

Narrative Development without Submersion in a Native Language

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1. Abstract

It is generally thought that children acquire narrative competence largely through submersion in a native language. Though reasonable on its face, this hypothesis is difficult to test experimentally. This study investigates whether a linguistically isolated deaf child demonstrates narrative strategies similar to those of hearing children, despite a lack of useful linguistic input. If so, then the possibility is raised that all children may rely more heavily on non-linguistic mechanisms for acquiring narrative competence than has previously been recognized.

2. Introduction

The goal of this work is to explore the relationship between language exposure and the development of narrative competence in a child. To do so, we examined a situation in which a child did not have access to conventional language, but in all other respects experienced the normal cultural world of his community. We observed a deaf child, whom we call David, whose profound hearing deficit prevented him from acquiring the language spoken around him, and whose hearing parents had not yet exposed him to a conventional sign system, such as American Sign language or Signed English. As a result, David was isolated from any useful linguistic input. We investigated the extent to which he was able, despite this linguistic isolation, to develop narrative competence.

We hypothesized that a child who does not have access to useful linguistic input may make use of other, non-verbal models for narrative — models that are usually secondary sources of input for hearing children. This hypothesis is consistent with contemporary views stressing that narratives consist of more than words; that they are, in fact, multi-modal performances (e.g., Miller & Wiley, 1997; Ochs & Capps, 1996).

David was a deaf child of a hearing family. His father was a civil employee and his mother a housewife. At the time of our observations, David had two older siblings, a brother and a sister, both of whom were hearing. All three children attended a private Catholic school, where David was enrolled in an oral training program.

The goal of parents, teachers, and other professionals who adhere to oral training is to socialize a deaf child, like David, into the surrounding hearing community by teaching him speech via lip-reading and withholding access to sign. Because acquisition of spoken language via lip-reading is extremely difficult and is mastered by very few congenitally deaf children (Conrad, 1979; Mayberry, 1992), this method often ends up isolating the deaf child from useful input from a conventional language, whether spoken or signed. In response, children like David often develop their own gesture systems to communicate with members of the surrounding hearing community (Fant, 1972; Goldin-Meadow & Feldman, 1977; Moores, 1974; Tervoort, 1961).

Although David had been enrolled in an oral program, at the time of our observations he had not successfully acquired spoken English. David did vocalize some words, but these seemed to punctuate his gestured utterances in a manner somewhat like gestures punctuate speech for hearing speakers. He did not combine two or more words within a single string. At the time that these data were collected, David had no knowledge of English, ASL, or Signed English.

A priori there was no reason to expect that David would narrate. We expected to find a gestural communicative system based on reference to things in the present ó requests for food or attention, points at toys or people in the immediate vicinity, and the like. We found, however, that David did refer to objects and events beyond the limits of his present context; he was able to reference the non-present (Butcher, Mylander & Goldin-Meadow, 1991; Morford & Goldin-Meadow, 1997). Moreover, as we describe here, David's descriptions of non-present events assumed many of the characteristics traditionally found in basic narrative formats — he used his gestures to recount stories.

3. Identifying and Coding Narratives in a Self-Generated Gesture System

The data for this study were collected by one of us (SGM) and consist of 6 videotapes totaling 13 hours of footage taken of David and his family in their Philadelphia home from age 3;3 to 5;2 (years; months). Most sessions were two hours long (one was three hours) and the main activity was free-play with toys that the experimenters brought to the home. Because these data had been originally collected in a naturalistic manner, we were able to build a study of narrative development that largely mapped onto the data collection for a similar study conducted by Miller and Sperry (1988) for assessing development of narratives of personal experience in hearing children.

Each of the 6 tapes was reviewed for any instances in which David referred to displaced topics. Gestured utterances were coded and translated according to a system previously established by Feldman, Goldin-Meadow and Gleitman

(1978) and Goldin-Meadow and Mylander (1984). This system allowed us to identify instances when David was clearly referring to some thing or event not in the present circumstance (cf., Butcher et al., 1991; Morford & Goldin-Meadow, 1997). All such instances were transcribed for both spoken and gestured utterances.

Having identified instances of reference to the non-present, we determined whether any could be classified as narratives. We did so by applying Sperry and Sperry's (1996) definition of a minimal narrative, which we adapted for David's gestured utterances (see also Miller and Sperry, 1988). In order to be able to explore the emergence of narrative activity, Sperry and Sperry set their criteria low; they defined a minimal narrative as containing two topic-centered utterances, one of which must include a verb of displaced action (see Table 1).

The following is an example of a minimal narrative produced by David at age 3;5. First we present a description of David's gestured utterances as we saw them in the video tape. This description is followed by an English gloss based on the morphological (Goldin-Meadow, Mylander & Butcher, 1995) and syntactic (Goldin-Meadow & Mylander, 1984) coding systems developed to interpret homesign. David gestured this narrative in response to a picture of a Christmas tree in a children's book. The session was taped during the summer — David was wearing shorts and playing on the living room floor with the toys that the experimenters brought with them. Upon seeing the picture, David became quite animated, standing up to show one of the experimenters where his family had placed the Christmas tree the previous December.

Example 1: A Narrative that Meets the Minimal Criteria

(utterance 1) Arms extend out to sides **WIDE** → point at drawing of Christmas tree → point at corner of living room (location of tree) → point toward corner raises vertically **HEIGHT**

(utterance 2) Point at corner of room

(utterance 3) Point at drawing of Christmas tree

Gloss:

The Christmas tree was wide and it went there and it was tall. It went there.
The Christmas tree.

In terms of Sperry and Sperry's (1996) criteria for identifying a narrative, David effectively used his present context to draw attention to the fact that he was referring to the non-present. The session was recorded during the summer and there was clearly no Christmas tree in the living room (in fact, there was a chair where David indicated the tree had stood). This contrast to the present conveys the displaced nature of the story. The descriptive statements about the

tree are utterances related to the displaced event that there had been a Christmas tree "right there."

David could clearly produce a simple narrative about a displaced event. We next asked whether, using homesign, David was able to display more sophisticated narrative devices similar to those hearing children use in their early narratives. Labov and Waletzky (1967) and Labov (1981) have outlined a number of features that constitute the referential dimension of narratives. We adapted Labov and Waletzky's narrative features in order to characterize David's gestured stories (see Table 1 for a summary of these features). Our goal was to explore the onset of narrative behaviors; we therefore allowed very rudimentary examples to fulfill the criterion for a given narrative feature. Nevertheless, such occurrences were required to conform to the definitions displayed in Table 1.

Table 1: Coding Criteria

FEATURE	DEFINITION
Displaced Event	indication of the non-here-and-now
Related Utterance	related to the displaced event
Closure	a marked end boundary
Setting	details of the situation in which the event takes place that emerge as the narrative unfolds
(Basic) Plot	the major action of the protagonist
Complication	sequence of events, external to the protagonist, answering the question "and then what happened?"
Orientation	an explicit statement of who, where, and when at the beginning of the narrative
Temporal Order	narrated events reflect the events of the real-life situation being related

Once a set of gestural utterances had been identified as meeting the minimal criteria for a narrative (*displaced event* plus related utterance), we then examined the utterances for additional narrative features. *Closure* is a marked end boundary for the narrative, usually a transition from narrating to some other activity such as play, or a return to discourse on the present. *Setting* statements are implicit references to the details of the situation in which the story takes place; these details emerge as the story unfolds. Displaced event develops into a *plot*, or the major action (often goal-directed) of the protagonist that weaves the story together. In addition to plot, a narrative often contains a *complication* — actions by other things, animals, or people "out there" in the world that interfere with the protagonist's action. Complicating actions answer the question "and then what happened?" (Labov, 1982: 225). Even more sophisticated stories include *orientation*, an explicit statement of who, where, and when, usually near the beginning of the narrative. The orientation serves as a means of familiarizing the narrator's audience by establishing the framework for the story

narrative. Finally, *temporal ordering* is a frequent feature of narratives — the order of the events narrated in the story reflects the order in which those events occurred in real life; if not, the misordered events are marked accordingly.

A narrative produced by David at age 5;2 is displayed in Example 2. Note that the narrative incorporates several of these more sophisticated narrative behaviors. To set the scene, David was playing with some toys with one of the experimenters on the floor in the living room. He saw a toy rabbit, which triggered the memory of an event concerning the family's pet rabbit, Bugs.

Example 2: A More Elaborated Narrative

(utterance 1) point on toy rabbit (vocalizes 'bobbit')

(utterance 2) point out of room toward the location of pet rabbit

(utterance 3) short, repeated point over head and back toward **backyard** → right hand, palm down, arched back toward body—**OPEN** cage door → both hands, palms down, move away from body in small arcs—**HOP** → mouth open & close sharply—**BITE** → point overhead and back toward **backyard** → point on toy **rabbit** → point toward **backyard**

Gloss:

We have a rabbit like this one out there. One time someone opened the cage and the rabbit hopped out and ate something in the backyard.

This narrative about David's pet rabbit is more fully-formed than the story about the Christmas tree. David establishes from the beginning where the story took place and that it is about the pet rabbit by providing a simple orientation ("We have a rabbit like this out there"). Then David moves through the tale to show his listener that someone opened the cage (presumably to play with the rabbit), which is the goal-directed behavior of the protagonist. The rabbit provides complication through its actions, which are independent of the protagonist's wishes or goals. Finally, David makes use of temporal ordering (1, someone opens the cage; 2, the rabbit hops out; 3, the rabbit eats something). It is not possible to determine from David's gestures alone that the events in his narratives were veridically ordered. However, the order was corroborated by David's mother who retold the story after him, adding such details as who let the rabbit out of its cage and what the rabbit ate.

4. The Developmental Progression of Narrative Features

Not only did David narrate effectively (through homesign) without access to useful conventional linguistic input, but his narratives increased in complexity over time. We first applied our coding system to narratives about the "self," as this project was designed to expand upon Miller's work on narratives of personal

experience in hearing children (cf. Miller, Wiley, Fung & Liang, 1997). Table 2 characterizes each of the 20 narratives David produced about himself. Each column represents a single narrative. The "X's" in each column correspond to each of the narrative features that David displayed in a given story. As David aged, his narratives became more complex, yet some simple narratives persisted at each age.

Table 2: Narratives about the self

FEATURES	Age at which narrative occurred				
	3;5	3;10	4;9	4;10	5;2
Displaced Action	X X X	X X X X X	X X X X X	X X X X X	X X X
Related Utterance	X X X	X X X X X	X X X X X	X X X X X	X X X
Closure	X X X	X X X X X	X X X X X	X X X X X	X X
Setting	X X X	X X X	X X X	X X X X	X
Plot			X X X X X	X X X	X X
Complication			X X	X X X X	X X
Orientation				X	X
Tempotal Order				X X	X X

After identifying narratives about the self, we analyzed the 14 narratives David produced on topics other than the self (e.g., the rabbit story in Example 2). Table 3 contains a characterization of these narratives. It is clear from a comparison of Tables 2 and 3 that, early on, David produced more narratives about himself than about others. However, the onset of features of complexity followed approximately the same trajectory in narratives about the self and in narratives about others, with some exceptions (setting, complication, and orientation appeared first in narratives about the self and one session later in narratives about others).

Table 3: Narratives about others

FEATURES	Age at which narrative occurred				
	3;5	3;10	4;9	4;10	5;2
Displaced Action	X	X	X X X X X	X X X X	X X
Related Utterance	X	X	X X X X X	X X X X	X X
Closure	X	X	X X X X X	X X X X	X X
Setting		X	X X X	X X X	X
Plot			X X X X	X X X	X
Complication				X X X	X
Orientation					X
Tempotal Order				X	X

The developmental patterns seen in David's homesign narratives are similar to those reported by Peterson and McCabe in their paper "Getting the Story" (1991: 217). They found that their sample of rural, lower socio-economic class

African-American children, at age 4;0, was still producing disorganized lists of actions. But by age 5;0, the children studied by Peterson and McCabe were able to produce temporally ordered accounts of experienced events along the lines of Labov and Waletzky's analytical criteria. It appears that David was able to do the same at the same ages.

Although "on time" when evaluated with respect to the Peterson and McCabe sample, David's narrative development was delayed relative to data presented by Burger and Miller (in press) on two European-American groups from Chicago. These researchers found that 6 children from Daly Park, a working-class neighborhood, and 6 more children from Longwood, a middle class community, were able to express two or more temporally-ordered acts in 40% of their naturally occurring stories about the past at age 2;6.

It is, of course, difficult to make normative claims about onset ages from such small samples. Nevertheless, the point we stress here is that, despite his isolation from a conventional, culturally bound language model, David adhered to a sequence in his narrative development that paralleled the sequence found in hearing children acquiring narratives from linguistic models.

The data from David's individual stories suggest that he had a well-developed narrative capacity that unfolded systematically over time. Table 4 summarizes the data from David's narratives of self and other (darkened boxes indicate the age at which a feature first appeared in one of David's narratives) and clearly illustrates David's development of increasingly sophisticated narrative skill over time.

Table 4: Summary of David's Age of Onset for Narrative Features

Age of onset					
Narrative Feature	3;5	3;10	4;9	4;10	5;2
Displaced Action					
Related Utterance					
Closure					
Setting					
Plot					
Complication					
Orientation					
Tempotal Order					

5. Conclusion

We have demonstrated that David was able to develop narrative skill without useful spoken or signed linguistic input, indicating that exposure to conventional language is not necessary for deaf homesigning children to learn to narrate. Furthermore, David's narratives appeared to develop in a pattern similar to that found in hearing children. His narratives met Sperry and Sperry's (1996) minimum requirements and his stories increased in complexity with age. Moreover, they evidenced temporal ordering similar to that found by Burger and

Miller (in press) and Peterson and McCabe (1991) in hearing children. Finally, by age 5;2 David was able to create equally complex narratives about self and non-self topics.

It is reasonable to assume that hearing children develop narrative skill as a result of constant access to the language surrounding them. If, however, deaf children who are not exposed to any conventional linguistic system develop narrative strategies similar to those of hearing children, as David has done, alternative developmental mechanisms may become more credible. We consider two, non-mutually exclusive possibilities. First, the deaf child may be depending on his or her own ability to communicate and express experience in a manner that others will understand. This would suggest that there may be some internal mechanism that children use to structure their narratives. Second, it may be that socialization of relevant modes of linguistic expression functions on a level deeper than conventional language. Deaf homesigning children may be accessing narrative strategies through largely non-verbal channels. If so, this raises the possibility that all children may be relying more heavily on non-linguistic mechanisms for learning linguistic behaviors than may have been previously recognized.

We are currently undertaking a project to address these possibilities by looking at narrative development cross-culturally in European-American and Taiwanese deaf children of hearing parents (Goldin-Meadow & Mylander, 1998). Our goal is to determine whether these children's narratives differ from each other in culturally significant ways. Miller et al. (1997) have shown that although there is considerable overlap between European-American and Taiwanese families in the content and use of early narrative, there are also some dramatic differences. When Taiwanese families co-narrate young children's past experiences, they are more likely than their European-American counterparts to use narrative didactically. They make explicit reference to moral rules, reinforce moral lessons, and point out the child's wrongdoing. European-American families, by contrast, foreground the entertainment function over the didactic function and go to considerable lengths to portray the child in a positive light.

If the deaf children in our studies do *not* demonstrate these culturally distinct patterns in their narrations, we will have evidence that these cultural patterns require a conventional language model for their transmittal — that they can *only* be conveyed through verbal means. However, if the deaf children demonstrate the cultural differences that hearing children routinely display in their narratives, we will have evidence that the cultural patterns *can* be conveyed through nonverbal means — that the deaf children are modeling some sort of external, non-linguistic cues onto their internally determined narrative organization.

Our cross-cultural findings will speak directly to the importance — or non-importance — of talk in enculturating a child. Some aspects of culture may be so deep that they are instantiated in the rich sources of non-linguistic behaviors that members of the culture routinely exhibit — paralinguistic gesture, context, body stance, physical actions. Other aspects of a culture may be inculcated in the young exclusively through words. Our studies of the gestural narratives that

deaf children of hearing parents produce are uniquely situated to make an empirical contribution to this question.

Notes

* Many thanks to David and his family. This research was supported by Grant No. BNS 8810769 from NSF and Grant No. RO1 DC00491 from NIH to S. Goldin-Meadow.

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