

Grandparents Speak: Museum Conversations across the Generations



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ABSTRACT

The research results from the Museum Learning Collaborative indicate that learning in museums (defined as conversational elaboration) is strongly influenced by three factors: 1) the learning environment (defined as the response to large design features); 2) conversational engagement (defined as explanatory, analytic and synthetic discussions of objects); 3) group identity (defined as knowledge, experience, and motivation). These results were consistent across different museum types and different visiting populations (Leinhardt and Knutson 2004). This case study uses the experiences and conversations of one group—four members of an intergenerational grandparent-grandchild group—and one dimension of the model: identity. It examines how this particular group of grandparents used the museum setting to take on non-stereotypical roles in ways that reflected identities: the role of storyteller (a sharer of information and family knowledge); the role of playmate (a learner and teacher who can enjoy an environment); the role of modeler of caring social interactions (a harmonizer who can experience conversational coherence and dissonance with grace). The conversational segments reproduced here are a means of unpacking the MLC model and exploring the discourse behaviors of this particularly interesting group.

INTRODUCTION

An older man sits in a soft chair facing a young boy, clearly his grandson; both are holding small electronic devices between their hands. Every few seconds, the young boy exclaims, “I won!” Over and over, the older man feigns disappointment. Suddenly, the young boy frantically starts to squeeze the device and cries out that his battery is dead; simultaneously, the older man announces with glee, “I won!”

A young boy stands in a store of some kind and asks a lady to enlarge a photograph for him. The boy wants it very, very big. Finally, we see that the photograph is of a robust young woman throwing a baseball. The tint and coloration of the photograph show that

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it is old. The scene switches and the young boy, now clutching the enlarged photograph, rings a doorbell. A kindly older woman answers the door and the young boy asks, while holding up the picture, "Grandma can you still do that?" The older woman replies, "Let's see," as the two walk out to the backyard.

These two scenes are from two different television advertisements. The first is for a type of battery, and the second for a photographic enlargement system. Both ads portray fanciful and stereotypical images of grandparents and capitalize on their special relationship with children. In the first example, the grandfather figure both plays and plays along with the slightly nerdy young boy. He is a friend willing to lose but he still tries to win. In the other, the grandmother is seen as a newly discovered potential playmate, an older woman with a meaningful yet unknown past.

In many western industrialized societies, the family unit that lives together under one roof does not include grandparents. In such cases, the grandparent takes on a set of roles, both real and imagined. At once the consummate insiders (they know all about the parents) and the consummate outsiders (they are not around for many of the core daily tasks and decisions), grandparents are perceived to play an unusual, yet extremely valuable, role.

Although grandparents and grandchildren have a special relationship, we have little documentation of intergenerational learning between grandparents and grandchildren, and little understanding of their roles and ways of interaction. Furthermore, grandparents in our society are healthier and live longer, so they have an opportunity for a significant influence on the lives of their grandchildren (Hagestad 1981). In this case study, we looked at museum-based interactions between grandparents and grandchildren and asked the question: How are these relationships enacted (and perhaps advanced) through visits to and conversations in museums? We are particularly interested in exploring how social identities and shared histories emerge through conversations provoked by the museum environment.

GRANDPARENTS, MUSEUMS, AND CONVERSATIONS

Museums are places that encourage a rich mixture of social, conversationally mediated interactions between grandparents and grandchildren. Interactions between grandparents and grandchildren can and do take place anywhere, but there are some locations and settings that are more conducive than others to supporting these particular identities. We suggest that enriching interactions take place in settings in which there is no pressing external goal to be achieved (such as buying a new pair of shoes or going to the doctor), nor any strong expectation for particular role-based behaviors (such as those at religious holidays, or family celebrations). These interactions might occur in environments that are contained geographically but are open with respect to purpose, duration, and movement. Communicative actions might be expected to take place in a location with many interesting objects and activities (a park, a beach, or a wooded path) but not in an environment that is so overwhelming with respect to stimulation that all conversation disappears.

Chrystal Ramirez Barranti (1985) analyzed the literature from the mid-1950s to the

mid-1980s that dealt with the variety of roles that non-custodial grandparents assume in the lives of grandchildren. In these accounts, grandparents were not observed in active interactions in different settings (see also Gratton and Haber 1996). There is a dearth of qualitative descriptions of grandparents engaged in interactions with grandchildren. In particular, even though grandparents and grandchildren frequent museums, this visitor group is under-studied.

Museums are ideal locales for studying these interactions because they afford unique opportunities for conversation. Museums are places for family members' jointly constructed agendas to emerge, for sharing of past experiences and future dreams, and for engaging with objects of cultural significance. Museums are locations where people come freely and without a need to accomplish a particular goal or to spend a specific amount of time. They are well-designed environments that stand ready to welcome both the intense scholar and the casual visitor (Leinhardt and Crowley 2002; Leinhardt and Knutson 2004; Crowley, et al. 2001; Leichter, Hensel, and Larson 1989). Museums are also unique locations for the researcher. With minimal intrusion, the researcher can learn how groups respond to different conditions and arrangements of environments and can study the very nature of informal learning and conversation.

We privilege conversation for pragmatic and theoretical reasons. Pragmatically, conversation is observable and recordable. Theoretically, conversation, to be successful—that is, meaningfully sustained—must follow some underlying agreements. Most theorists of discourse emphasize that for a conversation to work, there must be agreement on the part of the participants to make it work: to sustain it by resolving ambiguities or tolerating them and by talking in a manner that is consistent with the activity or practice in which they are engaged (see Clark 1996; Grice 1989; MacWhinnie 2005). Engagement in conversation both supports learning from the activity and anchors recall of the events and intentions with specific labels and meanings. And it is within conversation that perspective can change. For these reasons of learning through and with conversation among grandparents and grandchildren, we feel conversation is worth investigating.

BACKGROUND

The data for the case study came from the large 200-group database of the Museum Learning Collaborative (MLC). From 1996 to 2002, we studied learning in museums, adopting a socio-cultural stance toward learning, activity, and culture, and focusing on conversations as learning (Leinhardt, Crowley and Knutson 2002; Leinhardt and Knutson 2004). To conduct that study, we developed an underlying causal model of how we thought learning in the museum might take place. In this model, we considered the development of conversation and its elaboration as an important form of learning. By elaboration, we meant the enrichment of simple moves of noticing or judgment (“Look, a pretty mask!”) through incorporation of details of analysis (“Look how the shape of the eyebrows makes it look mad”), synthesis (“This Tlingit mask uses colors that are similar to Kwakiutl masks”), and explanation (“These masks are important because they were used by the Tlingit as a way to connect to the spirit world”).

Using conversational elaboration allowed us to avoid defining learning in the museum context either as the personal accumulation of factual or affective knowledge, on the one hand, or as a purely emotive exclamatory response, on the other. By focusing on conversation, we were able to use group activity as indicators of learning. Our model of learning included the historical context of the visit from two viewpoints—design (museum curators) and experiential (visitors)—by presuming that learning was a consequence of 1) explanatory conversational engagement with the content, 2) the identity of the visiting group (broadly construed in terms of the personal or shared history, interest, knowledge, and motivation of each participant), and 3) the responsiveness to the designed learning environment of the museum (Leinhardt and Knutson 2004; Leinhardt, Knutson, and Crowley 2003).

In the course of our study, we observed over 200 groups of visitors as they went through one of seven different exhibitions in one of five museum settings. (The average time spent was an hour, though some spent as little as 15 minutes, and others more than 90). The groups engaged in conversations before and after their visits and were audiotaped during their entire self-directed tour. The groups included friends, couples, business colleagues, siblings, parent(s) and child(ren), and intergenerational families. Intergenerational family groups constituted six percent of all groups in our sample, and were comprised of grandparents and grandchildren, or grandparents, grandchildren, and parents.

The results of the MLC research showed that the content of the conversations of all visitors was strongly influenced by 1) the identity of the visitor, 2) the learning environment experienced by the visitor, and 3) the explanatory engagement within the group. Groups who responded to the designed aspects of the environment by connecting with specific features (such as wall text, wayfinding signage, object signage) engaged in more conversation during their tours and elaborated more on their experience in the post-interview. Groups that engaged in more explanatory and analytic conversations during their tours had more to say in the post-interview about major themes and objects in the museum. Finally, those groups that had a sense of identity that positioned them as museum goers and that affiliated them with the contents of the exhibitions—in terms of what they brought to the setting, as well as how they viewed their own interest, knowledge, and experience—had more explanatory engagement during the tour and spoke more about the content of the exhibition in the post-interview.¹ All conversation was influenced, of course, by the specifics of what the groups saw.

“Identity” proved to be an especially crucial factor in this model of learning. Identity is a complex construct playing itself out in the social roles of any particular group. It includes how group members see themselves as participants in a given activity—for example, as museum visitors, or as appreciators of the new and different, or even as preservers of the known and valued. Aspects of this identity construct are what we are following up on in this paper.

SELECTING THE GRANDPARENT GROUP

We can consider the identities and roles of grandparents in different ways. We think about

identity as mediated by particular activities. We think about it in this way because we believe that interactions between grandparents and grandchildren accumulate over time. It is not the single encounter that is important on its own, but the accumulated encounters that combine to build a relationship and a sharing of knowledge and life expectations.

We have found it useful in thinking about identity to make analogical use of Brian MacWhinney's "perspective hypothesis." This is a theory of language that seeks to explain both the development of and use of particular linguistic actions (MacWhinney 2005). One claim made by the perspective hypothesis is the following: Children are able to learn cognitive pathways and mental models by tracing perspective shifts that occur in conversation (MacWhinney 2005, 199). According to this theory, grandparents can support their grandchildren's learning by modeling and engaging in perspective shifts in response to particular elements in a situation.

Among the many roles that grandparents can take on, we looked at three: 1) The grandparent can play the role of family storyteller and keeper of family memories. We would expect to see perspective-taking markers—such as "Do you remember when?"—that signal the role of storyteller in conversation. 2) Grandparents can act as safe playmates—fun, knowledgeable, and non-judgmental. In that role, grandparents introduce children to identities that appreciate, engage with, and enjoy life. Here, too, the role of playmate would be expected to have clear markers—for example, the grandparents' discourse would have specific connections to the ongoing activity. 3) The grandparent can model social interactions that are respectful of children's emerging understandings, without the obligation or burden of assuming a direct teaching position. We can find these roles being played out through a variety of activities and reflected in conversation. We assume that—as grandparents take on these roles—we will see perspective shifts in the conversations.

From the larger study of 200 groups, some findings relating to intergenerational families seemed interesting enough that we wanted to examine them more closely. We had the opportunity to observe grandparents and grandchildren at six of our seven venues. Intergenerational families behaved in ways that were consistent with other groups in our study. However, the specific nature of the grandparent role provides insight into the ways in which social roles and shared histories interact within the space of the museum environment. To focus more closely on these issues, we chose to explore one group's experience. The example described here comes from the Carnegie Museum of Natural History (CMNH), where the group was visiting the Alcoa Foundation Hall of American Indians.

We chose this particular group because they displayed several different ways of engaging with the material. In comparison to the average group in the MLC database, this group was typical with respect to their identity scores: they were moderately "planful" in deciding to come to the museum and had some level of personal experience with the content; they engaged with the features of the learning environment in the museum somewhat more than the average visitor group, for instance by stopping to read material silently or making clear efforts to follow the curatorial premises of the exhibition; and they offered analyses, explanations, and syntheses across exhibits at a level just slightly more than average. As a result, they learned more from their visit to CMNH than the average group in our study.

In the case of the group at CMNH, a grandfather and grandmother were visiting with their two grandsons who were cousins. The three core families lived fairly far apart from each other, and daily or weekly interaction among them was not possible. To compensate, the grandparents made a regular habit of meeting with and arranging extended outings with their grandchildren several times a year. This particular family trip was one week long. During the museum visit we observed, the group was touring the entire museum; Indian Hall was just one of their stops for the day. From this description, one stable identity feature of this family grouping can be inferred: the grandparents took their role of familial nurturer seriously and planned actions to support it. The grandparents had a rich store of experiences and adventures to share, as well as the ability to enter into the world of the two young boys. Another aspect of their identity was their own sense of connection to and knowledge about American Indians and that population's connections to the natural world. Three members of this group of four had been to other historic sites and had been to Indian Hall on at least one other occasion. Thus, one additional aspect of their identity was that of museum goers.

The museum and exhibition—The Carnegie Museum of Natural History is one of a cluster of buildings built and bequeathed to the people of Pittsburgh during the city's golden age of industrialization. The beautiful but imposing classically-styled stone building that houses the Natural History Museum has towering ceilings, large sweeping marble staircases, and colorful murals depicting the progressive development of mankind through industry. Indian Hall is not a space that one would find accidentally, since it is located at the back of the third floor tucked behind another exhibition hall.

Inside Indian Hall, there are life-like dioramas that show the intersection between traditional ways of life and contemporary influences, sections on contemporary educational practices, and displays on urban lifestyles. In a diorama showing a Hopi marriage ceremony, for example, each figure is contemporary and named, and features of contemporary American dress (such as eyeglasses and sneakers) appear alongside traditional Hopi hairstyles. The exhibit hall is designed with a strong linear path but there are points at which one could cut through the space. At the center of the exhibition space is Star Theater, a circular, domed area open on two sides, with built-in benches and a quiet, darkened atmosphere. The shape is reminiscent of the inside of a Kiva, a Navajo lodge, or an Iroquois dwelling. The domed ceiling serves as a projection site for a frequently running video depicting the night sky, with commentary explaining American Indian legends associated with stars and constellations.

THE STUDY: A MULTIGENERATIONAL CONVERSATION

We obtained their consent and conducted a pre-tour interview with this group.² Instead of giving a chronological account of their visit, this paper presents strands of conversation that reflect different roles that surfaced in the course of their visit. In one strand we see the grandparents, as storytellers, gradually introducing a story of a visit they had made to Alaska and then to the Southwest. Another example, one that illustrates the role of

playmate, explores the interactions between one boy and his grandfather as they shared a game. In addition, there is a series of jointly constructed explanations in which the grandparents serve as modelers of social interaction and intellectual engagement. Finally, there is an example of miscommunications that occurred, suggesting that this is the result of a different kind of modeling of social interactions.

The first account took place at a large diorama in the Tlingit section of the exhibition.

Track 6. Tlingit Plants

Grandfather: When Grandma and I were in Alaska we saw some Indians that were basket makers and they explained to us how to do that—how they gathered the grass and made baskets. I think they could make baskets that could hold water. [Travels and object focus.]

Younger Boy: That's really tight weaving, man. [Connects to object.]

Grandmother: From Juneau.

In this exchange, the grandfather juggled the perspective of the present engagement with the object and the beginning of a past narrative. The story line that showed the identity of the grandparents as explorers (“When Grandma and I were in Alaska...”) was returned to continuously throughout their tour of the exhibit hall. We saw these repeated explications as a kind of invitation to the young boys to also explore their world. As the grandparents moved into the tour, they both made appreciative comments about the beauty and craftsmanship of the objects in the exhibits, talking about the design of assorted baskets and other items made up of plants indigenous to the Northwest Coast. They shared their personal knowledge of how the baskets were made. They also shared their personal experience with Indians who acted as explainers to the grandparents.

The language was in the general service of engagement with the material or objects. The grandparents were, in some sense, facilitators, modeling how to enjoy a visit to the museum (and we saw more of that further on in the tour). But with his last move (starting a story) the grandfather introduced what we saw many times, namely, taking advantage of the inherent permission, or even invitation, given by the museum to share one's history in small anecdotal chunks with the other members of a group (Fienberg and Leinhardt 2002; Leinhardt and Knutson 2004). This story of the grandparents' trip to Alaska was echoed again as the group moved from the Tlingit to the Hopi areas and the grandparents talked about another trip they had been on. In the following exchange, the group is responding to a large array of ceremonial dolls or figures known as katsinas that they discuss across two other stops. Here we see the storytelling role continuing.

Tracks 17-19. Hopi Water, Wedding, and Katsinas

GF: These are like the dolls we bought out in Four Corners. [A region of the Southwest where four states—New Mexico, Colorado, Utah, and Arizona—come together and also a place of many Indian ceremonial and market gatherings.]

GM: Yeah! You remember the story of Grandpa buying the hunting doll? [Introduction of story.]

YB: No.

GM: No?

GF: I asked the lady. . . .

GM: It was like a flea-market-type thing. There were tables set up at the Four Corners out there. And Grandpa was looking for a doll that was good for hunting, since he was a game warden. He said to the lady, "Do you have any dolls that mean good hunting?" And she said, "No, I don't think we have anything like that, we don't make it for hunting." So we walked all around, you know the area, and on our way back to the van she said, "Mister, Mister, I think I found one, good hunting." Well, while we were gone she wrote, "Good hunting" on the bottom of one of the dolls she had there. [Sharing of story.]

YB: (Laughing).

GM: So, Grandpa has a good hunting doll. Of course, earlier it didn't mean good hunting, but it did just before we left.

GF: Just in case, she wrote "Good hunting" on the bottom and it meant, made it, good hunting.

GM: She made the sale. She was smart, she knew how to sell! [Moral of the story is explicated.]

Older Boy: If you go to New Mexico, that's what it still looks like. [Older boy joins in, returning to exhibit display.]

GM: Does it really?

YB: Uh-huh.

OB: Little different, but in Santa Fe it's like that.

GM: Your Dad has one of those dolls. Remember, Grandpa, what his doll is?

OB: I didn't know they were for different things. [Older boy had missed the story.]

GM: Oh, yeah, they have different meanings but I don't remember what his was.

YB: Well you have that one. It's blue, isn't it? Is that the Good Hunting one? [Younger boy reconnects to story and links grandfather's object to it.]

GP: Un-huh.

YB: Oh! That is it.

GP: That's it.

GM: That was so funny, that lady.

The grandparents accomplished a variety of things in these few turns of conversation. They modeled how to use an exhibition as a springboard for somewhat more elaborated conversation and remembering. They jointly became storytellers (with the grandmother taking over the grandfather's story). They showed good humor and admiration for the sales ability of the woman in the story; as before, they shifted perspective of the account to bring in another actor and to re-tell the story with that actor in the account. They also enhanced and elaborated on a known object, one that the young boys had clearly seen and noticed in their grandparents' home, thus making a three-way connection between the present, the past event, and an ongoing circumstance. Finally, they explained to the two boys that the "dolls" were not toys but meaningful objects with particular purposes. The ideas of travel and "grandparents as explorers" were also posted as a part of their identity, both as storytellers and communicators of a shared history. It is also important to note what the grandparents were not. They were not detailed, careful teachers of Native American history or culture. They were not didactic explainers.

We move next to examine a strand of conversation reflecting the playmate role that recurred throughout the tour. In this particular episode, the younger boy introduced the grandfather to an interactive video display (in an area with several interactive displays) designed to explore the family patterns and naming customs of the Tlingit. Here we saw the grandchild trying to generate interest in, and explain to his grandfather, the interactive exhibit station for constructing lineages in Tlingit clans such as bear and raven. As the conversation continued, we also saw another foray into the story of the Alaska trip and an opportunity for a recurrence of the role of grandfather as storyteller and traveler. In these segments of grandparents as playmates, the group went to an interactive exhibit and then moved to the adjacent mask exhibit.

Tracks 7 and 8. Bear Interactive/Tlingit Raven

YB: What's that? "Become an honorary member of the—First select." Here we go. Okay. "Into which group divided into two groups. That's your mother's." [Reads exhibit label.]

GF: Explains about the clans, bear clans.

YB: Okay.

GF: No, it's how the animals and the people relate.

YB: Everyone has a name. "The answer on your mother's side, mother's aunts and grandparents on the day of her—were given the—." [Younger boy is soliciting the playmate role as he tries to continue getting help in working the interactive game.]

GF: What are you looking at?

YB: I'm looking at—it's like a family tree thing. It goes through your, how you would be named. Uh-huh. Is not your mom or dad. It's probably your grandparents. [Younger boy tries to explain the overall purpose of the game.]

GF: Aunts.

YB: Aunts?

GF: Aunts and uncles. Try that.

YB: Uncles and grandfathers. Your eagle uncles. Your mother's—.

GF (to OB at adjacent display of masks in the Raven/Bear case): Did I ever tell you when we were up in Alaska they had a museum that had a lot of different masks in it that they used to use? [Grandfather, as storyteller, tries to bring in older boy to play the game.]

YB (to self): Then why isn't that grandfather highlighted?

GM (at masks): Different masks for different ceremonies. What was sad was when the Christians came in and started teaching the natives that they made them get rid of all their old ways, and made them do away with their dancing and singing and masks and all their rituals, so a lot of it is already lost. And now they're trying to bring it back, as much of it as they can. How that glows. [Grandmother starts one of her two strands of thematic explanation, the fragility of Indian culture because of missionary and western influences, using the grandfather's storytelling connection.]

OB: Yeah.

YB: What're these masks? Are these different masks or—?

GM: These are just different bear masks, masks they used in their dancing.

GF: These were totem people.

Here the younger boy first tried to interest his grandfather in the game and then he moved on to try to figure it out for himself. This was essentially an invitation for the grandfather to act as playmate with the joint construction of goals and discovery that implied. These tracks, taken together, show the younger boy trying, and partially succeeding, in getting help from his grandfather as he worked the interactive display. The younger boy read parts of the instructions and display aloud, which kept the information public; the grandfather responded with one brief mention of bear clans and then he self-corrected and told his grandson that the reference was to the interrelationship of people and animals. He continued by giving his grandson a clue so that the boy could finish his lineage chart.

By turning the conversation slightly, the grandfather brought the older boy into the conversation as he once again laid the groundwork for his tales of Alaska, this time with a story about masks. The grandmother added an interpretation of the importance of the museum they had visited in Alaska by giving a short summary of the American Indians' loss of cultural identity due to the impact of missionaries. This example of conversation across two adjacent exhibit stations shows the grandparents enacting the role of playmates. The positional moves in the conversation started with engagement in the present with the object and activity, then moved to a past narrative, and concluded with an embedded interpretation. In structure, these moves were similar to those in the Katsina doll story. With the question, "What are you looking at?" we see that the conversation also places demands of perspective-taking on all of the participants. All participants must understand what the others are looking at, and what they are working to make sense of.

Near the end of their tour, when the older boy joined the younger boy, the cousins were slightly more successful in attracting and maintaining the grandfather's attention as playmate, encouraging him to actively participate in an interactive game. At this computer-based video station, visitors could pretend to hunt buffalo, altering different characteristics of the time, tools, and weapons to impact the results of their virtual hunt. There was a large, raised video monitor above the main computer screen so that multiple visitors could simultaneously watch the game proceed. At several points in the discussion, the group had the opportunity to reveal its understanding of current and past hunting skills as well as the historical development of tools and strategies particularly associated with hunting buffalo. It is an unusually lengthy and sustained series of interactions, and one that showed quite clearly the teaching (and learning) styles of the grandfather, in particular.

Track 42. Lakota Buffalo Interactive

GF: Smashed-In-Buffalo-Jump. They had a place where they drove the buffalo off a cliff and this one weirdo wanted to see what it looked like from underneath. They piled the buffalo up so much, when they unpiled them he was dead underneath them. So they called it Smashed-In-Head-Buffalo-Jump. [Grandfather introduces game and partially reads the background commentary.]

YB: [At video, muttering.]

GF: What'd you do? Take the wrong track? [Grandfather intervenes as more knowledgeable playmate to support younger boy; grandfather adopts younger boy's perspective.]

YB: Yeah I went in the wrong direction and there was a—Hey! I want to go hunting again.

GF: Okay, I'm watching it up here. [To older boy:] Watch this and see if he gets a buffalo. [Again tries to include older boy as younger boy plays.]

OB: What do you have to do?

GF: I don't know, you make selections. [Grandfather gives just enough support, almost as coach.]

YB: Yeah but sometimes it won't—OK there. Horse, no horse? Yeah, horse. What do you think? I had buffalo run last time.

GF: Well you got to select hunting technique. [Support prompt that helps younger boy shift perspective.]

YB: What do you think?

GF: You want them to jump off a cliff or—? [Connects back to first prompt; grandfather adopts young boy's perspective again.]

YB: Yeah, running them off the cliff, buffalo run.

GF: So still hunting is out because you picked a horse, don't select too late because there won't be any buffalo left. [Refers to date of hunt, but note the conversation is about both the game strategy and the content.]

YB: Well, yeah, and if you select earlier they won't have any horses. Okay, select weapons. Well did they have guns by then? [Younger boy and grandfather display joint knowledge of what historical information is relevant vis-à-vis the Indians, guns, and horses.]

GF: 1840? [Question as answer.]

YB Yeah they did.

GF: Yeah. [Evaluative acknowledgement.]

YB: Well then?

GF: Well I wouldn't go in the summer. [Warning so that younger boy does not fail and have to start over again; the two are again working both in the content-of-hunting-knowledge space and in the coping-with-game space.]

OB: Spring or fall?

YB: Now.

OB: Just like deer hunting. [Older boy uses indirect prompt style as did grandfather.]

GF: North, south, east, or west. Better look at the—.

YB: Yeah there's the buffalo jump, so I have to go where the buffalo jump is.

GP: Well—.

OB: You have to get the buffalo first.

GF: Can you find where the buffalo are? [More support.]

YB: It doesn't show me.

GF: Well look at the buffalo run. Yeah, that's the tracks. [Big hint.]

YB: Okay, so?

GF: I don't know what your choice is. [General problem-solving support; grandfather backs away from the direct hint above.]

YB: Well, either north or west. I mean, if I go either I'm not really going in that direction. And if I push the wrong button I have to start all over again.

GF: Go west. [Senses YB's rise in frustration, and responds; grandfather is clearly in game space now, both are sharing same perspective.]

YB: Go west? Okay.

GF: I think you can move again.

YB: Yeah! They'll be able to smell me coming. [Laughter as grandmother joins.]

YB: 'Cause of the wind direction. See the wind direction? [Younger boy gets to explain to grandmother.]

GF: Yeah?

YB: What if I approach—.

GF: Are those the buffalo there?

YB: No, I don't think—.

GF: Well, there's the run, that's where you're going. [Game makes a beeping noise.]

Oh, here, that's where you're going.

OB: What was that beeping?

YB: Yeah I can see where I'm going but—.

GM: I don't know. What was the beeping?

YB: Are those the buffalo?

GM: Well, it looks like buffalo stampeding. [Helps to resolve confusion—the younger boy has completed the game, but cannot decipher the objects.]

YB: Aha! "Congratulations! You have a fast pony and you were able to kill four buffalo!" Woooo!

GF: See, you get to feed the sick widow. [Interprets the success.]

YB: [Chuckles.] "Sick widow for 13 days," yeah.

OB: Everyone takes turns giving her food.

....

GM: Can I try that? Want to try something different? [Invites older boy to play.]

OB: Why don't you try it? Try one by yourself. What's a, the other ones? Spirituality and stuff? What're those? [Reverses playmate role.]

GM: Spirits, their dances.

GF: Read this! It talks about controlled burns. [Ancient and modern technique for controlling wildfires.]

GM: Oh, Jeez he's already over there, control burning and stuff, he found it. Oh, are you going to try?

OB: Vanishing buffalo.

...

OB: I guess I was supposed to look at all the different dates.

...

GF: Yes and No. [Grandfather uses same technique as that used with younger boy.]

OB: Am I playing this game or are you? [Friendly sharing of roles but rejection of the prompt help that worked with younger boy.]

GF: [Laughs.]

GM: Let him do it. [Grandmother picks up on slight tension.]

GF: Don't look at me for the answer. [Grandfather adds humor.]

OB: I wasn't looking.

GF: Ohhhh. [Continues use of humor to reduce tension.]

OB: Seven out of 10.

GM: You have a future, see there? You haven't thought of that, being a buffalo rancher, there's another option for you.

OB: (Laughs.)

A lot happened in this extended stop at the interactive station. The younger boy got support and help from the grandfather as playmate/coach while they managed to retain the playful atmosphere that surrounded the game. Their shared fun attracted the older boy and the grandmother back to the station and the latter two took a turn after the first two had finished. The grandfather helped negotiate the procedures of the game (something at which he was not terribly good) and he also assisted both boys with the content of the game, hunting buffalo. The grandfather had some general knowledge about the substantive issues in the content of the game because of his work as a game warden. The younger boy was able to use and display his own knowledge. He knew to move downwind of his prey, and immediately saw the importance of hunting in fall or spring. He also understood the historical context of the dates that bracketed the pretend events—which took place after horses were introduced but before the buffalo were hunted to near extinction. The playing helped to reinforce the core identity of this small family group. They might not be skilled American Indian buffalo hunters from the mid-nineteenth century, but they still had some of the knowledge needed to survive in the wilderness. This episode also echoes the scene described in the opening of this paper, where the grandfather played a computer game with his grandchild. In both settings the grandparent is not necessarily good at the technology of the game; but each participant does have some useful skills and, more importantly, the desire and willingness to play. In a larger sense, this family group reinforced their own identities as being engaged with and enjoying the world around them.

The museum supported the group in storytelling and in playing together as a family unit. The museum also supported the joint construction of thematic explanations (for extended discussion of thematic discourse see Ash 2002 and Stainton 2002) and there is increasing evidence that engaging in coherent explanations leads to learning (Keil and Wilson 2000). Two substantial thematic ideas floated in and out of the grandparents' conversations: first, that the cultures depicted here were in danger of being lost; and second, that those groups of people who lived in environments with sufficient food resources had time and the luxury to do fine craft work, whereas those who lived in harsher conditions did not. We look next at three brief segments in which these ideas were advanced.

Track 9. Tlingit Heirlooms

GF: Unlike other Indians who were nomadic and didn't have many possessions or anything—

YB: Uh-huh.

GF: These Indians, 'cause there was so much food there—. [Lays out beginning of theory.]

YB: Yeah, so much food that they had time to make crafts and stuff. [Younger boy clearly knows this interpretation.]

Track 13. Hopi Corn Stacks

OB: Well, now you are back to the Western ones.

YB: The Western.

GF: Now this was a lot tougher existence than what the Tlingit had.

YB: Yeah, so they didn't have as much time for crafts and stuff. [Again gives the explanation.]

Track 16. Hopi House

GM: There are sheepskins on the floor. Is that meal?

GF: Yeah.

YB: Yeah, they were grinding.

GF: Isn't that amazing how this, how humans, even though almost alike, how they adapt to different environments? It was so dry here they had to irrigate; the Tlingits had so much water that they didn't have to worry about it. [Extension of idea of time and wealth to make art/craft versus time and effort needed to survive.]

In addition to introducing the Alaskan visit and its accompanying stories, the grandfather presented his theory of Indian cultural production (a kind of counternarrative to the grandmother's claim about loss of identity), namely, that those groups that had sufficient food and shelter were able to produce more objects such as masks and decorative pieces. The younger boy finished the grandfather's thought at the end of Track 9, indicating he was familiar with the particular explanation. The discussion of environment and its effect on lifestyle continued on Tracks 13 and 16 when the group looked at the Hopi section. These last comments showed the ways in which partial explanatory theories were considered and used by the entire group. There was no pretense that these were particularly profound or even accurate theories, but what they did do was to model for the two cousins the way in which one might move through an unstructured space and jointly construct an explanation and then use that explanation in several locations.

The agenda for this group was not only to see a museum exhibition but also to reinforce and build family bonds. In and of itself, this tour would have afforded insufficient time to do the latter—60 minutes of fragmented talk does not accomplish such a lofty goal. But many hours over many weeks and years does. Here we saw a brief glimpse of that ongoing activity as well as the interwoven and situated nature of this relationship-building process.

Not all of the conversations went quite so smoothly, however. Sometimes the exhibits confused one or another member of the group, and sometimes the members of the group did not quite understand each other. But the misunderstandings were moments of social modeling and learning, as well, because neither the grandparents nor the children became overly impatient or distressed. We turn to two final examples to illustrate such moments, the first of which began halfway through the tour and the second nearer to the end. The family was in the Star Theater, hearing explanations of the stars and constellations in terms of Indian legends.

Track 24. Star Theater

YB: Is that the end?

OB: Is that the end?

GF: Must be, yeah. I didn't know that they would even know the location of their, or the position, that they put their lodges.

OB: How did they trace their village to a star?

GF: Trace what?

OB: Trace their village to a star?

GF: Well, whichever one was brightest on the day that they were born.

OB: No, their village, they said.

GF: Oh, I didn't get that.

OB: Yeah, they said each village to a star.

Track 32. Iroquois Hunting

GF: The Mohawks work on high iron, steel workers.

YB: What are these things?

GM: The turtle? No, well.

GF: Look. No belts or anything, just walking.

GM: It's an emblem of their clan.

YB: Oh, I thought they served a purpose. Just emblems.

GM: Well it does. Each clan has its own emblem.

YB: No, I mean like, the thing, I thought it had a purpose.

GM: I don't understand what you're saying.

YB: I mean, they put their emblem on a lot of things, but I thought that one circle had a purpose, like they used it for something in cooking, or something.

GM: Senecas have eight clans and each clan has its own emblem, their own animal. And that's what those are. Three basic clans: bear, turtle, and wolf for the Iroquois. This is just to show what the clans are.

In these segments we see all four of the family members misunderstanding each other and, to some extent, the exhibit. They were unable to see from each other's perspective and so communication broke down. However, in both situations they handled the confusion gently and politely. But the questions remain unanswered. How did the village link itself to a star? Were there any utilitarian purposes to the objects that carried the clan emblems? This points to two issues. First, that communicative acts always have the potential to miss their desired targets even when communicators know one another well and have a clear point of conversational focus. Second, it points to the challenges of museum design. If this were a purely didactic situation, as is common in a formal educational setting, then there would be an easy solution to developing a complete, accurate explanation of the objects and their uses. If only one member understood the situation more completely, as we have seen in other interactions, then that individual could resolve the confusion. But in the museum, dedicated to being an informal setting for learning, one exhibit with "just enough" information may leave some visitors perplexed. The museum has to make a choice and consider the trade-off between providing information required for a complete understanding and presenting too much information to the average visitor.

In doing this research, we are following in the tradition of work that has explored informal learning over the last two decades (Doering and Pekarik 1996; Eisner 1993; Falk,

Moussouri, and Coulson 1998; Silverman 1995). We used one group's experience and conversation as a specific case by which to elucidate the ways in which roles, histories and identities emerge. This family group was consistent with other family groups that we observed in the MLC database. But the text of their conversation points to the unique particulars of their identities and social histories. Through their conversations we see their personal experiences emerging in response to their contact with the museum's presentation of American Indian culture.

As we saw in the opening of this paper, grandparents are often portrayed in popular culture either as spending their entire lives waiting for the important visit from their neglectful children and grandchildren, or as sweet fuddy-duddies not quite able to handle this modern fast-paced world. Naturally, neither view is accurate. What we have tried to do in this paper is to explore the ways in which the identities of specific grandparents are manifested in the activities and conversations they engage in with their grandchildren. As we hinted earlier in this paper, it may be that analyses characterizing grandparents as being of one type (authoritarian) or another (collegial) are not as helpful as seeing them engaged in different activities that allow them to take on a variety of potential roles in which aspects of their identities can be most meaningfully shared with their grandchildren.

If we wish to avoid characterizing grandparents and their roles in a solid, immutable fashion, then we must also assume that each and every grandparent-grandchild encounter is unique and its outcome unpredictable. The conversations and activities presented as examples in this paper took place as the result of the familial history of talk and action that had gone on among these participants many times before our recorders were turned on. Likewise, what we actually observed and reported probably served as a prologue to the encounters yet to come. Identity is a precursor to the specifics of a particular encounter. A given activity affords the opportunity to display, rehearse, and enhance identity—in this case that of guide to a wider world and gentle support for a system of mutually nurturing exchanges. Finally, identity is constantly evolving and forming in a posture for the future. The simple visit to the museum affords families the opportunity to learn and to practice being families.

If museums are important locations for family exchanges, what can museums do to systematically develop the features affording use of such a space? Museums have been attentive to the issues posed by individual differences in interests and desires. Science, natural history, and children's museums, in particular, are very aware that they have a complex mix of visitors. They respond with specific exhibits designed to reach divergent audiences. They have been less aware that the visiting group may well have a group agenda that transcends the separate curatorial agendas or specific objects. Prompts designed to encourage interaction within groups, especially intergenerational ones, hold promise for supporting multiple roles (playmate, friend, storyteller, modeler). The support of multiple roles, in turn, is likely to increase different types of explanations. An increase in the variety and richness of explanations on the part of visiting groups is likely to increase both enjoyment and learning.

NOTES

1. The MLC research allowed us to make quantitative statements about learning. Specifically, a multiple regression and subsequent path analytic model which used the three elements of the causal model (identity, environment, and conversation) explained nearly 60 percent of the observed variation in learning (see Leinhardt and Knutson 2004, 157).
2. The pre-interview was an audiotaped, self-administered conversation among group members prompted by printed questions and photos.

REFERENCES

- Ash, D. 2002. **Negotiations of thematic conversations about biology.** In *Learning Conversations in Museums*, G. Leinhardt, K. Crowley, and K. Knutson, eds., 357–500. Mahwah, NJ: Lawrence Erlbaum Associates.
- Barranti, C. R. 1985. The grandparent/grandchild relationship: Family resource in an era of voluntary bonds. *Family Relations* 34: 343–352.
- Clark, H. 1996. *Using Language*. Cambridge: Cambridge University Press.
- Crowley, K., M. A. Callanan, J. Jipson, J. Galco, K. Topping, and J. Shrager. 2001. Shared scientific thinking in everyday parent-child activity. *Science Education* 85 (6): 712–732.
- Doering, Z., and A. Pekarik. 1996. Questioning the entrance narrative. *Journal of Museum Education* 21 (3): 20–22.
- Eisner, E. W. 1993. Forms of understanding and the future of educational research. *Educational Researcher* 22 (7): 5–11.
- Falk, J. H., T. Moussouri, and D. Coulson. 1998. The effect of visitors' agendas on museum learning. *Curator: The Museum Journal* 41 (2): 107–120.
- Fienberg, J., and G. Leinhardt. 2002. Looking through the glass: Reflections of identity in conversations at a history museum. In *Learning Conversations in Museums*, G. Leinhardt, K. Crowley, K. Knutson, eds., 167–211. Mahwah, NJ: Lawrence Erlbaum Associates.
- Gratton, B., and C. Haber. 1996. Three phases in the history of American grandparents: Authority, burden, companion. *Generations* (Spring): 7–12.
- Grice, P. 1989. *Studies in the Way of Words*. Cambridge, MA: Harvard University Press.
- Keil, F. and R. Wilson. 2000. *Explanation and Cognition*. Cambridge, MA: M.I.T. Press.
- Leichter, H., K. Hensel, and E. Larsen. 1989. Families and museums: Issues and perspectives. *Marriage and Family Review* 13 (3): 15–50.
- Leinhardt, G., and K. Knutson. 2004. *Listening in on Museum Conversations*. Walnut Creek, CA: AltaMira Press.
- Leinhardt, G., K. Knutson, and K. Crowley. 2003. Museum Learning Collaborative redux. *Journal of Museum Education* 28 (1): 23–31.

- Leinhardt, G., and K. Crowley. 2002. Objects of learning, objects of talk: Changing minds in museums. In *Perspectives on Object-centered Learning in Museums*, S. Paris, ed., 301–324. Mahwah, NJ: Lawrence Erlbaum Associates.
- MacWhinney, B. 2005. The emergence of grammar from perspective. In *The Grounding of Cognition: The Role of Perception and Action in Memory, Language and Thinking*, D. Pecher and R. A. Zwann, eds., 198–223. Cambridge: Cambridge University Press.
- Silverman, L. 1995. Visitor meaning-making in museums for a new age. *Curator: The Museum Journal* 38: 161–170.
- Stainton, C. 2002. Voices and images: Making connections between identity and art. In *Learning Conversations in Museums*, G. Leinhardt, K. Crowley, K. Knutson, eds., 213–257. Mahwah, NJ: Lawrence Erlbaum Associates.