder sibling offered completely unsupervised support to a young child because, in the Mayan case, there were none, and in the Wolof case, they were extremely rare. Cultural comparisons were made between the verbal or nonverbal means used by older siblings to cooperate with, guide, or respond to the youngest child, who was two years old. In both cultures, older siblings assume the role of teacher or guide for the toddler. The higher status of the older child is implicit in this teaching role. In both Zinacantec Maya and Wolof cultures, the higher status of the older child in sibling caregiving is generalized to all older person-younger person relationships, in which younger persons must behave respectfully toward

those who are older. For both the Zinacantecs and the Wolof, this principle is particularly central in older brother–younger brother relationships (Diop 1985; Vogt 1969).

Mayan Data: Ethnographic Background and Method

The Zinacantecs are a Mayan people who have been the subjects of ongoing ethnographic and experimental inquiry for over 40 years (e.g., de León 1997, 1999; Greenfield et al. 1989; Laughlin 1975; Vogt 1969). Boys traditionally grew up to spend their lives as subsistence farmers. Girls grew up to become mothers and to provide for their families by cooking and weaving.

Speech is a very important part of the Mayan daily routine, labeled as a potentially powerful force, to the extent that one's talk could cause another to become ill or even die (Stross 1974). Learning to speak properly, then, is an important part of development and socialization. Work on language practices has focused largely on adult linguistic functions, genres, and wordplay. For example, Haviland (1977) discusses the relationship between gossip and reputation in Zinacantan. In gossip, people often try to get more information than they give. Children learn how to gossip as they witness adult gossip conversations at the homes of extended family members and then return to tell their mothers what they witnessed. Haviland (2000) also reports on Tzotzil gestures and pointing, as does de León (2002). Zinacantec children learn and use gestural pointing as well as linguistic markers of pointing in the course of sibling interactions (de León 2002).

Several researchers have focused specifically on child language acquisition and socialization in Zinacantan. Gossen (1974a, 1974b) discusses children's games and songs; however, he does not discuss the development of such practices or their role in developmental processes. Others have focused specifically on developmental processes in language socialization and acquisition. Tzotzil language acquisition is embedded within participation frameworks (Goffman 1974) consisting of the child and important social others (de León 1997). De León (1997) shows how the child does more than simply occupy one participant category in the framework. Indeed, the Zinacantec infant shows, through her nonverbal behaviors, increasing competence as a coparticipant in the group routines within which her own actions are embedded. Children begin their mastery of *k'op* (language, defined broadly) by learning to repeat single words correctly and relate them to the correct referents (Gossen 1974a) with the help of others in the environment (de León 1997).

Linguistic anthropologists have also related children's emotions to their language acquisition and their caregivers' socialization of linguistic practices (de León 1999). Gossen (1974b) discusses the important Chamula

concept of heat to the child's developing linguistic competence. In this concept of heat, shared by all the Tzotzil Indians, babies are considered "cold," acquiring more heat as they develop. De León (1999) shows how early child socialization practices help to toughen children to help them gain more "heat." Caregivers train Zinacantec children to express the hot emotions of anger and aggression before the third year of life. Caregivers use verbal toughening routines to strengthen the child's soul, the innermost part of the child that is the basis of the social persona. De León (1999) describes how these emotionally laden "toughening" interactions help develop moral agency equally in both boys and girls. Teasing arouses the expression of anger that is believed to be an expression of "strength, assertiveness, and positively-valued confrontational behavior" (de León 1999).

Apparently, this is an adult socialization function as it has not been observed in sibling interactions. On the contrary, older siblings have the explicit charge of keeping the younger ones happy, with consequences for themselves if they do not. Therefore, on the emotional level, sibling and adult caregivers appear to have complementary roles in Zinacantec child socialization.

The Data Set

The data for this study were collected in the courtyards of Zinacantec Mayan families living in Nabenchauk, a Zinacantec village of about 45 hundred inhabitants. A courtyard might include one, two, or three households; in the latter two cases, the grouping would be of brothers and their nuclear family households or the households of two brothers plus the household of their parents. Other brothers with their families could live nearby. The Zinacantec Maya are monogamous and Catholic, although their particular religious practices are suffused with elements of the indigenous Mayan religion.

This village has two schools, one of which was attended by some of the older children. The Zinacantecs speak Tzotzil, a Maya language. However, schooling takes place in Spanish. The mothers in the study speak only Tzotzil to their children, although a minority have had some years of elementary education. About twenty percent of the Zinacantec child sample had some schooling, usually one or two years.

Videotapes were made of naturally occurring sibling groups at play. The focal children were 36 children (18 girls, 18 boys) ages 20 to 38 months (mean = 24 months) at play with their older siblings, cousins, and one six-year-old aunt (72 children ranging in age from three to 11 years, M = six years, ten months). The cousins and aunt are classificatory siblings, sharing the household or the extended-family compound.

Video data were collected as part of a larger, ongoing study of the development of cultural teaching (Maynard 1996, 2002). Data reported in this study were collected over a period of four months in 1997. For the study of the development of teaching, episodes of sibling teaching were selected and coded based on the criterion that an older sibling was doing something a younger sibling could learn. This definition allowed the study of both intentional and unintentional teaching. Teaching episodes were transcribed and coded for discourse variables involved in teaching. For the present analyses, a subset of the teaching transcripts was selected to highlight the development of teaching, age, and gender hierarchies in play, and the management of noncompliance by older siblings. The examples presented in this article are typical of sibling interactions observed over ten months of fieldwork that included both video ethnography and participant-observation. A more complete corpus of transcripts may be found in Maynard (1999).

Wolof Data: Ethnographic Background and Method

The most predominant exchanges between the Wolof child and his partners during the first months are marked by rhythmic, vocal stimulations and very codified postures. By guiding the attention and the postures as well as the prompting routines, the Wolof baby is invited to create real and symbolic links with people other than the mother (Rabain 1994). Brothers, sisters, cousins, patrilineal aunts and uncles, and classificatory grandparents form a dense social environment in polygamous domestic groups that can contain from ten to 35 persons. By using a wide range of rhythmic stimulations and postures, the practices of Wolof mothering combine the concern with physical growth and the development of sociability. The Wolof newborn child is described as a fragile being (*liir bu tooy*) who must be supported and protected. The strengthening of bones allows the child to become *liir bu dëgër* (a firm and resisting being), who can stand on his legs without succumbing to pressure. Baby massage consists of exercises repeated by stretch and extension and contributes to this transformation. By helping the child to master his very early physical reactions, the massage and stretching serve a double function: to shape the body of the baby and to forge the character of the adult that he will become (Rabain-Jamin 2003).

Children are weaned, at approximately 20–22 months, in the study villages and by this time must be able to walk on their own. The beginning of language, associated also with weaning, marks the detachment of the child from the invisible world from where it came. As other West African societies believe, the baby is then expected to lose his initial capacities of clairvoyance and to fit definitively into the social world (Bonnet 1994; Lallemand 1981). During the rite of weaning, the baby shares a pancake

of millet with the children of the house who will soon be her playfellows in a united social group. Beyond the circle of adult relatives, allies, and guests, the category of the peers and the elder siblings (and the parity of age in the broad sense) is considered a major source of control in socialization. Historically, the Wolof had a system of age groups (*maas*), organizing boys and girls according to a linear principle by age level. At the present time, the term *maas* indicates same-age companions and refers to playful activities organized by the children. In a society strongly organized into a hierarchy, marked by the distinction of orders and castes, the functioning of the Wolof age group represents the ideal of traditional cooperation depending on the social status of each member (Diop 1985). Thus, children learn to negotiate among themselves. This type of democratic and egalitarian functioning favors a form of social cohesion beyond the collateral family lineage membership.

Wolof adults recognize the existence of individual differences in the precocity of appearance of language (as in that of walking). The opinion most frequently expressed is that these variations are due to the quality of the maternal milk. Certain advisers, however, notice that "in certain families we speak more to the children than in others," recognizing the educational action of the family circle and the fact that the spoken exchanges in which the child is a full partner have a socializing value. In a general way, it is at first the capacities of understanding of the very young child that hold the attention of adults. They are tested by the play of commands and teasing by relatives, such as the grandfather, who concludes, "You, you are not a fool." Thus, they make sure that the child has acquired an understanding of the place that he occupies in the domestic environment. During the prelinguistic period, by means of prompted and reported speech, Wolof caregivers (adults and children) promote triadic exchanges. The parents' goal would be not so much to encourage early speaking as it would be to make the child part of a complex set of social relationships (Rabain-Jamin 1998).

The Data Set

The Wolof data were collected in two Baol villages with about nine hundred and twelve hundred inhabitants, located about one hundred kilometers from Dakar. Each of these villages has a school where teaching is done in French. The village children start school at the age of seven or eight, although some begin Koranic school (in Arabic) when they are four or five. Virtually all married women in these villages speak only Wolof, and only two or three have had a few years of schooling. The Wolof are Muslim and polygamous, and the co-spouses live in separate homes in the head of household's compound. The compounds vary in size between 10 and 30

persons. In the largest ones, which are divided into units, it is not uncommon for a child to have half-siblings or cousins of about the same age.

Two-year-old target children ages 20 to 36 months (nine boys, nine girls; $M = 25$ months) were observed in interaction with 34 older children from age three years, three months to 13 years ($M =$ six years, eight months). A little less than half were siblings (full or half); a little more than half were cousins who lived in the same compound. Twenty-four of the 34 older children (70 percent) were girls. The children were videotaped in their villages as they played together. They were within sight of an adult who generally did not intervene unless there was some type of incident. The play scenarios were similar to those observed in the Mayan study (Maynard 1999). The older children were engaged in make-believe play (pretending to cook, to take care of a baby, to make a cart) and either directly or indirectly allowed the younger children to join in, sometimes even assigning them roles. The children's symbolic play activities usually took place in an area close to, but different from, the space occupied by the adults. The data collected led us to separate the older siblings' conversational contributions according to whether they were made by a four to six year old or an eight to 13 year old, and whether the play situations allowed for dyadic verbal exchanges between the target child and one of the older sibling partners.

COOPERATION IN WOLOF AND ZINACANTEC MAYA SIBLING INTERACTIONS: THE TEACHING FUNCTION

Much of the play activity of Zinacantec Maya and Wolof children in sibling caregiving groups consists of teaching interactions in which an older sibling gives the younger sibling a task, draws attention to the task, or provides a model from which the younger can learn. It will be clear from the examples that follow that these interactions involve mechanisms of behavioral regulation between siblings and cousins of different ages. By differentiating the roles and responsibilities of differently aged participants in an age-appropriate way, competition and jealousy are minimized and group participation is maximized. Important elements in this differentiation are respect for the authority of the older siblings and for their guidance, and the priority granted to the regulation of the very young child's emotional state.

Nonverbal Interactions between a Two Year Old and Three- to Five-Year-Old Siblings

Within a large multiage group, two year olds in both Wolof and Mayan samples learned best from their slightly older sibling (three to five years)

through nonverbal interaction. In play situations involving a large group of siblings of different ages, the two-year-old child was integrated as a participant but remained on the outskirts of the play, speaking little. In this setting, the conversation was often dominated by the older siblings. However, if nonverbal behaviors are taken into account (proximity relations, gestural mimicking), we find that privileged interactions were taking place between the two year old and the three- to five-year-old siblings. The spatial organization of the child group in these situations showed that the youngest child often chose a location next to one of the older children and engaged in parallel or complementary actions. Below is an illustration of this from the Wolof data:

For a little more than an hour, a group of six children are pretending to cook. There are two girls seven, three girls between the ages of three and a half and four years, and a 23-month-old boy, Mbaye, who is the cousin, nephew, and brother, respectively, of the girls. The girls are going through the steps of preparing a meal from millet. The eldest two (seven years old) are shaping and mixing the millet as they talk to each other. They are having a discussion about the distribution of roles and are teasing each other. The younger, less talkative four year olds are carrying out the simpler task of millet winnowing (shaking the containers of millet to remove impurities) that precedes its pounding.

The recording shows 23-month-old Mbaye being brought into the activities and the different roles the older children play with respect to him. Note that, up to this point, the oldest girls (age seven) are in charge of distributing roles, while the four year olds have simpler, albeit equally important, roles to fulfill in the cooking. As the sequence continues, one of the seven year olds ensures a role for 23-month-old Mbaye, a role that does not put pressure on him to perform but allows him opportunities to participate at his own level.

At the beginning of the sequence, seven-year-old Aminata, Mbaye's aunt, gives him a pot and an old tin plate, out of which he builds a play oven. A few seconds later, three-year-old Mbaye's attention is attracted to his sister Magatte, age three years, six months, who is rhythmically hitting her platter of sand against the ground to make the sand go up in the air in a winnowing motion. Mbaye goes over to Magatte and sits down, first facing her and then beside her. He imitates Magatte's gesture but makes it wider and with a slower motion. He accentuates the leaning forward movement. Magatte reproduces her brother's exaggerated gesture and then stops. Mbaye, who had stopped to scrape the sand with his pot, resumes the leaning forward movement. Magatte watches him do this three times and then starts to hit her platter against the ground again, as in the beginning. Mbaye reproduces Magatte's rhythmic hitting movements.

In this short sequence, the activities of the three-year-old sister and her younger brother are coordinated by means of identical body positioning, adopted by the two year old (face-to-face, then side-by-side). This imitative play is aimed at a goal-oriented activity, meal making, which requires the appropriation of bodily techniques and the implementation of kinesthetic schemes. The imitation of gestures and postures is the

organizing principle of the interaction. The body swaying combines the codified gesture representing the winnowing action, and its magnification representing the purely expressive dimension. The child uses his own body to mirror the body of another, in a sort of empathetic echoing process (Cosnier 1994). This nonverbal communication mode includes imitating, being imitated in return, and generating rhythm and amplitude variations. In this way, even though the four-year-old elder does not directly or verbally guide the young one's activity, she plays an important role in teaching her young brother. In a complementary way, despite their skill inequality, the youngster has a reciprocal influence on the older girl's actions. Observations like these show that four year olds, who are close in age and familiar to their younger siblings and with whom they share activity areas and routines, attract two year olds and capture their attention. In doing so, they help the baby acquire the skills offered by their culture.

In the Zinacantec example of play washing that follows, the successful pedagogical communication of the four year old to the two year old is also nonverbal. The four year old provides an action model that the two year old then imitates. One difference is that the Zinacantec four year old, below, unlike the Wolof three year old in the preceding scene, does try to give verbal directives; however, they are not successful. Indeed, neither are the verbal directives of the older Wolof children to the two year old. However, as in the Wolof example above, the oldest Zinacantec children successfully structure the play by providing the materials. Thus, in the example that follows, the essential elements in "teaching" or inducing the two year old to participate in play washing are nonverbal: the provision of the materials by two older children, ages six and nine, and the provision of an action model by a four year old.

This interaction involves children ranging in age from two to nine: Rosy (age nine), Xunka' (age six), Esteban (age four), and Patricia (age two) who are engaged in play washing. Like the three-and-one-half-year-old Wolof child, above, four-year-old Esteban furnishes a nonverbal model of washing for the two year old, without really trying to attract her attention to his model. Unlike the Wolof case, above, the two year old does not immediately imitate the model. However, less than a minute later, she does so. As in the Wolof case, above, the two year old and the four year old continue with parallel nonverbal activity.

In this example, Patricia and Esteban are playing in the backyard. Rosy enters and places a bucket with a piece of clothing in it between Esteban and Patricia. She then directs both of them in washing. Rosy tells the children, "You will see," as she gathers tools for washing. Esteban says that he wants the bucket as Rosy goes to get something else. Rosy returns with another bucket. The following is a transcript of the rest of the vignette:

- Esteban: Hand me that. Take out the pants. (Reaching for pants)
 Patricia: La. [Baby talk sound, in protest to Esteban]
 E: I want one!
 Rosy: [mumbles] . . . your washing.
 (Retreats to watch the washing action at a distance)
 Wash! Wash!
 E: (Does washing action with his threads)
 Let's wash!
 E: Hand me a little water.
 P: Aaw! (She looks to the water, touches her bucket, and makes the sound in protest.)
 R: Wash Patri! (Enters to help her)
 R: (As she takes the pants out of the bucket)
 Take out—take out the washing here.
 R: Wash! Put soap on your washing here. (Shows the washing movement and pretends to put soap on the washing)
 Wash this—look! Wash look! (To Patricia)
 [What have you brought? (to Xunka')] ¹
 Xunka': [Look. Look. (Xunka' brings in a big glass of water and looks to Rosy as to where to put it.)
 R: Give it to him [so that] he can see it. [Here, Rosy directs Xunka' 's attention.]
 You understand. Understand. (To Patricia)
 R: (Retreats, to watch the washing from a distance, then reenters to add water to Patricia's bucket, from the larger bucket.)
 Let's pour your water down.
 E: (Continues his washing action, not engaging Patricia. He knocks over a glass of water, and they all laugh.)
 Draw water and bring it back! (To Xunka')
 X: (Runs to get him water)
 P: (Looks at what Esteban is doing and imitates the action)
 R: (Exits the scene completely)
 X: (Notifies that Rosy has gone. She brings water for Patricia and Esteban.)
 Look [at] this [water]! (Gives Esteban water, then pours some out for Patricia)
 (Esteban and Patricia continue washing.) ¹

In addition to the fact that the essential element in teaching is non-verbal, another important way in which the Zinacantec example mirrors the Wolof example is in the age hierarchy that is manifest in this sequence. Nine-year-old Rosy manages the whole scene. Her helper is six-year-old Xunka', who looks to Rosy for guidance. Rosy tells four-year-old Esteban what to do ("Wash! Wash!"), and Esteban accepts her authoritative suggestion: four seconds later, he incorporates it transitively ("Let's wash!") for Patricia, two years his junior, who does not respond to his verbal command but ultimately does follow his action model.

Age Hierarchy, Leadership, and Conversational Contributions

In the preceding example, Xunka', age six, is the older sister Rosy's helper; as such, she follows Rosy's lead and says almost nothing. However,

in accordance with the principle of age hierarchy, Xunka', age six, takes on the role of the "boss" when she, in turn, is the oldest. In the following scene, Xunka' takes an authoritative leadership and teaching role on both the nonverbal and verbal levels. This role includes corrections when a younger child makes a mistake.

- X: Come here Pati! Let's play here!
 E: (Enters to sit with them) Let's play then!
 (Xunka' is tearing leaves off a branch to serve as pretend tortillas as Patricia and Esteban both watch her. Esteban exits.)
 X: Wait then. I'm going . . . I'm going to put it this way—even better. (Goes to pound the leaves and make them better. Sees that Patricia is doing nothing and demands from a distance that she pat tortillas.)
 You pat. Pat tortillas! Pat tortillas!
 (Xunka' herself is pounding leaves with a rock on top of a wooden surface away from Patricia.) They (tortillas) came out good and thick.
 (Xunka' comes closer to Patricia and notices that Patricia has taken the wrong leaves off the wrong branch.) Not this. Just the little ones! Just the little ones! There aren't any . . . [mumbles].

In these everyday situations in which multiparty interactive episodes prevail, verbal productions by the three- to five-year-old siblings directed at the younger sibling could be less common. The number of children gathered in the multiparty Wolof group could explain the verbal relations that develop between peers of four or seven years. An especially nonverbal form of management would prevail in this instance with the two-year-old child, the peripheral partner.

In the first Zinacantec example, above, four-year-old Esteban talked, but his communications were not successful. In the second, he merely echoed the six-year-old leader Xunka', and the reinforced request to play was observed by two-year-old Patricia, who joined Esteban in imitating Xunka', gathering pretend "tortillas" from the tree.

In sharp contrast were dyads in which the three to five year old was the oldest child present, with a two-year-old partner. In those cases, a more sustained dialogue with some successful verbal communication was likely to emerge. Here the focus is again on teaching interactions in which a three to five year old serves as the two year old's teacher. In these interchanges, the sophistication of the older child's teaching strategies, including their verbal component, could increase. Equally interesting, the two year old sometimes made some verbal contribution, whereas in the larger group with more levels of authority there was none. Here is an example from Senegal about an interaction between two children.

In the following sequence, a number of initiatives are taken by a two-year-old boy, Ibou, whose linguistic production skills are still limited, as he tries to be included in the activity of an older parallel cousin, Asta (three years, four months). The sequence involves taking care of a baby doll.

Ibou moves away from Asta and picks up a little old bench with an animal's head that Asta uses as a doll. He takes it to Asta and says, "Here." Asta takes it and then gives it back to him, saying, "Here, here, here raise [take it from] me!" After moving away, Ibou comes back with the doll, and Asta asks for it: "Give it." She lays it down on its side on a stair step: "I'm laying it down here." Ibou touches it. Asta then turns around to lay a loincloth on the bench doll, saying, "Wait until I wrap it with this." Ibou leans over the covered doll and hits it several times: "Eee" (vocalization with a rising intonation normally used by an older child to warn a younger one), "can't you hear?" Asta continues her cooking.

Again two-year-old Ibou takes the initiative to enter into play with three-year-old Asta. Asta eventually takes the opportunity to teach Ibou, and much of this successful episode is accomplished by verbal means. Asta successfully asks for the doll and then verbally induces him to wait while she dresses the doll in a loincloth. Asta is successful in getting him to enter into make-believe baby play with the doll, as he adds his own theme of scolding the baby, both verbally and nonverbally. Here, a new level of verbal interaction between three year old and two year old has been added to the modes of teaching that were seen in the multiage, multiparty situation presented earlier.

A Zinacantec four year old, Esteban, momentarily alone with his two-year-old sister, Patricia, has more success in communicating with her verbally than he had in the multiage sibling group interaction, described earlier. Here is the example:

Two-year-old Patricia has started to walk away from four-year-old Esteban, with whom she has been playing with paper, glue, and scissors. The children's mother calls to Patricia from a distance, "Patricia, play like this here!" Esteban picks up on this request and tries to engage Patricia, saying, "Let's play, I am here!" Patricia responds with, "Huh?" and Esteban again encourages her to play. Patricia comes around to join Esteban, standing by his side. He picks up a book of papers but doesn't engage her until he says, "Baby, bring the things!" to which she refuses, "No."

Esteban's successful verbal directive, "Let's play," in fact follows his mother's model. Patricia responds positively to Esteban's verbalization by moving next to him. However, Esteban is unable to follow up by engaging her in play, and his next directive, "Baby, bring the things!" elicits a verbal response from Patricia, but it is a negative, "No." The significance of non-cooperative refusals will be discussed in the next section. For now, the important point is that, in both cultures, dyadic interactions elicit more successful verbal communication between a two year old and a slightly older child than do multiparty communications; here success is measured in terms of communications that elicit a relevant response.

However, to understand this example, gender roles must also be taken into account. Esteban, as a boy, is at least as interested in getting his way through commanding a girl, Patricia, as he is in helping her to learn. In Zinacantec society, not only is there a hierarchy upward from the younger to the older but there is also a hierarchy upward from females to males.

Thus, the situation is quite different in the following scene between a four-year-old girl, Petu', and her younger sister, Elena. The play activity here is washing a doll. Petu' asks Elena to wash the baby as she puts soap and water on the baby doll. Petu' washes the stomach and back of the doll, and Elena washes it a little by touching its stomach. Petu' continues washing the baby doll vigorously and Elena wanders off. Here, the older four-year-old girl allows the two year old to participate more and seems less interested in controlling her behavior for her own ends than did the older four-year-old boy in the preceding example. Indeed, even though Elena does not talk, Petu's role as guide and teacher here seems much more like Asta's than like Esteban's, vis-à-vis two-year-old Ibou in the Wolof example above.

Wolof children also socialize a gender hierarchy in their play, with males exerting control over females. In the next example, a Wolof five-year-old boy desires to get his own way with his little sister, who is 22 months old.

Jara (22 months) comes near her brother Pàppa (5 years), holding a big spinning top. Pàppa says to Jara, "Lend it to me, lend it to me." Jara replies, "Let go," and Pàppa takes the spinning top from her. Pàppa commands, "Move over Jara, I grind the millet." He then takes a handful of sand from his jelly jar to put it on the hollow space in the upside-down spinning top. Pàppa describes his action, "I grind the millet, I grind the millet." Jara replies, "Grind the millet." A visiting neighbor, five-year-old Bintu, approaches and remarks: "Jara said that you grind the millet, do you understand?" Pàppa then says, "Yes Jara said that I take grind the millet, after it is Xaadim's turn."

Similarly, in a Wolof transcript concerning an interaction between a nine-year-old boy, Iba, and a two-year-old girl, Fadia (presented below), Iba tries to control his sister through teasing as much as he tries to teach her. The control of the female by the male is enacted and socialized in sibling play in both the Zinacantec and Wolof groups. At the same time, four-year-old Petu' and three-year-old Asta are enacting and socializing the role of the female as nurturant guide.

What is the nature of the verbalizations addressed by this age group to a younger child? An analysis of the speech acts of the three-and-one-half- to five-year-old Wolof children who addressed a sufficient number of utterances to their younger 24- or 30-month-old sibling or cousin (Rabain-Jamin 2001) indicated the prevalence of requests for action (55.3 percent to 77.7 percent), but very few requests for information (2.8 percent to 7.9 percent). In line with this general finding in the Wolof data, four out of five of Asta's verbalizations, above, to her younger brother were requests for action. Similarly, all three of Esteban's verbalizations, above, from the Zinacantec data, were requests for action. Correspondingly, in the Zinacantec data as a whole, requests for action (commands) were the most frequent form of discourse by the three to five year olds in their teaching interactions (Maynard 2002), while requests for information were negligible.

Nonetheless, if one compares the Wolof interaction with the Zinacantec, the quoted examples suggest that some stylistic differences exist in the interactions of the Wolof and Zinacantec children. The linguistic interactions may appear more prominent and more complex in the young Wolof children in the vignettes that are reported here. Recall nevertheless that the Zinacantecs value quietness in children (Brazelton et al. 1969) who are accustomed to listening to adult conversation. Because younger siblings are not verbally assertive, older siblings make more of an effort to include younger siblings in their activities.

Contribution of Older Siblings

As should be apparent from the nature of the sibling hierarchies, the older siblings (ages seven to 13) played a different role for the two year olds. In situations where several children were playing together, Wolof children made a place for the toddler and provided him or her with the materials that allowed them to take part in the play (a pot, a worn-out lid), as in "Diara come join us, come on in!" which Ndeye (13) said to Diara (2) to bring her into the circle, or "Here, Mbaye, here's your thing," which Amy (7) said to Mbaye (23 months) as she handed him an old lid. An example from the Zinacantec data was when nine-year-old Rosy, in the washing example, brought a pail of water with a piece of clothing in it, placed it between Esteban (4) and Patricia (2), and directed them in washing. Rosy continued to support and help Patricia to participate when it was clear that she needed more help in the washing activity than Esteban did. For example, in the washing example, Rosy came on the scene to help Patricia, saying, "Wash Patri!" In multiage play activity, the older child's role consists of obtaining objects for the youngster and defining a framework that will ensure the young child's physical inclusion and position as a participant in the group.

In situations with fewer actors (dyads or triads), older Wolof siblings appear to offer more scaffolding in support of the young child learning to speak. From the purely verbal standpoint, children at this age make more utterances that, like questions, require the younger child to respond with language. For example, in the two dyads where the older sibling (a nine-year-old boy or a 13-year-old girl) produced over 50 utterances, action directives were the most frequent type of utterance (43.2 percent and 65.9 percent, respectively), but the number of requests for information also tended to be greater (28.3 percent and 19.1 percent), probably due to greater language development in the older child. The dialogue below took place when the mother was momentarily absent, which is a social situation where the role of the older child is well-defined. It shows how an older sibling can exhibit verbal tuning to the younger one through the production of a variety of speech acts aimed at maintaining the topic of conversation and

facilitating the action the younger one is trying to achieve. The participants in this sequence, which took place while the mother was momentarily absent, were Fadia, a two-year-old girl, Iba, her nine-year-old brother, and Niaye, her six-year-old sister. Iba and Fadia are sitting next to a platter containing cut-up pieces of pumpkin. A knife is on the ground nearby.

- Fadia: Knife. (Looking at the knife)
 Iba: Where's the knife? I'll give you the knife?
 I: Here's the knife.
 F: (Throws the spoon far away)
 I: Get up and get the knife! (Helps her up)
 Niaye: (Brings the knife closer)
 I: Go on, sit down, come sit here!
 F: (Sits down next to him)
 I: Take the knife (Gives it to her)
 I: Here, cut!
 F: (Takes the knife but gives it back with a groan)
 I: What did you say?
 F: Mama . . . Mama
 I: Mama's back

Two minutes later, after the mother returns and serves a snack of cookies, Iba resumes the topic:

- I: Come cut the pumpkin! (Making cutting motions)
 F: (Still standing in front of him)
 I: (Takes a play watch off his wrist and puts it on Fadia's wrist)
 (In the meantime, Niaye, the 6-year-old sister, takes the knife.)
 I: (To Niaye) You cut your finger
 I: (To Fadia) Lend me . . . You've refused? (Touching the watch to the child's wrist)
 F: I've refused . . . you're bad (Hits the mat with the knife)
 I: You're bad . . . you're bad (Holding out his hand in the direction of the knife)
 F: I'll cut you!
 I: If you cut me, you'll be sorry!

The threats do not cause a fight, and the exchange goes on. The older child starts a new pretending game by putting the knife into the shoe that the younger girl has taken off, making it into a car: "I'll take you to Thies [the neighboring town]," he says to Fadia. He gives up the knife when Fadia asks for it, puts the shoe to his ear as if it were a telephone, and starts a brief hospital scenario (he had previously been hospitalized): "Hallo, are you healthy?" Then he quickly returns to his sister's cooking activity as she cuts the pumpkin, and the dialogue between them continues.

In this social situation, the Wolof custom of older-child caregiving of younger siblings generates a context for action and dialogue and defines its contours and its limits. The speech acts produced by the older child are more than just action directives; they include an assertive act aimed at misleading the younger child, and requests for information. The types of questions asked show that older children adapt their remarks to the young

one, take the child's reactions into account, and question intentions ("What did you say?" "You've refused?"). These questions act as prompts that bring the younger child into the dialogue, in this case, with an affirmation of opposition ("I've refused . . . You're bad"). The older child handles this verbal opposition by echoing the younger child's utterance and then setting the limits on the youngster's threats by means of a warning. At the semantic level, this entire dialogue dealt with familiar topics likely to capture the child's attention: food and drink, clothing, and accessories (shoes, the older child's watch, the younger child's earring).

Quantitative analysis of the Zinacantec data (Maynard 2002) indicates that, as they get older, Zinacantec children, like Wolof children, attempt to elicit more language from their two-year-old siblings although, like the older Wolof children, the overwhelming majority of their verbalizations remain requests for action. While all types of talk increase with age, descriptions and explanations, which stimulate talk rather than action, increase from nothing at ages three to five to very low levels (per minute of talk) at ages six and seven (still statistically significantly higher than the youngest age) to much (and significantly) higher levels at ages eight to eleven.

An example from the Zinacantec data involves eight-year-old Tonik and two-year-old Katal. In this example, Tonik teaches Katal how to wash a baby doll. While she makes many requests for action, she also includes a statement, "I have poured it," as she pours water on the baby blouse, and a question, "Do you want another [glass of water]?"

Mayan and Wolof sibling interactions have a number of features in common. For one, most two year olds speak very little. Interactions with slightly older siblings (ages three to five), although mainly nonverbal, furnish an effective support for the activity of the youngest child. Older and younger siblings cooperate in joint play. Studies on the functions of speech in the make-believe play of Italian children 18 and 32 months old have shown that gestures prevail for the youngest children while, for the older children, speech and actions no longer play simple complementary roles in expressing shared meanings: children begin to use language "to manage and run the overall scenario" (Musatti 1986).

Another finding in both data sets was that older children of all ages tend to preferentially address young two and three year olds via a series of action directives. Such sequences of orders are a sign of the enlistment of the younger child in the action. Direct orders appear to be the standard means of addressing a younger child. Receiving orders means being granted responsibilities and being allowed to participate in the play. The subordination relationship ensures integration into the group.

In both cultural groups, the linguistic skills of older siblings ages eight to 13, in conjunction with their caregiving obligations, appear to promote

behaviors that serve as scaffolding for young two year olds. These behaviors are manifested in different ways, including making room for the young one in the activity area, offering objects, and giving demonstrations or providing physical guidance for the child.

In addition, in social situations in which the younger sibling is experiencing discomfort, the Wolof examples showed adaptation on the part of the older children who posed questions that gave rise to verbal responses from the younger child and displayed consideration of the younger child's intentions. In the Zinacantec examples, the older child tended to take the initiative in empathizing with the younger child's plight and helping them without waiting for a request from the younger. This example suggests a stylistic difference. The Wolof tend to scaffold the younger child to use verbal means of expression, whereas the Zinacantecs tend to respond to nonverbal cues emitted by the younger child without requesting the younger one to verbally specify demands.

Noncompliance and Refusals in Teaching Interactions

The conventions of communication are not learned solely through scaffolding and cooperation between adult and child, or between children of different skill levels. Learning also takes place in moments of conflict and confrontation between different points of view. Social conflict may play an important role in the growth of social understanding. A major finding in both the Mayan and Wolof data was the ability of older siblings to exercise flexibility in handling their two-year-old sibling's first manifestations of opposition or refusal.

The older siblings exhibited an understanding of their status as they issued commands to younger brothers and sisters. However, as will be seen in the examples, the two year olds did not always comply with the demands of their elders. Older children often appear to handle a younger child's noncompliance by adjusting the activity to suit the little one's desires.

In one Zinacantec example, an eight-year-old girl, Maruch, adjusts her request after seeing that her two-year-old sibling does not comply. Maruch asks Petu' to make tortillas and moves Petu's hand in a tortilla-making motion. However, Petu' does not want to make tortillas, so Maruch tries to get Petu' to hold a baby doll, saying, "Hold your baby, then!" Two-year-old Petu' still does not comply. Maruch tries again to get Petu' to make tortillas, which Petu' will not do. Finally, Maruch convinces Petu' to hold the baby doll. Maruch says, "Just hold your baby doll then." Petu' holds the baby doll, and both are content. In another example, four-year-old Esteban asks two-year-old Patricia to get something for him. When she does not get him what he wants, Esteban simply goes to get it himself. Thus, noncompliance does not interfere with the play. These examples are representative of the overall pattern that maintains harmony among siblings.

In general, older children handle noncompliance or refusals from two year olds without becoming upset and without explaining why they should comply. In most cases, the older child simply does whatever can be done to make the two year old content. This harmonious pattern is typical of both Zinacantec and Wolof children's daily interactions in the context of multi-age play in the sibling/cousin group. One particular strategy seen in the Wolof data was to restore cooperation through a change of topic. The change of topic in this case transformed the conflict into a harmonious teaching interaction, which in turn led the younger girl to fulfill the older's request. The conflict was resolved by giving up on the request and changing the topic after a series of requests and refusals. The transition from one center of interest to another serves to arrest the conflict, even if the aim of the initial request has not been abandoned. For children, a topic change represents an attempt to return to a state of cooperation. These behaviors not only reveal the importance of the cooperative model in sibling play routines but also demonstrate the weight of implicit older-younger helping behavior norms in a social environment in which adults are never very far away. Here is an example of this in an exchange between two Wolof sisters:

Oumy (age four years, seven months) makes several unsuccessful attempts to get the whip that her younger sister Fatou (two years, eight months) is using to pound some sand in an old wheel: "You lend me your pounder. . . . Lend it to me! . . . lend it to me!" Fatou resists. An unexpected event occurs: Oumy bumps her foot against the plastic jug Fatou is using as a "pretend doll." Fatou looks at the jug doll and says to Oumy, "Take her, she's crying." The situation then reverses. Oumy redirects the proposal towards the younger child. She suggests: "Aren't you even going to take her to nurse her?" The younger girl takes the jug and brings it up to her breast. She then lets her sister have the whip so she can take her turn pounding.

Topic changes appear to be an important part of the joint activity and negotiation routines of these children. In this example, the older child drops her request for a while and returns to a state of agreement with her younger sister about the to-be-carried-out action. The harmonious unfolding of the social interaction is momentarily reestablished, so the younger girl agrees to satisfy the older one's request.

Certainly, the four- to five-year-old child knows that the adults or the close siblings are ready to intervene, and to sanction by a disapproving remark, any conflict that occurs between a peer or a younger child. Older siblings have to learn to manage such conflicts, and if they fail to master that, their position as caretaker can be threatened. The older siblings' social role is, from the age of four or five years, to assure good management of the emotions and well-being of the younger child and to know how to use those management skills to distribute tasks and role taking during shared activities. The four- to five-year-old child also leans on the experience and the knowledge gleaned from very early child caregiving interactions.

GENERAL DISCUSSION

Much of the play activity of Zinacantec Maya and Wolof children in sibling caregiving groups consists of teaching interactions in which an older sibling gives the younger a task, draws the younger's attention to a task, or provides a model from which the younger can learn. Wolof and Mayan children spend considerable time in close proximity to the work or play activities being carried out by others. In cultural contexts that promote the development of caregiving skills, children learn to take into account and foresee the needs and desires of younger children.

As Dunn (1988) noted for European children, older siblings take charge of their younger sibling's play, while themselves remaining actors in the activities underway. This generalization would apply to the two cultures here and may well be a universal. However, we maintain that the emphasis on teaching by older siblings is much stronger in sibling caregiving cultures than in Western cultures. In the course of their sibling interactions, Wolof and Zinacantec children teach and learn through everyday play activities such as cooking or taking care of a baby. The extent to which this is true in European-based cultures requires further empirical research.

We also found examples of social hierarchy in the teaching interactions of both the Wolof and the Maya. According to the age composition of a particular group, the same children have opportunities to practice different communication skills, particularly in the verbal realm. At the same time, roles are carefully adjusted to the skill level of children of different ages, a kind of sibling scaffolding.

Like adults, older children support their younger siblings and have power over them. In both cultural groups, power dominates with older boys, support with older girls. However, unlike adults, both boys and girls defend their own goals and interests in play and, in doing so, are led to develop all kinds of pragmatic skills to bring out these interests while avoiding conflict (e.g., when Oumy devises a strategy to get the whip from Fatou, without making her upset). Indeed, we found a preference for harmony over conflict, confirming the notion that sibling caregiving breeds interdependence among siblings and cousins that, in turn, entails the management of conflict to regain and maintain harmony (Weisner 1982). In the context of these striking cross-cultural similarities, there are interesting cross-cultural differences between sibling interaction in Wolof and Zinacantec sibling groups.

Two-year-old Wolof children are able to take the initiative to insert themselves into the activity of a group of older children, whereas two-year-old Zinacantec children respond more to the initiatives of the older children, who take the responsibility of integrating them into the group. In fact, depending on the circumstances, the two-year-old Wolof child can

take the initiative to insert him- or herself into the group, or can be invited to participate. Accepted as spectator, secondary actor, or speaker, the Wolof child is never separated from group play. The Wolof baby can be the heart of the playgroup as early as six months, and the adults reinforce the narrow association of play and child caregiving for all the older children. Certain Wolof observations can give the impression that the older children's support of the younger child's speech is quite important. The older children frequently make commands for action by the younger children, as with the Zinacantecs. However, the eight- to ten-year-old Wolof children also support the demands of the two-year-old child to third parties: "Khoudia, leave that alone. He [the baby] said: look (to a four-year-old girl who wants to take the mirror held by the baby)." Older children produce assertions or pose questions to the younger ones ("What are you looking at?" "That is you there," while presenting the mirror to the younger child). Zinacantec sibling caregivers of eight to ten years also engage in similar questions when holding children in front of mirrors, and they support two year olds' demands, but usually the demands are made nonverbally. For example, one sibling caregiver defended the current activity with the child by saying to the mother, "He doesn't want to," when the mother had suggested they play something else. Here, however, the support is of the two year old's nonverbal assertion, rather than a verbal one.

Among the Wolof, the importance of reported speech and of prompts in the key period of entering into language, at about two years of age (cf. Rabain-Jamin 1998), clearly shows the importance of the spoken word. The child's social entourage highlights the child's rights to the spoken word. One often sees a third person, an older child or an adult, be the spokesperson for the requests: "He said, 'Leave me alone'"; "He said that he wants to play." In cases of reported speech such as these, the child's assertion is supported and validated by a third person because children are not supposed to function by themselves. If others pay attention to what is said, one will, in return, pay attention to what others say. As is true for the Zinacantecs, the child is supposed to pay attention to what others say. Moreover, if one opens for the child the domain of speech, one is sensitive to the social disorder that speech can create (*Wax bal la* [The word is a bullet from a gun]). In summary, among the Wolof, the insertion of the child among other children by means of the spoken word is valued. Through their spoken words, children are supposed to show their willingness for social participation, but they must also know how to keep in their place and listen to elders.

Another related difference is that from the age of 20 to 24 months, the Wolof child is invited to participate in language exchanges. They are the evidence par excellence that one can agree and be in harmony. Zinacantec children also become part of the fabric of social interactions, but with less

wordplay. They show knowledge of age and gender hierarchies as they participate in activities together. Across interactive transactions and thanks to the creativity of language, the children's behavior in both groups is then inscribed within the general limits of social rules and community institutions.

The similarities noted in the effects of sibling caregiving in two societies that appear in other respects so different—geographic environment, social institutions, rituals and religion, communication style—are particularly interesting. They argue in favor of general, perhaps even universal, regularities in behavioral mechanisms of cultural transmission and the modalities by which children teach one another in the context of taking care of each other. Children's linguistic interactions reflect their growing abilities to teach each other and to gain and maintain compliance, both factors in maintaining harmony in the sibling group.

We hope that other researchers using variations of situations and scaffolding measures will bring supplementary observations to clarify the hypotheses that we have advanced here. The comparison between the two populations, Maya and Wolof, brought us to underline the similarity of the symbolizing processes operated by the children in their games and their interpersonal exchanges. The children's behaviors indicate the methods by which each acquires the position of girl or boy, of older or younger, while selectively borrowing from adults the behavioral traits such as what to do and say. The marking of the personal positions operates according to many modalities, through different sensory channels, and is made up of simple gestures, actions, of physical appropriation of a particular place, or of words or declarations. It is interesting that, comparing one society to another, these child behaviors link themselves to complex elements of social life (organizations of different family relationships, degrees of hierarchy, practices of caregiving, systems of beliefs, theories of emotions). In an indirect way, the observable behaviors reflect the less visible appropriation by every child of the family life and the cultural modes for behavior that are furnished in the course of socialization.

JACQUELINE RABAIN-JAMIN is Chargée de Recherches in the Centre National de la Recherche Scientifique, Université de Poitiers, France.

ASHLEY E. MAYNARD is Assistant Professor of Psychology at the University of Hawaii at Manoa.

PATRICIA GREENFIELD is Professor of Psychology at University of California, Los Angeles.

NOTES

Acknowledgments. Portions of the data reported in this article were presented in P. Greenfield (Chair), *Cultural Context and Developmental Theory: Evidence from the Maya of Mexico*, a symposium presented in the annual meeting of the Jean Piaget Society, Mexico City, Mexico, June 1999; in S. Ervin-Tripp (Chair), *Peer Talk in Cross-Linguistic Perspective*,

a symposium presented at the VIIIth International Congress for the Study of Child Language, San Sebastian-Donostia, Spain, July 1999; and in S. Gaskins (Chair), *The Cultural Study of Children's Play*, a symposium presented at the annual meeting of the American Anthropological Association, Chicago, Illinois, November 1999.

We would like to thank the families who participated in the studies. We also thank Jean-Leopold Diouf and Ndeye Nenne Fall for their Wolof translation and Vivian Waltz for her help with English translation. We thank Maruch Perez who helped with data collection in Chiapas. The authors gratefully acknowledge support for this research from the Latin American Center and the Center for Culture and Health at UCLA. Maynard was supported by a National Science Foundation graduate research fellowship, a fellowship from the Center for the Study of Evolution and the Origin of Life at UCLA, and by dissertation-year and postdoctoral fellowships from the University of California, Office of the President.

1. The single open bracket in this line and the next indicate overlapping talk.

REFERENCES CITED

Bonnet, D.

- 1994 *L'éternel retour ou le destin singulier de l'enfant*. *L'Homme* 131:93-110.

Brazelton, T. Berry, John S. Robey, and George A. Collier

- 1969 Infant Development in the Zinacantan Indians of Southern Mexico. *Pediatrics* 44:274-383.

Brown, Penelope

- 1998 Conversational Structure and Language Acquisition: The Role of Repetition in Tzeltal. *Journal of Linguistic Anthropology* 8(2):197-221.

Corsaro, William A.

- 1997 *The Sociology of Childhood*. Thousand Oaks, CA: Pine Forge Press.

Cosnier, Jacques

- 1994 *Psychologie des émotions et des sentiments*. Paris: Retz-Nathan.

de León, Lourdes

- 1997 Talking to Children in Tzotzil (Mayan). Paper presented at the Annual Meeting of the American Anthropological Association, Washington, DC, November 19-23.
- 1998 The Emergent Participant: Interactive Patterns in the Socialization of Tzotzil (Mayan) Infants. *Journal of Linguistic Anthropology* 8(2):131-161.
- 1999 Mu me majeluk, mu me uteluk ("Not with Hitting, Not with Scolding"): Socializing Emotion and Moral Agency in Tzotzil (Mayan) Children. Paper presented at the 29th Annual Meetings of the Jean Piaget Society, Mexico City, Mexico, June.
- 2002 Body and Domestic Space in Zinacantan Socialization. Paper presented at the 32nd Annual Meetings of the Jean Piaget Society, Philadelphia, PA, June.

Diop, Abdoulaye B.

- 1985 *La famille wolof*. Paris: Karthala.

Dunn, Judy

- 1988 *The Beginnings of Social Understanding*. Oxford: Blackwell.

Egner, Inge

- 1988 *Analyse conversationnelle de l'échange réparateur en wobe*. Berne: Peter Lang.

Eisenberg, Ann, and Catherine Garvey

- 1981 Children's Use of Verbal Strategies in Resolving Conflicts. *Discourse Processes* 4:149-170.

Fassin, Didier

- 1992 *Pouvoir et maladie en Afrique*. Paris: Presses Universitaires de France.

Goffman, Erving

1974 The Frame Analysis of Talk. *In* Frame Analysis: An Essay on the Organization of Experience. Erving Goffman, ed. Pp. 496–559. Cambridge, MA: Harvard University Press.

Goodwin, Marjorie

1990 He-Said-She Said: Talk As Social Organization among Black Children. Bloomington: Indiana University Press.

Gossen, Gary H.

1974a To Speak with a Heated Heart: Chamula Canons of Style and Good Performance. *In* Explorations in the Ethnography of Speaking. R. Bauman and J. Sherzer, eds. Pp. 389–413. Cambridge: Cambridge University Press.

1974b Chamulas in the World of the Sun. Cambridge, MA: Harvard University Press.

Greenfield, Patricia M.

1997 Culture As Process: Empirical Methods for Cultural Psychology. *In* Handbook of Cross-Cultural Psychology, vol. 1. J. W. Berry, Y. H. Poortinga, and J. Pandey, eds. Pp. 301–346. Boston: Allyn and Bacon.

Greenfield, Patricia M., T. Berry Brazelton, and Carla P. Childs

1989 From Birth to Maturity in Zinacantan: Ontogenesis in Cultural Context. *In* Ethnographic Encounters in Southern Mesoamerica: Celebratory Essays in Honor of Evon Z. Vogt. V. Bricker and G. Gossen, eds. Pp. 177–354. Albany: Institute of Mesoamerican Studies, SUNY.

Harkness, Sara, and Charles M. Super

1996 Parents' Cultural Belief Systems: Their Origins, Expressions, and Consequences. New York: Guilford.

Haviland, John B.

1977 Gossip, Reputation, and Knowledge in Zinacantan. Chicago: University of Chicago Press.

2000 Pointing, Gesture Spaces, and Mental Maps. *In* Language and Gesture: Window into Thought and Action. David McNeill, ed. Pp. 13–46. Cambridge: Cambridge University Press.

Hirschfeld, Lawrence A.

2002 Why Don't Anthropologists Like Children? *American Anthropologist* 104(2):611–627.

Ingold, Tim

2000 Apprentissage. *In* Dictionnaire de l'ethnologie et de l'anthropologie. P. Bonte and M. Izard, eds. Pp. 764–765. Paris: Presses Universitaires de France.

Lallemand, S.

1981 Pratiques de maternage chez les Kotokoli du Togo et les Mossi de Haute-Volta. *Journal des Africanistes* 51(1–2):43–70.

Laughlin, Robert M.

1975 The Great Tzotzil Dictionary of San Lorenzo Zinacantan. Washington, DC: Smithsonian Institution Press.

Lave, Jean, and Etienne Wenger

1991 Situated Learning: Legitimate Peripheral Participation. Cambridge: Cambridge University Press.

Mannle, Sara, Michelle Barton, and Michael Tomasello

1991 Two-Year-Olds' Conversations with Their Preschool-Aged Siblings and Their Mothers. *First Language* 11:57–71.

Maynard, Ashley

1996 The Zinacantec Model of Teaching and Learning. M.A. thesis, Department of Psychology, University of California, Los Angeles.

- 1999 Cultural Teaching: The Social Organization and Development of Teaching in Zinacantan Maya Sibling Interactions. Ph.D. dissertation, Department of Psychology, University of California, Los Angeles.
- 2002 Cultural Teaching: The Development of Teaching Skills in Maya Sibling Interactions. *Child Development* 73(3):969-982.
- Musatti, Tullia
- 1986 Representational and Communicative Abilities in Early Social Play: A Case Study. *Human Development* 29:49-60.
- Nuckolls, Charles W.
- 1993 An Introduction to the Cross-Cultural Study of Sibling Relations. *In* *Siblings in South Asia. Brothers and Sisters in Cultural Context*. C. W. Nuckolls, ed. Pp. 19-41. New York: Guilford Press.
- Ochs, Elinor
- 2001 Socialization. *In* *Key Terms in Language and Culture*. A. Duranti, ed. Pp. 227-230. Malden, MA: Blackwell Publishers.
- Ochs, Elinor, and Bambi Schieffelin
- 1984 Language Acquisition and Socialization: Three Developmental Stories and Their Implications. *In* *Culture Theory: Essays on Mind, Self and Emotion*. R. A. Shweder and R. A. LeVine, eds. Pp. 276-320. Cambridge: Cambridge University Press.
- Ortígues, Marie-Cecile, and Edmond Ortígues
- 1984 *Oedipe africain*. 3rd edition. Paris: L'Harmattan.
- Piaget, Jean
- 1965[1932] *The Moral Judgment of the Child*. New York: Free Press.
- Rabain-Jamin, Jacqueline
- 1994[1979] *L'enfant du lignage. Du sevrage à la classe d'âge chez les Wolof du Sénégal*. 2nd edition. Paris: Payot.
- 1998 Polyadic Language Socialization Strategy: The Case of Toddlers in Senegal. *Discourse Processes* 26:43-65.
- 2001 Language Use in Mother-Child and Young Siblings Interactions in Senegal. *First Language* 63:357-385.
- 2003 Enfance, âge et développement chez les Wolof du Sénégal. Special issue, "Passages à l'âge d'homme," *L'Homme* (167-168):47-64.
- Rogoff, Barbara
- 1990 *Apprenticeship in Thinking*. New York: Oxford University Press.
- Schieffelin, Bambi B., and Elinor Ochs, eds.
- 1986 *Language Socialization across Cultures*. Cambridge: Cambridge University Press.
- Stross, Brian
- 1974 Speaking of Speaking: Tenejapan Tzeltal Metalinguistics. *In* *Explorations in the Ethnography of Speaking*. R. Bauman and J. Sherzer, eds. Pp. 213-239. Cambridge: Cambridge University Press.
- Super, Charles M., and Sara Harkness
- 1986 The Developmental Niche: A Conceptualization at the Interface of Child and Culture. *International Journal of Behavioral Development* 9:545-569.
- Verba, Mina
- 1993 Cooperative Formats in Pretend Play among Young Children. *Cognition and Instruction* 11(3-4):265-280.
- Vogt, Evon Z.
- 1969 *Zinacantan: A Maya Community in the Highlands of Chiapas*. Cambridge, MA: Harvard University Press.
- Vygotsky, Lev S.
- 1978 *Mind in Society*. New York: Cambridge University Press.

Watson-Gegeo, Karen Ann, and David W. Gegeo

1989 The Role of Sibling Interaction in Child Socialization. *In* Sibling Interaction across Cultures: Theoretical and Methodological Issues. P. G. Zukow, ed. Pp. 54–76. New York: Springer-Verlag.

Weisner, Thomas S.

1982 Sibling Interdependence and Child Caretaking: A Cross-Cultural View. *In* Sibling Relationships: Their Nature and Significance across the Lifespan. M. Lamb and B. Sutton-Smith, eds. Pp. 305–327. Hillsdale, NJ: Erlbaum.

1993 Overview: Sibling Similarity and Difference in Different Cultures. *In* Siblings in South Asia. Brothers and Sisters in Cultural Context. C. W. Nuckolls, ed. Pp. 1–17. New York: Guilford Press.

Weisner, Thomas S., and Ronald Gallimore

1977 My Brother's Keeper: Child and Sibling Caretaking. *Current Anthropology* 18:169–190.

Woollett, Anne

1986 The Influence of Older Siblings in the Language Environment of Young Children. *British Journal of Developmental Psychology* 4:235–245.

Zukow, Patricia G.

1989a Communicating across Disciplines: On Integrating Psychological and Ethnographic Approaches to Sibling Research. *In* Sibling Interaction across Cultures: Theoretical and Methodological Issues. P. G. Zukow, ed. Pp. 1–8. New York: Springer-Verlag.

1989b Sibling Interaction across Cultures: Theoretical and Methodological Issues. New York: Springer-Verlag.

1989c Siblings as Effective Socializing Agents: Evidence from Central Mexico. *In* Sibling Interaction across Cultures: Theoretical and Methodological Issues. P. G. Zukow, ed. Pp. 79–105. New York: Springer-Verlag.