

The Development of Language Use: Expressing Perspectives on a Scene*

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Develop mental Perspective: Ablex

Introduction

In acquiring a language, children also acquire a variety of expressive options. This study examines children's developing ability to use different linguistic means to describe the same referential content depending on the particular perspective that is expressed. Some linguists have discussed perspective taking in terms of the distinction between foreground and background in narrative discourse (e.g., Hopper, 1979; Reinhart, 1982; Tomlin, 1987) and the related notions of figure and ground (Talmy, 1978, 1985; Wallace 1982). Others have focused on questions of predicate-argument configurations and thematic role structure from various points of view (e.g., Foley & Van Valin, 1985; Jackendoff, 1987; Levin, 1986). The present study considers issues of predicate-argument array as a facet of how children vary perspectives in talking about a particular scene in the course of a picture-based narrative.

- 1. Compare these ways a speaker might talk about an event in the neighborhood.
 - a. They're putting up a new overpass where I live. It took them long enough to get started.
 - b. A new overpass is going up where I live. It's gonna make a big difference to us.
 - c. The new overpass where I live is being worked on. I can't wait!

In these three versions, pragmatic, semantic, and syntactic factors interact in the kind of information the speaker chooses to present, as well as how he or she selects to encode this information linguistically. For instance, the noun "overpass" functions as syntactic direct object and as semantic patient or theme of an accomplishment verb, the two-place predicate "put-up" in (1a); as surface subject with an undergoer relation to the one-place activity verb "go up" in (1b); and as surface subject and thematic patient of the passive predicate "be worked on" in (1c). The lead-in sentences also differ in degree of agency and patient-affectiveness: Only (1a) is syntactically transitive but the subject is not necessarily referential, while the subject in (1b) is more actively involved in

the event than in (1c). The follow-on sentences each present a different response on the part of the speaker to the information conveyed in the first sentence. And the subject of each follow-on sentence involves different anaphoric reference to what precedes: The pronoun "it" is expletive in (2a), but could have an expletive or a referential sense in (2b), while "I" is deictically anchored and would be interpreted in the same way even if there were no antecedent "I" in the first sentence in (2c).

In adopting a perspective on situations, speakers are free to choose both the linguistic material they wish to deploy—lexical items and grammatical forms—and the way these are arrayed together so as to focus on a particular participant, to highlight or blur the contrast between participants as dynamic agents or inert undergoers, to package several component parts of an event into one predicate or to spread them out analytically, and so on. There is nothing inherently correct or preferred in one form of expression compared with another. Rather, they represent the speaker's point of view, and so depend on the speaker's choice of how he or she will talk about some state of affairs in the real world, not simply on the external facts about that state of affairs itself. To this end, speakers have recourse to, and children must acquire: (a) a repertoire of linguistic means for expressing these different options, (b) knowledge of the functions which these means can serve in their language,¹ and (c) a cognitive basis and affective motivations for deciding among the options on any given occasion.

The child thus needs to acquire a wide array of optional devices and to learn how to alternate these felicitously to express particular perspectives. One

¹I use the term "function" in a deliberately vague sense, without commitment to a particular functionalist view of linguistic analysis or language acquisition (for instance, Silverstein 1987, Van Valin 1989, or other orientations discussed in Nichols, 1984). In the present context, the "function" of linguistic forms includes: knowledge of discourse-sensitive factors such as maintaining and shifting reference, focus, and contrast; level of informativeness as well as organization and structuring of information in the text; interclause linkage and connectivity (Ariel, 1991; Berman, 1988, Giora, 1985); and also conditions governing the pragmatics of assertion and presupposition at the level of a single sentence (Crain & Hamburger, 1985). It further involves the more generalized semantic function served by an array of superficially distinct formal constructions. For instance, the function of object-specification is served by nominal modifiers such as adjectives, adjunct nouns in compounds, relative clauses, and prepositional phrases; while temporal notions of simultaneity and retrospection in ongoing discourse are expressed by morphological markers of verb aspect, by lexical adverbials, and by clause sequencing. Yet another facet to the term is the functionality of a certain construction within a language to achieve goals of the kind noted above (Slobin, 1987a). For instance, Demuth (1985) suggests that young Sesotho speakers use relative clauses very early in part because their language lacks a rich system of adjectives to achieve the same purpose; and I have argued that although passives are syntactically quite productive in Hebrew, they are relatively little used by speakers because the language has a wide range of other, more favored devices for downgrading the agent and focusing on the patient of an action (Berman, 1979). The morphological means available to a language for processes of new-word formation can likewise be shown to differ in their relative "productivity" from the point of view of speaker preferences (Berman, 1987b).

plausible hypothesis is that, initially, children adopt only a single perspective on events, and so do not vary the way they refer to situations. But in fact this is *not* the case, from very early on. Even before age 2, children distinguish between the two major temporal perspectives of result versus process. Slobin (1985) further argues that across languages, the "basic child grammar" of 2-year-olds allows them to select between highly transitive manipulative activity scenes and at least one kind of intransitive figure-ground scene in talking about events. This claim is supported by findings for early comprehension of the difference between syntactically transitive and intransitive formulations of an event—for example, "the frog is turning the bird" vs. "the frog is turning" (Naigles, Hirsch-Pasek, Golinkoff, Gleitman, & Gleitman, 1987). And detailed longitudinal studies of individual English-speaking children have shown them to distinguish different perspectives in reference to self (Budwig, 1985) as well as in the selection of verb forms in different discourse and interactional contexts (Gerhardt, 1988; Gee-Gerhardt & Savasir, 1985).

An alternative claim would be that children lack the required linguistic devices to express alternate perspectives on a situation. And indeed strings like those in (1) sound rather different than what one would expect from a 2- to 3-year-old speaker of English. Yet this argument, too, is not entirely correct. It has been demonstrated for numerous languages, including Hebrew, that by age 3 children make use of a wide range of grammatical functors and inflectional markers of categories such as number, gender, person, mood, and tense. This is also true of morphological marking of verb-aspect, as a typically grammaticized device for representing perspectives or viewpoints on a situation (Chung & Timberlake, 1985; Smith, 1983; Smith & Weist, 1987).² For example, among the youngest children included in the crosslinguistic collection of picturebook narratives of which the Hebrew database described below forms a part, ages 3;0-3;11, the English speakers use past simple and past progressive, present simple and present progressive on the verb, while Spanish children use past perfective and imperfective, past progressive, present simple, present progressive, and also present perfect (Slobin, 1986b). In acquiring syntax, too, 3- to 4-year-olds are capable of producing complex constructions;

²The grammar of English, for example, makes it possible to morphologically contrast all the following perspectives on a single real-world state of affairs, since speakers can distinguish durative vs. nondurative aspect by progressive marking, and present relevance or relative tense by perfect aspect (and Spanish grammaticizes even more options, through the distinction between perfective/imperfective aspect). The grammar of Hebrew, in contrast, provides only a single present vs. past tense for all these options. Compare the following comment of one friend to another watching a young boy they both know doing laps in a swimming pool:

- | | |
|--|---------------------------|
| (i) He swims really well | Heb. <i>soxe</i> —Present |
| (ii) He is swimming really well | <i>soxe</i> —Present |
| (iii) He is a really good swimmer | <i>saxyan</i> —Agent |
| (iv) He has been swimming really well lately | <i>soxe</i> —Present |
| (v) He has never swum so well | <i>saxa</i> —Past |
| (vi) He swam much better last season | <i>saxa</i> —Past |

this is shown in elicited production tasks conducted by Crain and his associates (Hamburger & Crain, 1985; Crain & Nakayama, 1987, Chapter 6), as well as by the occasional relative clauses in the Hebrew 3-year-old picture book narratives discussed below, and the common use of relative clauses by Sesotho-speaking children at an even younger age (Demuth, 1983).

Thus children are able to express different perspectives linguistically, and they deploy a rich set of linguistic devices from an early age, irrespective of their particular native tongue. However, the range of functions served by these forms (in all or any of the senses of "function" noted in fn. 1 above) is elaborated and enriched across time. For instance, English-speaking children's early use of the *-ing* ending on verbs to mark any kind of durative activity, not necessarily to express genuine aspectual contrast between, say, attributive "he's a really good swimmer," habitual "he swims really well," or iterative "he's swimming better than ever" (see fn. 2). Relatedly, children first acquire the unmarked use of the progressive, as behavioral (or "phenomenal") as compared with "structural") and transitory, for example, "he's hitting me," rather than its more marked use where it is construed as relatively enduring, for example, "The statue . . . is standing at the corner of Kirkland and Colledge" (Goldsmith & Woisetschlaeger, 1982, and see also Smith, 1983).

The analysis reported on below relates to children's developing *use* of language, on the assumption that they will not necessarily use the same options for the same purposes as adults. This study differs from research which traces the developmental history of a particular linguistic construction such as progressive aspect in English, or children's use of devices such as pronouns (Budwig, 1985), verb inflections (Gerhardt, 1988), or subjectless impersonals (Berman, 1987b) to alternate perspective. Instead, I consider how children describe the contents of a single episode, to demonstrate that making inferences about a situation, overall thematic organization of verbal output, as well as command of the necessary morphosyntactic and lexical devices all combine in the developing ability to talk about events.

Perspectives on a Scene in Narrative

To address these questions, I examined a selected excerpt from Hebrew children's narratives and analyzed what perspectives speakers take on a scene in the sense of the events depicted on a single page of a picture storybook.³ The

³The booklet in question, "Frog Where Are You" by Mercer Mayer (New York, The Dial Press, 1969), consists of pictures without words, and was used as part of a large-scale cross-linguistic project conducted in conjunction with Dan Slobin and others on the development of temporality in narrative (Berman, 1988, 1990; Berman & Slobin, 1987; Slobin, 1986, 1987b). Collection and analysis of the data were supported by grants from the United States-Israel Binational Science Foundation (BSF), Jerusalem, Israel, the Linguistics Program of the National Science Foundation, and the Sloan Foundation Program in Cognitive Science at the University of California at Berkeley.

picture shows the bedroom of a little boy and his dog, the central protagonists in the story. In the preceding picture, the boy and dog are lying awake on the boy's bed, gazing at an empty glass jar. It had held a pet frog, which crept out and got away during the night while the boy and dog were sleeping. In the picture to be analyzed, the boy is shown standing barefoot, on the floor are his slippers and a large boot, and he is holding the other boot up high—evidently looking inside it to see if his missing frog is there. The dog is to the right with his head tightly inside the glass jar of the frog, which is lying on its side.

The scene selected for analysis allowed narrators to switch perspectives between this picture in isolation or in relation to the search as a whole, between different perspectives on the dog's entry into and being caught in the jar, and between the boy and his boot and the dog and jar. The relative complexity of describing this scene was revealed by the fact that it incurred several instances of ungrammaticalities in the narratives of children whose usage was generally grammatically well formed. The scene also gave rise to rather more hesitations, repairs and backtrackings than did other parts of the narrative. This is illustrated below for some English children's narratives in (2) and for the Hebrew database of the present study in (3). In (2) and (3) below, as in subsequent examples, figures in square brackets give the children's age in years and months, for example, [5;11] refers to a child aged 5 years, 11 months, while [Ad] refers to an adult narrator.⁴

2. a. And then the dog f . . . sticks his . . . head in and he gets caught [5;11]
- b. Then—the dog he—he g—he gets stuck in the bowl. [9;31]
- c. er . . . The dog had got a—got the jar stuck on his head. [9;11]
3. a. *ve ve—ha-kelev nixnas b'ox ha-tsinselet* and and—the-dog enters inside the jar [4;31]
- b. *ve . . . ve ha-kelev hu lakax et ha-ke'ara shel ha-tsfardea ve sam ota al ha-xalon . . . ve sam ota al harosh shelo* and . . . and the-dog he took ACC the-bowl of the-frog and put it on the-window . . . and put it on-his head [5;11]
- c. *ha-kelev xipes e . . . hixnis et ha-rosh shelo l'ox hakki* the-dog searched er . . . inserted his head into the-vessel [9;6]

⁴ A dash separated by spaces indicates a short pause, while three dots indicate a longer pause within a single utterance. Throughout the text, Hebrew forms are represented in broad phonetic description, without regard for historical accuracy or conventional orthography. The letter "x" stands for the velar fricative at the end of the words *Bach*, *loch*. In Hebrew, words are usually stressed on the final syllable. A hyphen marks bound morphemes which are separate words in English—for example, *ha-*"the," *be-*"in," *ba-*"in-the." The translations are free, unless accompanied by an additional morpheme-by-morpheme gloss. Verbs are cited in the morphologically simple form of third person, masculine singular past tense, irrespective of what was used in the texts.

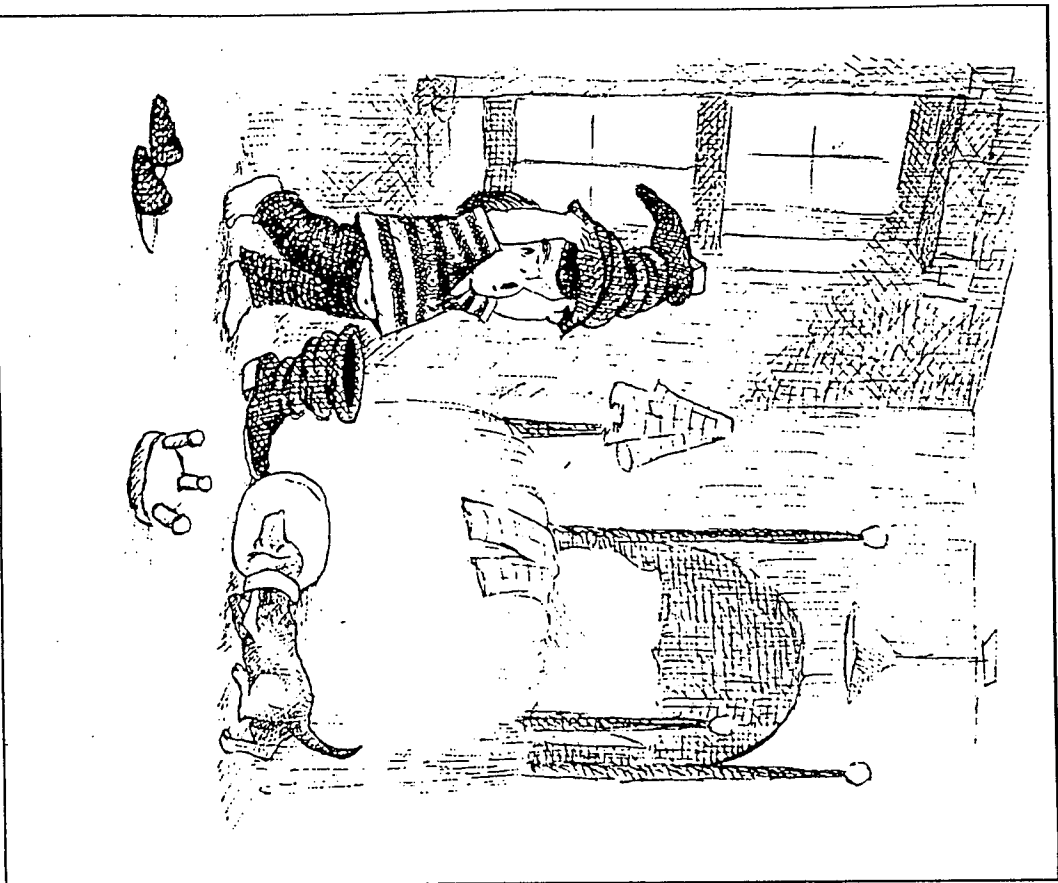


Figure 7.1. Enlarged version of the fourth picture-frame (out of total 24) in the picturebook *Frog, Where Are You?* written and illustrated by Mercer Mayer, New York, The Dial Press, 1969.

- d. *ve ha-kelev nixnas—ve ha-rosh shel hakelev nixnas betox . . .* [11;4] and the-dog went-in—and the-head of the-dog went into the jar

The database is a set of 84 Hebrew narratives based on the same picture booklet and elicited by a standard set of procedures from a population of

native Hebrew-speaking, middle-class Israelis aged from 3 years to adulthood. Subjects were instructed as follows, with slight changes in wording depending on age group: "This is a book that tells a story about a boy and a frog. First look at all the pictures, look through the whole book, and afterwards you will tell me the story." When they had gone through the entire booklet of 24 pictures, they were told: "Now go back to the beginning, and you tell the story." The picture book remained open all the time, and the younger children were helped in turning the pages. Only minimal verbal prompts were given throughout the task. The material analyzed below is from 12 narrators at each of the following ages: 3-4, 4-5, 5-6 years (a total of 36 preschoolers), 7-8, 9-10, and 11-12 years (a total 36 schoolchildren in 2nd, 4th, and 6th grade, respectively); as well as 12 adults, all with high school or some college education.

Findings for the adults represent endstate versions of task performance. Yet the adult narratives do not constitute a unified "norm," but show great variation in content and style. They range from 35 to 160 clauses in length, and include concisely encapsulated, closely packaged narratives, on the one hand, and complexly elaborated narratives with fine details of plotline events and specification of background circumstances, on the other. In other words, adults selected different perspectives in performing the task at hand. For instance, the situation could be construed either as one of picture description and hence rendered in the present tense or anchored in the past tense in more typically narrative style. The large majority of children from age 4 up opted for the latter (85% used past tense in telling their stories), whereas the adult narratives were fairly equally divided between present and past-tense anchoring (Berman, 1988).

Analysis of the scene in question was facilitated by the fact that there were no appreciable differences with age in the number of overt *mentions* of some connection between the dog and the jar.⁵ In other words, the situation was considered equally noteworthy by all respondents (even if presumably for different reasons). The "dog in/with jar" motif was mentioned by three-quarters of the adults (9/12);⁶ it was also mentioned by three-quarters of the preschoolers (27/36-10, 8, and 9 mentions by children aged three, four, and five years respectively); and by nearly 90 percent of the schoolage children

⁵This is in marked contrast to amount of mention accorded other scenes in the same story. For instance, the contents of the preceding picture, showing the boy's awakening to discover that the jar is empty, was mentioned by only one-third of the preschoolers, by all schoolage children, and by all but one adult (Berman, 1988).

⁶The three adults who failed to do so all generalized across the specifics of the scene, thus: "(He) searched for it all over the house and his dog helped him", "he dresses in a great hurry and decides to run and search for the frog"; "right away (he) went out to search for it." This more global presentation of events is reflected in another count: two-thirds (17/24) of the 2nd- and 4th-graders mention both the boy plus boot and the dog plus jar elements of this scene, compared with only one-third (8/24) of the 6th graders and adults.

(32/36-10, 12, and 10 mentions by children aged 7, 9, and 11 respectively). The bulk of the respondents thus referred to at least one facet of the contents of the picture in question (68 out of 84 = 81%).

The picture selected for analysis was suited for discussion of perspective taking from several points of view. First, this scene depicts the beginning of the search which constitutes the central theme of the plot as a whole. It thus was a good point for comparing local, single-picture based descriptions with a more global perspective on this scene as the onset of a larger sequence of events. Second, analysis of perspectives speakers adopt with respect to the dog getting stuck inside the jar served as a point of departure for questions having to do with (a) *argument-array*—what is selected as syntactic subject, direct object, and/or oblique object; (b) *transitivity*—for instance, does the dog stick its neck into the jar, or does it get its head stuck, or does its head get stuck; and (c) *grammatical voice*: active—the dog sticks its head in, passive—the dog is caught by/in the jar, or middle—the dog is/gets stuck in the jar. And third, since the picture depicts both the boy and the dog in a particular situation, it was also possible to examine how speakers *shift* perspective from one protagonist to another (the boy and the dog) or focus on the two protagonists together as sharing a joint searching activity.

Children's descriptions of the scene are analyzed in terms of these three aspects of marking perspective in discourse, thus: (a) *Local vs. global organization of elements*: I assumed that younger children would take a more local view of the scene. They tend to treat the task as describing a group of isolated pictures rather than as an integrated storyline with an onset, a consequence, and a conclusion, and so will not characterize the scene as the first steps in a general search for the frog. (b) *Perspectives on a single event*: I expected younger children to mention fewer components of a single event, and that they would favor an actor perspective in describing what the dog did in relation to the jar. On the other hand, different expressive options might be selected by even the youngest narrators; that is, there would be some variety in the way individual 3-year-olds choose to describe the dog's entering the jar. (c) *Perspectives on related events*: Again, even the youngest children may adopt varying perspectives on different events; for instance, they could shift from one protagonist to another as they proceed. But only older children will switch perspectives within a single scene, and they will do so by more appropriate linguistic devices of cohesion.

Local vs. Global Presentation of Events

As noted, narrators could relate to the scene by either a local description which treats it as a self-contained situation or by a global perspective in which it forms part of a larger narrative context. The picture represents the initiation of the boy and his dog's search for their missing frog, a search which forms the central motif of the story, and covers the bulk of the book (72% of its 24 pictures). That is, the search-for-frog motif is much more extensive than the

scene-setting which precedes, showing that the boy has a frog and that it escapes from the jar, and the denouement which follows where the boy recovers his lost frog (in fact finds another one to take its place). Speakers have several options in relating this scene to the macrolevel theme of the search. They can adopt an "umbrella-like" perspective taking the search motif as the frame that unifies all the elements of the story, in which case (a) they need not relate to this scene at all—for example, (4a) below; (b) they can generalize across the picture by simply saying "they started searching," then go on to the next step in the story without further detail—for example, (4b); alternatively, (c) they might combine the boy's looking in the boots and the dog's looking inside the jar as both search-activities, then specify what the two protagonists did—for example, (4c); or (d) they may not express a search perspective at all, either because they do not realize that this is at issue or because they choose to detail each element in the scene rather than to generalize—an option selected by several preschool children aged 3 to 6 years but by no schoolage children aged 6 to 12 or adults. The following translations from Hebrew adult narratives illustrate the first three possibilities:

4. a. *YONA, woman aged 21—Clauses #7-13 out of a total 37.*
When Danny got up in the morning, (he) dressed, and found the frog was gone. Right away (he) went out to look for it. He went out towards the-forest to-look-for it.
- b. *DAFNA, woman aged 22—Clauses 11-14 out of a total 50.*
In the morning he awoke, and he did not find it. (He) looked for it all over the house, and the dog helped him.
- c. *SHAY, man aged 24—Clauses 12-14 out of a total 51.*
Danny and Yoye started looking-for . . . the frog. Danny searched inside the boot, Yoye searched inside the jar of glass and his head got stuck there.

In selecting different options for relating the "dog-in-jar" scene to a global search theme, the 12 adults divided up as follows: (a) one said nothing at all about this scene; (b) three mentioned it as the start of a general search; (c) eight started with a general statement about searching, then provided more detail about this picture (the favored option among adults); while (d) none ignored the search theme. A very different breakdown emerges on this matter among the younger storytellers in the sample.

Two criteria determined whether narrators treated this scene as initiation of the search. The first was use of a relevant verb—minimally the general activity verb for visual perception *histakel* meaning "look = look at," used alone or with an object governed by the preposition *be-* "at" or *al* "on," but more typically the verb *xipes* meaning "look for, search, seek," which takes a direct object. These are translated in (5) below as *look* and *search*, respectively. The latter is semantically more specialized, and children learn it later than *histakel*

"look at," yet it is an everyday colloquial term, not of a higher register like English *search*, *seek*. A second criterion for reference to search-initiation was how generalized it was across (a) this particular picture, and (b) what precedes or follows in the plotline. Mentions of the search-motif were ranked on a 6-point scale of explicitness, by the criteria of lexical specificity in verb-use combined with generality of thematic plotline reference. Points on the scale are defined and illustrated in (5) below, followed by a quantitative breakdown for each age-group in Table 7.1.

5. *Types of reference to search motif, in ascending order of explicitness:*
 1. General verb for *look* in relation to boots or jar; indicates motivation of the actor to interact with the object: [4;6]
 - a. *And then the dog looks in . . . in . . . the jar*
 2. Specific verb for *search* in boot or in jar; connects event to the previous scene, showing that frog has left jar: [4;3]
 - b. *And the boy searches, whether it's inside his boot*
 - c. *And the dog looked meanwhile whether a frog is in the jar* [5;3]
 3. Verb meaning *look/search* used for both boy looking in boot, dog in jar; the two participants are described as engaged in a similar kind of event: [5;0]
 - d. *And the dog—looked from [sic] the jar. The boy peeped from the window*
 - e. *And the boy looked inside the boot and the dog looked through er . . . the open jar* [5;3]
 4. Both protagonists are combined in a single search, or boy is specified as searching and dog ignored or treated as side-issue—with or without subsequent comment summing up results of looking: [5;9]
 - f. *So they searched very hard inside the hat and maybe inside the jar and they didn't find (it), so they looked outside and the dog got into the jar*
 - g. *They search (for) the frog, the dog inside the jar, the boy inside the shirt, and they don't find it* [7;3]
 5. Same as #4, but including initial prospective comment; reference to the fact that they were both searching and/or that they searched all over the place, that is, a single inclusive search: [7;5]
 - h. *So they searched (for) it in the shoes and in all kinds of places, and the dog, suddenly he searched (for) it inside the jar, and got-caught*
 - i. *And they searched (for) it, and the dog that tried to smell the jar got himself inside of that . . . wensil* [9;6]
 - j. *He searched (for) it all over the entire house, among the clothes, in the shoes, he turned the whole house upside down. The dog*

searched in the vase where the frog was a few moments ago, and found . . . [11;5]

6. Same as #4, but including a summary statement; reference to a search in progress, or begun, i.e. initiation of longer search:
- k. *They go to search (for) it. At first they search all over the house, and in the course of searching, the dog sticks its head . . .* [Ad]
1. *Danny and Yoze started to search (for) . . . the frog. Danny searched inside a boot, Yoze searched inside the glass pail, and got stuck* [Ad]

Table 7.1 gives the raw numbers of respondents in each age group who referred to the search-motif, ranked on the scale delineated in (5).

The table shows a clear stepwise progression from preschool to schoolage compared with adults' reference to the search-motif. The adults overwhelmingly note this as the onset of a generalized "searching-expedition" (Hebrew *masa xipusim*), as an entire chain of events that is triggered by what preceded (ranked as #6 above), and so do half the 6th graders, and a third of the 4th graders, but no younger children. By early school-age (7-year-olds), reference is nearly always made to the search as an inclusive activity (rank #5), but rarely before then; and the 5-year-olds, but not the younger children, describe both boy and dog as both looking or searching for something. In other words, none of the 3- and 4-year-olds, only some of the 5-year-olds, but all of the school-age and adult respondents relate this scene to the overall frame of the story.

Developmental differences in the perspectives of local vs. global, picture-

Table 7.1. Number of references to search-theme, by age and type of reference [N = number of respondents in each group who mentioned the picture]

Age	N	1 X or Y looks in A or B	2 X or Y seeks in A or B	3 X looks in A, Y seeks in B	4 X (and Y) search for frog	5 Inclusive search (all over)	6 Inception of general search	Tot
3s	10	—	—	—	—	—	—	0
4s	9	1	1	—	—	—	—	2
5s	11	1	1	1	5	1	—	9
7s	11	—	—	—	1	10	—	11
9s	12	—	—	—	4	4	4	12
11s	11	—	—	—	—	6	5	11
Ads	9	—	—	—	—	1	8	9

description vs. story-telling, frame-by-frame vs. overarching discourse organization have been noted for narratives based on this picturebook in different languages, from various research perspectives (Bamberg, 1987; Berman, 1988; Slobin, 1986b). The present analysis further demonstrates that these distinctions affect how speakers present the contents of a particular scene, and serve to delimit the range of options available to them for this purpose. Thus, all (although not necessarily only) the children who organize their narratives around the three critical plotline elements of (a) the discovery that the frog is gone, (b) sustained search for the missing frog, and (c) recovery of frog or finding a substitute for it, will mention the search motif in describing this scene. Moreover, the way they refer to the search motif interacts with how they describe the contents of this scene. All the 3- and 4-year-olds, and many of the 5-year-olds present its component events, the boy interacting with the boot and the dog with the jar, as two separate, unrelated activities. They have no recourse to an organizing conceptual frame—linguistically expressed as a common predication, the search theme; or by means of a common point of reference—either locative, for example, *in the bedroom, inside the house* or temporal, for example, *in the meanwhile, at the same time, after they found the frog was gone, before they went outside*.

Perspectives on a Single Event

The scene depicts animate beings—the boy and his dog—or part of these beings—their head or neck—interacting with an inanimate object—a big boot and a glass jar, respectively. Descriptions of the dog's interaction with the jar demonstrate that people of similar educational and linguistic background use language to describe the same external situation in different ways. Compare, again, such excerpts as the following, translated from some Hebrew adult narratives.

6. a. *Avistai, male aged 20:*

And the dog has the glass jar on his head.

- b. *Nir, male aged 24:*

They search and search, the dog searches inside the jar, the boy inside the boot . . .

- c. *Shay, male aged 23:*

Yoze [=the dog] searched inside the pail of glass, and his head got stuck there. . . .

Children, too, rely on a variety of linguistic options to express the same external situation from the youngest age group tested (three years). In developmental terms, however, certain perspectives are favored by older children compared with younger. This is shown by analysis of clauses

describing this scene in terms of (a) number and array of arguments, (b) type of predicate—with verbs divided according to the categories specified by Vendler (1967) and elaborated by Dowty (1979) and Van Valin (Foley & Van Valin, 1984; Van Valin, 1987), and (c) prepositional markers of different types of complements—arguments and adverbial adjuncts—as set out in (7).

7. *Notation for Representing Arguments, Predicates, Prepositions:*

(see fn. 4)

(i) ARGUMENTS: **kelev** = dog:

standing also for names (e.g. *Yoye* in (6c above), nouns like *klavlav* "puppy," *kalbon* "doggy," and pronouns, e.g. *hu* "he, it," *ze* "it, this" standing for words like *tsint-senet* "jar," *agartal* "vase," *kufsa* "can," *kli* "utensil," *davar* "thing," and pronouns like *oto* "it," *betoxa* "inside-it"

dli = pail:
including words for neck, throat, and pronouns

rosh = head:
including words for animal, and pronouns

tsfar(dea) = frog:
including words for animal, and pronouns

(ii) VERBS:

STA stands for verbs denoting *states*, i.e. temporally unbounded static situations—here, being or remaining (stuck) inside the jar;
ACT stands for *activities*, i.e., temporarily unbounded dynamic situations—here, going or entering into the jar, or looking inside the jar; **ACH** and **ACC** are two subclasses of activities:
ACH stands for *achievements*, i.e., the moment of termination or the process leading up to it when an undergoer enters into a state or an activity—here, getting caught in the jar; and
ACC stands for *accomplishments*, where an action brings about a change of state—for example, sticks his head inside the jar.⁷

⁷These classes refer to perspectives taken on events by choice of a predicate representing a particular kind of *Aktionsart* or inherent lexical aspect, in contrast to grammatical aspect of the type noted in fn. 2 above. The present analysis disregards this important linguistic device for perspective-taking. First, it is not applicable to Hebrew and, second, the event in question is basically punctual and does not invite a durative/punctual contrast, as do other scenes in the story (Slobin, 1986).

Root	Form	Class	Glosses
h-1-x	<i>halax</i>	ACT	go, walk
k-n-s	<i>nixnas</i>	ACT	go/get/come-in(to) = enter
s-y-m	<i>hixnis</i>	ACC	put/take/shove-in(to) = insert
l-k-x	<i>sam lakax</i>	ACC	put take
s-k-l	<i>histakel</i>	ACT	look (at)
x-p-s	<i>xipes</i>	ACT	look-for, search (for), seek
h-y-y	<i>yesh, haya</i>	STA	be = (there's), is, was . . .
sh-?-r	<i>nish'ar</i>	STA	say, remain
t-p-s	<i>nitpas</i>	ACH	get-caught
t-q-?	<i>tafus</i>	STA	be-caught
	<i>taka</i>	ACC	stick-into
	<i>nitka</i>	ACH	get-stuck
	<i>takua</i>	STA	be-stuck

(iii) RELATIONS: are manifested by the following prepositionals:

<i>et</i>	=	Accusative	Direct Object marker
<i>be-, btox</i>	=	in, at; inside	Stative Locative
<i>le-, ltox</i>	=	to; into	Goal Directional marker
<i>lo,</i>	=	to/for-him/it	Dative marker of affectee ⁸
<i>shel</i>	=	of, 's	Possessive, Genitive marker

This range of options was analyzed for each age group in the Hebrew narratives, starting with the 3-year-olds, aged 3;0-3;11, as presented in (8). Below. As before, the bracketed numbers stand for the child's age, and position in the year-group: [3k] is the eleventh child in the 3-year-old group, and older than the ninth child [3lj], both of whom are older than the third child, [3cl]. The clauses outlined schematically in (8) show that 10 (out of a total 12) 3-year-olds mentioned the dog-jar situation, and that they chose no fewer than eight different ways to do so.⁹ (In the examples that follow, numbers in parentheses refer to the number of children in each age group who gave that response.)

8. *Ages 3;0-3;11:*

a. *kelev (haya) btox dli* STA dog (was) in jar (1)

⁸An example would be *ze nitka lo ba-rosh* "it got-stuck to-him on-the-head," where the dative *lo* "to-him" indicates that "he" was the being affected by this event. This use of dative pronouns in Hebrew is analyzed in Berman (1982).

⁹This analysis ignores reference to the content of subsequent pictures, where the dog is shown leaning from and then falling out the window with his head stuck in the jar, as noted on pp. 186-187.

- b. *kelev* . . . *er rosh shel kelev* STA dog . . . er head of dog (1)
 c. *kelev nixnas llox dli* ACT dog entered = went into jar (1)
 d. *kelev lakax dli* ACC dog took jar (1)
 e. *kelev hixnis rosh* dog inserted = put-in head (1)
 f. *kelev hixnis rosh blox dli* dog inserted head inside jar (3)
 g. *kelev sam dli al rosh* dog put jar on head (1)
 h. *ve po kelev nitka* ACH and here dog got-stuck (1)

Six out of the ten 3-year-olds who mentioned this event gave it a causative-agent orientation, with the dog doing something to the jar in two cases, and to its head in the other four; only one described it as a noncausative (intransitive) activity with the dog as patient—example (8c)—while two gave a verbless stative description—(8a, 8b)—and the remaining child used an inchoative verb—example (8h). The child who used the verb for *get-stuck* was the only 3-year-old who described this scene with a single argument; five specify two arguments, and the other four specify three arguments. Not one mentioned the frog as a potential fourth argument, since none of these 3-year-olds related the content of this picture thematically to preceding events. Thus even these young children were able to use straightforward locative type propositions to describe this event, with no recourse to prior events or the fact that the jar belonged to or had been associated with the frog. Moreover, by adopting a basic perspective of Theme-Location or Actor-Action in all but one case (the last example, (8h) above), these younger children were able to avoid the difficult decisions made by older narrators in choosing more complex perspectives—for instance, whether the dog deliberately stuck its head inside or got stuck there by accident, whether the dog looked inside and so got caught, or went inside and then could not get out, and so on. They simply said the dog is in the jar, the dog has gone into the jar, or the dog has put his head into the jar.

Eight of the twelve 4-year-olds mention the dog's interaction with the jar, as set out in (9) below. They present a more homogeneous perspective on this event than the threes, all eight taking an ACTIVITY orientation, seven from the point of view of the dog as actor, and one—example (9g)—taking the dog's head as focus. Four-year-olds clearly possess the linguistic means for adopting an accomplishment perspective. For instance, two of the children in this group use the causative verb *hixnis* "cause-to-enter = put in, insert" in describing subsequent scenes (e.g., "and here also he *put-in* his head, the-dog") to describe the next picture, where the dog is leaning out of the window with the jar on his head; [4j] "he fell out and he *put-in* his head (in)to . . ." two pictures later where the dog has fallen out of the window with the jar on his head.

They simply choose not to use this perspective when first describing the dog-in-jar.

9. *Ages 4;0-4;11:*
 a. *kelev halax blox dli shel tsfar* dog went inside jar of frog (1)
 b. *kelev histakel be-dli* dog looked at/in jar (1)
 c. *kelev roitse nixnas letox dli* dog wants enter into jar (2)
 d. *kelev nixnas letox dli shel tsfar* dog enters into jar of frog (1)
 e. *kelev nixnas letox dli shel tsfar*, dog entered into jar of frog, and searched *ve xipes* (1)
 f. *kelev nixnas le-dli be-rosh* dog entered (in)to jar in head (ambiguous *be-* = in ~ with, unclear) (1)
 g. *rosh shel kelev nixnas le-dli* head of dog entered (in)to jar (1)

These descriptions are more varied than the 3-year-olds' from one point of view: They range from the juvenile reliance—in example (9a)—on a general-purpose motion verb *halax* "go" (Clark, 1978) to explicit mention of the search motive—in (9c). Some of the 4-year-olds also display a more thematic organization: three children in this group (in examples 9a, 9d, and 9e) as against not a single 3-year-old, mention the frog in relation to the jar, taking a perspective which relates this situation to an earlier one (two pictures back). One child in this age group suggests that the entry into the jar was accidental; she says the dog did it *be 'acimar'entayim* "with closing-of eyes = closing his eyes," and in this way weakens the actor-oriented perspective of the dog as voluntary agent. Downgrading of agency is also suggested by child who says that it was the dog's head, rather than the dog himself, that entered the jar—example (9g). That is, although the 4-year-olds all take a shared ACTIVITY perspective, they temper it in ways not attempted by the younger group.

This contrasts, too, with the 5-year-olds who refer to the dog plus jar in this picture (9 out of 12). They provide the most varied descriptions of the three preschool-age groups: two children talk about the dog looking in the jar; two talk about the dog going into the jar; another four take a transitive-accomplishment perspective with the verbs meaning "take, put, insert"; while one child—who also refers to the search motif explicitly for both the boy and the dog—takes a patient-achievement perspective, thus: *ve axarey ze ha-kelev nitka ha-kufsa im ha-rosh* "and after that the-dog got-stuck the-jar with his-head." But his description is illformed, as was that of the 4-year-old who had a more complex argument-array in (9f) above. This 5-year-old's formulation breaks down in relation to all three arguments: If the noun for dog is left-dislocated, then there should be a dative case-marked pronominal trace of this; if the feminine noun *kufsa* "can = jar" is the nominative grammatical subject, it requires feminine marking on the verb *nitka* "get-stuck"; and if jar

is nominative then the noun *rosh* "head" should be marked for locative *be-* "on, over" and not instrumental or comitative *im*. That is, the child should have said either *ha-kelev, nika'la lo ha-ku'fa ba-rosh* "the dog, got-stuck + Fem to-him the-jar + Fem on-(his)-head" or *ha-kelev nika ba-ku'fa im ha-rosh* "the-dog + Masc got-stuck + Masc in-the-jar with its-head." This example suggests that when preschoolers opt for something other than a simple actor-activity perspective on this event, they may limit the number of other arguments they mention—as was done by child the 3-year-old in (8h) above—or else they will produce errors in formulating the interrelations between the arguments and their functions.

An age-related finding is the distinct rise in choice of *patient perspective* by means of an inchoative achievement verb (e.g., *nikka, niipas* "get-stuck, get-caught"—in a typically intransitive verb-pattern). A quarter of the school-children, aged 7 to 12 years, who mentioned this event (8/32) express this orientation, compared with only 2 out of the 29 preschoolers (aged 3 to 6 years). The examples in (10) are from the youngest school-age children, 7-year-old second-graders, and account for 5 out of 10 descriptions of the scene given by this age group.

10. *Ages 7;0-7;11 [second grade]:*
- a. *dli nixnas lo [=kelev] llox rosh*
jar entered to-him [=dog] into head
 - b. *kelev xipes brox dli ve niipas*
dog searched inside jar and got-caught
 - c. *kelev nika brox dli shel tsfar*
dog got-stuck inside jar of frog
 - d. *kelev, nika lo [=kelev] dli al rosh*
dog, got-stuck to-him [=dog] jar on head
 - e. *kelev, nika lo [=kelev] rosh brox dli*
dog, got-stuck to-him head inside jar

The effect of *agent downgrading* is also achieved by specifying an affectee perspective on the dog through use of the dative pronoun *lo*, coreferential with the dog (examples 10a, 10d, 10e above). Moreover, 7-year-olds, but not the younger children, use left-dislocation appropriately to establish the dog as topic, then describe what happened to him as patient—as shown by correct use of gender concord in examples (10d and 10e). This evidence for development of an undergoer-perspective with respect to the dog among the 7-year-olds is supported by findings for other languages, and for other events in this story. For instance, in describing a scene where the boy gets entangled in the antlers of a deer, younger children typically selected an Actor-Activity perspective in describing the boy having climbed or gotten onto the deer (Berman & Slobin, 1987; Slobin, 1986b).

Another difference between the descriptions of preschoolers and older children reflects an increasing ability at *event-packaging*. This is expressed as (a) elaboration—by adjoining several argument and adjunct phrases within a single clause or by embedding clauses within a single sentence; or as (b) restriction—by coalescing several events into a single predication.

Examples of intracause elaboration by children from three different school-age groups are given in (11).

11. a. *ve kelev shel-o [=yede] nixnas im rosh brox dli* [7;7]
and his dog [=the boy's] entered with head inside jar
- b. *az be-dli shel tsfar, kelev hixnis rosh shel-o [=kelev]* [9;6]
then in-jar of frog, dog inserted his head [=dog's]
- c. *kelev nixnas—rosh shel kelev, kelev hixnis rosh be-ta'ur* [12;0]
la dli shel tsfar
dog inserted—head of dog, dog inserted head by-mistake
(in)to frog's jar

The manner adverbial *beta'ur* "by mistake" in the last example provides intracause elaboration, and serves to downgrade agency, treating the dog's action as nonvolitional. Several schoolage narrators use this as a means to specify a less agentive perspective (e.g., *dli kavvana* "without meaning" in (12) below).

In other words, as shown in (10) as well, early schoolage use varied linguistic devices to meet the general function of downgrading of agency in describing the dog—in-jar situation. These include intransitive verb-morphology; prepositional case-marking of the affectee role as dative; manner adverbials to describe the event as nonvolitional; and left-dislocated word-order to topicalize the dog as patient.

Elaboration is also achieved by adding predications (as discussed further in connection with perspective switching below). Examples from children aged nine and eleven are given in (12).

12. a. *kelev xipes—er—hixnis rosh llox dli she tsfar hayta bo* [9;5]
dog searched—er—inserted head inside jar that frog had-been in
- b. *kelev hixnis rosh shel-o llox dli minenu barxa tsfar* [9;0]
dog inserted his head into jar from-which ran-away frog
- c. *ve kelev nixnas bli kavana la-dli she bo hayta tsfar* [11;5]
and dog entered without meaning (in)to jar in-which had-been frog
- d. *kelev xipes—ba-dli she bo hayta tsfar lifney mispar dakot* [11;6]
dog searched—in jar in which had-been frog several minutes ago

- e. *ve kelev she nisa le-hariax dli, nixmas lo brox dli* [9:6]
and dog that tried to-smell jar, entered to-him(self) inside jar

This kind of packaging across different events by means of relative clauses was not done by any of the children up to age nine, even though Hebrew-speaking 3-year-olds can form relative clauses. Nor did the younger children coalesce different events in the same scene into a single predication, as illustrated in (13), where *yeled* "boy, child" stands for "the boy" and *magaf* "boot" stands for "(his) shoes, boots."

13. [7b] *hem xipsu tsfar, kelev brox dli, yeled brox magaf*
they searched (for) frog, dog inside jar, boy inside boot

[7f] *yeled — xipes ba-magaf, ve kelev ba-dli*
boy searched in boot, and dog in jar

[9d] *az hixliu le-xapes oto [=et tsfar] mi-kol hacladim,*
brox kutonei, brox magaf, brox dli
then (they) began searching (for) it [=frog] on-all sides,
inside shirt, inside boots, inside jar

[11j] *hem xipsu be-kol, be-kol ha-xeder kaley li-mtso et tsfar*
they searched all over, all over the room so as to find frog

Combining events by embedding clauses as in (12), or by adding phrasal components within a single clause as in (13) occurs across the 9- and 11-year-olds, and in most 7-year-old texts, but not among the preschoolers. The ability to interweave different events in discourse within a single syntactic frame—phrasal, clausal, or sentential—is a critical feature of developing a *narrative perspective*. In the task at hand, this perspective is reflected by narrators' explicitly relating the jar to its role in preceding pictures, or by connecting the contents of this scene to the frog's disappearance earlier on.

Perspective Switching

The scene was also examined to show how initiation of the search reflects speakers' ability to switch perspective—from one protagonist to another, from agent to patient, or from punctual to durative or protracted aspect, and from one temporal or locative frame to another. Narrators could do this by switching from one protagonist to another—the boy holding up the boot and the dog stuck in the jar—and/or by shifting views on a single protagonist, for instance, from an actor-focus describing the dog looking inside or putting his head into the jar to a patient-focus that describes the dog getting or being stuck there. But speakers could also choose to categorize across a single predication: The physical situation of both boy and dog having or putting something on their head, and the mental state of looking for the frog. Continuities combined

with shifts across referents and predicates function to move a narrative forward cohesively yet flexibly. Analysis reveals a general developmental trend from this point of view: The younger children treat each frame as isolated and self-contained, a picture of a single object, state, or event; early school-age children chain from one event to the next, coordinating them along a sequential line; and more mature narrators embed two or more events within a single frame. This is illustrated by the following excerpts from two adult narratives:¹⁰

14. a. And [zero = he] began to search. [Zero = he] searched inside the boots, and the dog searched inside the jar, [zero = frog] may by chance have stayed inside, so that the jar remained caught [perfective] onto the dog's head, and he couldn't get free.

b. Both of them search (for) it inside the room, when er—the dog inserts its head into the jar. The jar gets-stuck [inchoative] onto his head, and he tries to shake it off.

The notion of "switching perspective" simply does not apply in the case of the youngest children in our sample, aged three to four; as noted, they fail to treat the different events as interrelated in any way. The only switch is in *participant reference*, going from the boy to the dog or from the dog to the boy, as follows.

15. a. and (there) came a moon, and the dog got inside the jar, and the boy put his shoe on his head. [3;0]
b. er . . . er . . . the boy puts his shoe on his head . . . the dog inserts its head inside the can. [3;7]
c. a boy and a frog. the dog er . . . took the glass. This boy he put on his Mommy's shoes. [3;7]
d. And the—and the dog is inside this bottle. And the boy he holds the dog. [3;10]

These children are able to describe the contents of a picture—and they can name the relevant participants and the objects depicted there distinctively. In contrast, a couple of the older 4-year-olds, do show some initial *chaining* of events as sequentially following upon one another, for instance:

¹⁰The examples in this section are given in English translation, since the kind of thematic organization they reflect relies less on language-particular devices than clause-internal verbal argument configurations discussed in the preceding section.

16. a. After that, in the morning when the boy and the dog got up, the dog went into the jar of the frog. [4:8]
- b. And the frog went outside, and . . . the dog it went onto his [=the dog's] head, and he fell from the window [4:9]

But the 4-year-olds, too, fail to switch perspective from one event to another in this scene or from this scene to an event which precedes or follows it.¹¹ This more flexible orientation on a scene is found only among children from age five, and it shows the following developmental patterning. The five-year-olds manifest *protagonist switching* from reference to the boy and dog together, to the boy or the dog alone—typically in the form of a grammatical shift from plural to singular, marked on the verb as well as on nouns and adjectives in Hebrew (examples in (16) below). The younger schoolchildren (7- to 8-year-olds) shift from *agent to patient* for the same protagonist, as an early means of making aspectual distinctions to mark the inception, continuation, and/or endstate of a given situation. The older speakers manifest a variety of shifts in perspective. For instance, many of the nine-year olds express *temporal-aspectual switching* quite explicitly, by retrospective reference to the jar as the place where the frog had been, or by talking about the dog as still remaining inside the jar. And from this phase on,

¹¹The single exception is one child aged 4;3, who with many repairs and backtrackings refers to the dog's interaction with the jar in several ways, with both intransitive *nixnas* "go in(0), enter" and transitive *hixnis* "put-in(0), cause-to-enter":

- Picture 3a: *hakelev nixnas lerox hachenevet*
 ve mexapes . . . *hoyeled mexapes*
im ze berox hamagot.
 The-dog goes into the-jar
 and searches . . . the boy searches
 if it's inside the boot.
- Picture 3b: *KAN hoyeled kore larsarden*
 ve hakelev nixnas lerox . . . *hakufo*
 shel harsarden.
 HERE the boy calls the frog
 and the dog goes into . . . the-can
 of the frog.
- Picture 4a: *KAN hakelev melakek oto*
 ve gam . . . ve KAN hu maxnis et haroshi shelo hakelev
 and also . . . and here he inserts/put in his head the-dog
 HERE the-dog licks him [=the boy]

Repeated use of deictic *kan* "here" shows the child moving from picture to picture in the book, not from one event to the next in the story. And even though he uses different forms of the verb *k-n-s go/get/put in*—they do not serve genuine perspective switching across events. Picture 4a, where the child talks about the dog inserting its head in the jar, in fact depicts a situation that requires a *stative* predicate for the dog's head still being inside the jar, the dog being stuck there. Compare these two adult versions: *kelev nafal kshe rosh-o natun box dli* "the dog fell with his-head situated inside the jar," and *be-od rosh-o takua box ha-dli* "with his-head still stuck inside the jar." This 4-year-old, in contrast, knows both the transitive and intransitive of this motion verb, but does not alternate them to switch perspective. Similarly, in describing another scene, where the boy who is sprawled on the ground with an owl gazing down at him from the hole into which he had been peering, Hebrew-speaking 4- and 5-year-olds often said things like *hoyeled nafal ki hoyanshuf hipil oto* "the-boy fell because the-owl made-fall him = pushed him down" (Slobin, 1987b).

speakers use numerous linguistic devices for this purpose—they subordinate background events in relative clauses, they leftdislocate nominals in order to establish them as topics, and they front oblique objects to achieve a switch in focus—illustrated by excerpts from the 6th-grade narratives in (17) below.

Shifting from plural to singular was used by 3 of the 10 5-year-olds who mentioned this scene, but by none of the younger children. As illustrated in (17), the suffix *-u* or *-im* in the Hebrew verb-forms is the plural marker for past and present tense respectively.

17. a. So they searched [= *xips-u*] very hard inside the hat and maybe in the jar, and they did not find [= *mac'-u*], and . . . the dog er got inside [= *nixnas*] the jar with its head [5:8]
- b. They look [*mistak'im*] in their shoes, and they do not find [*noc'im*] and afterwards the dog gets-stuck [= *nikal*] . . . [5:9]

The excerpts in (17) illustrate another shift made by three of the 5-year-olds, by three 7-year-olds, and by a couple of older children (one in the 9-year-old group, one of the 11-year-olds). They relate to the *consequence* of an activity—here, the fact that they looked but "did not find (the frog)." None of the younger children add a comment on what happens once the dog is inside the jar. There is also a difference in the way speakers relate to the follow-up events. Adults typically do so by explicit mention of the *aspectual protractedness*, of the resultant state, for example, (a) *fell outside with the jar on his head*, (b) *with the dog still caught inside the jar*, [20d] *with his head situated inside the jar*, (c) *while his head is stuck in the jar*, (d) *the jar remained stuck on the dog's head and he couldn't get free*; while (e) one adult mentioned the dog's *trying to shake off the jar*. Several older children (four 9-year-olds and two 11-year-olds) also elaborate on the event in *irrealis modality*: Like the last adult mentioned, they switch from an active to a stative perspective, in terms such as the dog's "wanting, trying, not managing, being unable to get out of the jar."

Another kind of switch is shown by half of the 9-year-olds (but by none of the younger children), who mention that the dog got inside the jar "where the frog had been" or "from which the frog had escaped" (examples are given in (12) above). This requires a shift in participant perspective—the dog is in the jar where the frog used to be—and in temporal perspective—the frog's being in the jar is retrospective to the dog's entry into the jar. This is achieved through relativization, with a syntactic shift from the main clause object—the jar—to subordinate clause subject—the frog.

This kind of switching back and forth across protagonists, and across different components of the same and of different events is clearly shown in the following three excerpts translated from sixth-grade narratives:

18. a. They search + Plur in the boots, and the dog gets into the—sticks his head into the jar and checks whether the frog is there, and it— and it isn't [11;5]
- b. The boy searched all over the house, among his clothes, his shoes, he turned the house upside down. The dog searched—in the vase that the frog had been in a few minutes earlier, and discovered that it—wasn't (there), but when (he) wanted to get his get out of the vase, he couldn't [11;6]
- c. And . . . (they) begin [*maxil-iml*] to search all over. The boy gets-dressed [*mitabeshl*] and (they) decide [*maxli-iml*] to go outside. The dog gets in [*nixrasl*] . . . the head of the dog, he inserted [*nixrisl*] it by mistake into the jar of the frog, where the frog lived, and (they) begin [*maxil-iml*] . . . [12;0]

Perspective switching of this kind within a particular scene requires skilled deployment of syntactic devices for cohesiveness—including coordination and subordination as well as use of anaphoric pronouns and subject ellipsis. The third example in (18) also illustrates use of left-dislocation and temporal shifting to past tense in talking about a punctual event and its precedent within a generally present-tense narrative. And these examples, together with those noted for the adults earlier, show how a wide range of different structural and lexical devices combine with different facets of the scene—aspectual, temporal, locative, causal—to determine how speakers describe the same event from varying perspectives.

Discussion

These findings for how Hebrew-speaking children describe a single scene in a picturebook story are discussed below in relation to the following broader issues: The cognitive and linguistic demands of the task; the nature of developing narrative skills compared with other discourse modes; the interaction between form and function in this development; and cross-linguistic compared with language-particular facets of developing abilities at expressing perspectives on events.

The task presented to the children, where they were shown the contents of the entire booklet, and then asked to themselves "tell the story" while looking at the pictures, provided heavy scaffolding for content. That is, children did not have to recall or reconstruct events which they had experienced or been told about, they could simply describe the contents of each picture in turn. But they did have to demonstrate understanding of visual (specifically, black-and-white pictorial) cues; to make inferences, for instance, that the boy and/or dog were looking for something; and to relate one picture to the next, for example, to note that they were looking for a pet frog that was no longer in the

jar where it had been held. Children from the youngest age examined (3;0) were able to describe the contents of this, as of other pictures in the booklet, quite adequately. They were less adept at making inferences and at relating one picture to the next—as shown by the findings for reference to the search-motif. These results are closely consistent with those of Karmiloff-Smith (1981, 1983) even though the storybook used here depicts a much longer and more complicated chain of events than the pictured sequences in the tasks she assigned to English and French-speaking children. They are also supported by findings on a partly comparable task performed by German children when retelling the contents of this booklet after hearing the story from their mothers (Bamberg, 1987). And they are in line with findings for veridical storytelling based on personal experiences told by children of similar ages (e.g., Peterson & McCabe, 1983).

Karmiloff-Smith's perceptive account of children's developing discourse abilities has shown that younger, preschool children, still at the "procedural phrase," will opt for a predominantly protagonist-oriented perspective. They will produce utterances which are syntactically well-formed and lexically felicitous, but they cannot as yet integrate an overall discourse—whether at the macrolevel of the entire narrative or at the microlevel such as the dog-in-jar scene—as a single organizational unit. Young schoolage children—most of the 7- and all the 9-year-olds in the Hebrew sample—treat the scene analyzed here as a coherent, well-motivated whole, but only from age 9 up do the narratives become felicitously subordinated to an overarching discourse theme, incorporated at both the local and the global level. Only at around age 9 to 10 are children able to integrate what Karmiloff-Smith has termed both "bottom-up" and "top-down" processing in narrative discourse as in other, nonlinguistic tasks.

The present study, like the others noted above and like my earlier analysis of the overall structure of these Hebrew texts (Berman, 1988), focuses on the special demands of narrative discourse. This is relevant to the general concern of this chapter from the following point of view. As I had assumed, children as young as age 3 can talk about the same situation—the dog inside a jar—in different ways. A pilot study in which subjects were prompted to elaborate on the contents of the pictures by questions such as "Why did he do it?" and "How do you think the dog got into the jar?" suggests that 3-year-olds can also establish links between events when they are explicitly required to do so. But it takes time for children to develop the special perspective of the narrative mode of discourse, which in this case means using the contents of a picturebook to tell a story that is sequentially and causally related within a single thematic frame.

Knowledge of the narrative mode depends in part on cultural norms, where schoolage children have themselves read stories beginning with "Once upon a time . . ." and ending with "so in the end . . ." and they know what is expected of them when an investigator, like their classteacher, instructs them "Now you

tell me a story." But it also has to do with cognitive maturation, and the ability to recount sequences of events without the mediation of explicit linguistic input. Preschool-age children *are* able to express richer and more flexible shifts in perspective, but in other discourse modes, not in the context of extended narrative. The scaffolding provided by interlocutor questions, queries, denials, challenges, and other discourse prompts in the course of *conversational* interchange leads children from an early age to shift from one perspective to another as part of the give-and-take of verbal interaction. The conversations of Hebrew-speaking 4-year-olds show, for instance, that they can alternate flexibly and skillfully between a personalized and a more impersonal description of events through switches from first and second to third person, from singular to plural, from past perfective to present tense or irrealis mood, from definite to indefinite reference, and so on. (Berman, 1987c, 1990).

It might be argued that the differences observed between preschool and school-age descriptions of a scene are strictly "cognitive" rather than linguistic, particularly since preschool narratives based on this picture booklet differ along similar lines from those of 9-year-olds in other languages as well (Bamberg, 1987; Berman & Slobin, 1987; Slobin, 1986). But this is begging the issue, since development of a *narrative perspective* obviously relies on knowledge which is anchored in language. The explanation seems, instead, to lie in the relation between linguistic forms and the *functions* which they serve (in the broad sense of "function" noted in fn. 1 above). With development, both (a) the range of forms used to meet a particular function, and (b) the range of functions met by a particular form are extended and enriched.

For example, the array of forms illustrated in (18) above for the oldest children in the sample include: anaphorical pronouns, locative phrases, sentential coordination, relative clauses, and left-dislocations. These constructions all occur in the speech of Hebrew-speaking preschoolers (Berman, 1985). But they are not used by the younger children telling this story for the purpose of maintaining the flow of their narrative by shifting perspectives from agent to patient, from activity to event, and from inception to endstate. Rather, with age the function of shifting perspective on a situation is met by an increasing diversity of linguistic forms. For instance, in this scene it was shown that the function of lowering transitivity can be achieved by lexical choice of Aktionsart, by morphological modification of verb transitivity and voice, by reorganization of argument arrays at the clause level, by coordinating and subordinating across clauses, or by any or all of these together.

In just the same way, diverse forms of noun modification can serve the function of *object-specification*. Children start out by defining objects deictically, using words like *this* or *that*, subsequently also the equivalent of *my*, *mine* to specify the objects of their reference. As they mature cognitively, and are able to define entities in a context-free way, relying on purely linguistic rather than situational cues, they also acquire a wider range of devices for this function—adjectives, prepositional phrases, and genitives for instance—so

that *this book* and *my book* can now alternate with *the little book*, *mommy's book*, *the book with pictures*. Somewhat later, children learn to construct propositionally complex nominals of different kinds, enabling them to further vary perspective in identifying or attributing properties to a given object—for example, *my favorite animal book*, *the book I got for my birthday from uncle Tim*. The distinction between a participant-neutral, impersonal or generic statement compared with a personalized, context-specific perspective is likewise achieved by a combination of factors: Use of plural versus singular; specified versus nonspecified subjects; definite versus nonspecific referents; use of deictic first and second person as against anaphoric third-person reference; and choice of specific versus irrealis tense-mood forms (Berman, 1987c). Details of developmental patterning will clearly depend to some extent on the particular language being acquired. (This is shown for relative clauses by Demuth 1983, Slobin 1986a, and for noun compounding by Berman 1987a, Clark & Berman 1987.) But in any language, an entire range of superficially unrelated forms are deployed in conjunction in presenting a particular perspective. Once cognitive maturation enables the speaker to adopt a certain stance, he or she will deploy diverse linguistic devices for this purpose.

As for a particular form acquiring more elaborated functions, it is well established that in the course of development, "old forms are used to perform new functions." This was suggested at the outset of the chapter with respect to progressive marking in English. It is also clearly demonstrated by changes in use of the coordinating conjunction *ve*—"and" in these Hebrew narratives (Geva, 1989). Likewise, the Hebrew form *benayim* "meanwhile, in the meantime" is used as a rather vacuous discourse marker in a 3-year-old narrative, whereas in the older children's stories, as in the adults', it serves as a favored marker of simultaneity (5/12 5-year-olds, 9 of the sevens, 11 of the nines, and 8 of the adult Hebrew narratives use it in this way); in contrast, German narrators occasionally use *in der Zwischenzeit*, while English speakers hardly ever use *meanwhile*, *meantime* for this purpose (von Steutgen, 1987). Similarly, an inchoative middle-voice or passive form (e.g., English *get-stuck*, *be-caught*) is used increasingly with age by English and by Hebrew speakers, but not in the German narratives, to express a patient-perspective with respect to the dog-in-jar or boy-on-antlers (Berman & Slobin, 1987).

This suggests another facet of developing form-function relations. It is not always obvious which particular forms will be marshalled to meet a given function, nor what function will be met by certain forms—within a language and across different languages. Another example is Hebrew narrators' reliance on the form *pit'om* "suddenly, all of a sudden" to mark discourse boundaries when switching to a new topic (e.g., the appearance of some new creature in the forest). This form was used in this way by many children aged 5, 7, and 9—80 times in two-thirds (23/36) of their narratives—but by few of the younger children—9 tokens in one-third (8/24) 3- and 4-year-old narratives; while the adults used it only 9 times in all, compared with an average of nearly 27 per

group at age 5, 7, and 9). In other words, forms which appear referentially equivalent may have different discourse functions in different languages and at different phases of development. This is revealed by the way the terms for *meanwhile* and *suddenly* are used by the Hebrew but not the English narrators in this task, and by the fact that Hebrew and English speakers but not the Germans use passive and middle voice for lowering transitivity.

The last question to be addressed is the fact that the database for the present study was from Hebrew. Studies of the same task in other languages show that the general trends noted for different developmental phases are shared across learners of different languages—both with regard to overall organization of narratives at the macro level, and with respect to specific functions such as switching participant-perspective or making retrospective comments (Berman & Slobin, 1987; Slobin, 1986b, 1987a, b). Nonetheless, the particular language being acquired will affect what facets of a given perspective may be favored by speakers, and how they choose to express it. For instance, the rich system of Hebrew inflection is exploited by the 3-year-olds in this study to distinguish between participants by marking them as singular or plural, masculine or feminine; and Hebrew derivational verb-morphology allows the older children to switch to an undergoer focus by means of an intransitive accomplishment verb rather than its active, transitive counterpart favored at an earlier phase. On the other hand, lack of a distinct neuter gender for inanimate objects denies Hebrew speakers one way of distinguishing the boy, dog, and frog from the boot and the jar. Nor do they have a way to mark perspective-switching by grammatical verb-inflection as in English and Spanish (see fn. 2). Besides, even when forms *are* available in a language, they may not be highly favored for a particular function. For instance, English and Hebrew speakers rely on distinctions of grammatical voice more than was found for the Germans, even though German grammar does have a passive construction. These findings together suggest that, on the one hand, children acquiring different languages will with age learn to perform the same range of general discourse functions on the basis of both greater cognitive maturation and broadened expressive abilities. On the other hand, however, as they mature, speakers will tend increasingly to favor the perspectives most obviously promoted by the grammar of their native tongue, as their use of language becomes more and more strongly Hebrew, or English, Spanish, or Turkish in flavor and propensity.

The point of view I have tried to present is developmental rather than endstate in focus. This means that the child needs to abandon earlier strategies, to move away from encoding along lines of what has been termed in quite different frameworks the constraints imposed by the principle of mutual exclusivity (Chapter 3), one-to-one mapping (Slobin, 1973), or the uniqueness principle (Wexler & Culicover, 1980) in order to select alternative formulations of a particular conceptual content. This is consistent with earlier work of mine,

where I have argued that children must go beyond structure-dependent knowledge of morphosyntax, moving from clause-internal phrase-structure to interclause connectivity and on to thematically motivated discourse cohesion. In the present context, this means that the development of thematic structure at the global level of narrative impinges on the expressive options selected in describing a particular event.

As analyzed here in relation to how children express perspectives on a scene in a picturebook story, the development of language use represents a complex interaction between: (a) increased efficiency at meeting the demands of *on-line processing*, which enables speakers to plan and organize their linguistic output hierarchically, in terms of higher-level thematic structures; (b) *conceptual maturation* required for speakers to infer interrelations between events and to embed description of an event in a network of causal, temporal, and other associated circumstances in order to express more elaborately varied perspectives on a situation; and (c) cumulative *linguistic knowledge* underlying speakers' ability to deploy the devices available in and favored by their language flexibly and so to adopt broad discourse perspectives such as the storytelling mode, on the one hand, and to express specific context-bound distinctions such as a more or less agentive or a more or less personalized perspective on a situation, on the other. It is a formidable but challenging task for developmental psycholinguistics to spell out the role of each factor in the child's emergent knowledge of language structure and of language use.

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