* * *

The dimensions briefly reviewed above represent major formal differences between the five languages from the point of view of the developing ability to relate events in narrative. The following five chapters document the development of these formal means in detail. The final section in each chapter summarizes the course of development in terms of the four topic areas presented here. In addition, an overall view of the development of temporality across languages is given in Chapter IVA.

Chapter IIIA

DEVELOPMENT OF LINGUISTIC FORMS: ENGLISH[1]

[1] This chapter is based on materials collected by Virginia Marchman and Tanya Renner as part of their doctoral research at the University of California, Berkeley (Marchman, 1989; Renner, 1988). We are grateful to them for making these data and their valuable analyses available to us. Responsibility for the contents of this chapter lies with the authors.

0. INTRODUCTION

The English frog stories were collected in California from children and adults of middle-class background, monolingual speakers of American English. Except for occasional higher-register vocabulary used by some adults, their style is colloquial, spoken English. For example, gerundive *-ing* forms are preferred to Latinate nominalizations (Section 1.2.1); Germanic verb-particle combinations are used rather than more formal, Latinate monolexemic locative verbs — e.g., *go up* vs. *ascend*, *run after* vs. *pursue* (Section 2.1); and everyday connectives like *and*, *so*, *also* are preferred to expressions like *moreover*, *therefore*, *furthermore* (Sections 4.2, 4.3).

The English preschool narrations — all the 3-year-old texts, most of the 4-year-olds, and around half the 5-year-olds — are rather juvenile in form and content compared with the other languages. Not one of the English-speaking 3-year-olds, an occasional 4-year-old, and around half the 5-year-olds make overt reference to the search theme, and these 5-year-olds are also the only ones who refer explicitly to all three major plot components (Chapter IIA, Section 2). Most 3-year-old texts switch between present and past tense and fail to establish a unified temporal anchor. Only around half the clauses they produce have lexically specific verbs, the rest being static descriptions with *be*.[1] Many of the 3-year-olds also make errors in the grammatical forms of verbs — e.g., regularizations like *falled, keeped, runned*, ill-formed complex strings like *he's wake, were go, was take*, and agreement errors like *it have, they cames*. Their texts lack cohesiveness, except for one child who chains

[1] In contrast, 80% of the clauses produced by children from age 4 years and up include verbs other than the copula.

clauses by *and then* (*E3f-3;9*) and another who uses causal connectives like *so* and *because* (*E3g-3;9*), while two others make mechanical use of *and* to indicate that another utterance is to follow (Section 4.2). The 3-year-old transcripts reveal many prompts and encouragements on the part of the investigator (Chapter IIA, Section 4.1), and these 3-year-olds produce far more interactive comments and digressions than their contemporaries in the other languages.

This discrepancy between the level of the 3-year-old English texts compared with some of the 4- and 5-year-olds and all the older children is reflected across the different linguistic devices and grammatical constructions surveyed in this chapter: tense-aspect usage (Section 1), descriptions of the component parts of a situation (Section 2), perspectives encoded by different verb-argument arrays (Section 3), and markers of textual cohesiveness (Section 4).

1. ENGLISH TENSE/ASPECT/MODALITY

English has an elaborate system of grammatical marking of tense, aspect, and modality.[2] The forms include (1) **bound suffixes**: *-s* for 3rd person singular in the present tense — e.g., *jumps, falls*; *-ed* for past tense and regular past participles — e.g., *jumped, climbed*; *-en* for irregular past participles — e.g., *fallen, gone*; and the *-ing* ending of present participles and gerunds — e.g., *jumping, falling*; (2) **internal stem-change** — e.g., *fall ~ fell, come ~ came*; (3) **auxiliary verbs** — *be, have, do*; (4) **modal verbs** — *can, may, must, shall, will* followed by an uninflected form of the main verb; and (5) **semi-modals** used with some form of *be* and followed by an infinitival *to* — e.g., *be going to = gonna, able, about, used*. These different forms are used in combination with one another to constitute complex tense and aspect marking (and also passive voice, Section 3.1). Perfect aspect is formed by *have* combined with a past participle — e.g., *has jumped, had fallen*, and progressive aspect is formed by *be* combined with the *-ing* present participle — e.g., *is jumping, was falling*. (Verbs with none of these overt aspectual markings are referred to in this chapter as "simple aspect" forms.) These complex auxiliary constituents can cooccur, with the modal element (if there is one) first, followed by perfect aspect, and/or by progressive aspect (and/or by passive voice) — e.g., *may have jumped, may be jumping, has been jumping, may*

[2] The rich linguistics literature on these systems is concerned mainly with their form and/or function in sentences, not connected text. General background on tense and aspect are provided in Comrie (1985) and Comrie (1976). The English forms are surveyed in Joos (1964) and Palmer (1974), with attempts at semantic generalizations in King (1983) and McCawley (1971), and see, particularly, Declerck (1991).

have been jumping.

Finite verbs are marked for either present or past tense — e.g., *jumps / jumped, fall / fell, is / was.* In complex verbal strings, tense is marked on the first element — modal, or *have* or *be*, compare *may / might have fallen, has / had been falling, is / was falling.* Forms traditionally termed **future** tense have the structure of a modal (or semi-modal) plus main verb — e.g., *will / would fall, will / would have fallen, will / would be falling* and also *is / was going to fall, is / was going to have fallen.*

Nonfinite verb forms are not marked for tense. They occur in simple clauses, with complex verbal strings, preceded by tense-marked auxiliaries and modals or else by modal or aspectual verbs. They may stand alone as main verbs, but may also modify the modal or aspectual contour of another verb. Examples of modal modification in our English sample are: *The boy **tried** to climb up it* [*E3d-3;5*], *The dog **decided** to go away* [*E9e-9;7*]. Examples of extended aspect are: *They **keep** going around* [*E4f-4;7*], *They **went** looking for it* [*E4e-4;7*], *And they **start** calling* [*E5d-5;6*]. Nonfinite verb forms also occur in multiclause sentences, and then their temporal reference is relative to the tense of the verb in the main clause, e.g., *(The deer) carried him to the edge of the cliff, with his dog **chasing** after* [*E9a-9;1*]; *The little boy just watches him **fall**, still **wondering** where the frog is* [*E20h*]; *The dog is rescued from **having** his head stuck in the jar* [*E20b*].

Our analysis focuses on the facets of tense and aspect which proved most relevant to the English frog stories (Sections 1.1 to 1.3). Reference to the future with *will*, and irrealis mood in general, is relatively marginal to these accounts and is not treated here.

1.1. Present and/or Past Tense

Findings for different languages show that by age 3, children are able to mark distinctions between past and present tense as stipulated by the grammar of their native language (Aksu-Koç, 1988b; Weist, 1986). This is supported by evidence from children acquiring both American and British English (Brown, 1973; Fletcher, 1979, 1981). We therefore assumed that the youngest children in this sample, aged 3 years, would be able to make appropriate use of one or both of these tenses in formulating their narrations. This in fact turned out to be true in a rather limited sense. Most of the younger children, as noted, make **errors of form**. They sometimes regularize "strong" or irregular past tense forms (Bybee & Slobin, 1982), e.g., *falled* [*E3a-3;1*], *caughted* [*E3e-3;8*], and *catched* [*E4a-4;0*], *keeped* [*E3g-3;9*], *comed* [*E4e-4;6*], *taked* [*E4f-4;7*], now and then even in 5-year-old texts, e.g., *flied* [*E5b-5;2*], *creeped* [E5i-5;19]. Children occasionally add a present-tense suffix to a past-tense stem — e.g., *cames* [*E3g-3;9*], *gots* [*E5g-5;9*]; and quite a few 3-year-olds, although few older children, omit the *-s* suffix and use an unmarked stem form with a 3rd-person singular subject — e.g., *He cry, and it fall down* [*E3c-3;4*], *The owl come* [*E3d-3;5*]. Another common omission is of the tense-marking auxiliary *is* or *are* with verbs in progressive aspect (Section 1.2.1).

Where correct, the younger children's use of grammatical tense reflects structural well-formedness within the confines of individual clauses, not at the level of more extended discourse. Examples of grammatically correct tense usage in 3-year-old English texts include "strong" past tense forms — e.g., *A owl flew out of here* [*E3a-3;1*], *The jar broke* [*E3i-3;9*], *The dog fell down* [*E3j-3;10*]; regular past tense — *The dog barked* [*E3e-3;8*], *And then he climbed a tree* [*E3f-3;9*], *He knocked them off of the cliff* [*E3j-3;10*]; and an occasional simple present tense — *What if he steps in the glass!* [*E3g-3;9*], *The mouse wants to eat the boy* [*E3h-3;9*], *He sees two frogs* [*E3j-3;10*]. However, and this is the burden of our argument, the younger children fail to use grammatical tense or aspect in a discourse-appropriate fashion, in keeping with the demands of a well-organized narrative text.

1.1.1. Dominant tense

Choice of a consistently favored tense throughout the narration was taken as criterial for a well-formed narrative (Chapter IIA). As noted there, narrators can select to anchor their accounts in either present or past tense. Past tense in English as in other languages is the unmarked or most typical temporal setting for the recounting of chronologically sequential events in narrative. But speakers may choose to depart from this norm by adopting the more marked "narrative" or historic use of present tense for the main thread of their narrations (Casparis, 1975; Herring, 1985; Silva-Corvalán, 1983; Wolfson, 1982). In such instances, the text is generically anchored in simple present-tense forms, as illustrated by the following excerpt from an adult English story.

(1) *And then all the bees start chasing the dog, who runs away, and this owl comes out and the boy falls, and then he climbs a rock, climbs to the top of the rock, and he screams for the frog again, calls for the frog, and then he gets stuck in a reindeer's antlers, and the reindeer takes off with him, on him, and they go over to a cliff.* [*E20a*]

The picture-based nature of our narratives makes a present-tense perspective fully appropriate, since the events depicted in the book can be viewed as ongoing, and narrators can choose to treat the pictures as depicting a currently unfolding sequence of events. This is shown in the following excerpt from a 9-year-old text.

(2) *The boy's looking at his frog, and the dog's smiling down, and then he's going to bed and the frog is sneaking out. Then it's morning and the frog is gone. He's looking all over his room, messing it up.* [*E9l-9;11*]

Reliance on past tense is thus not criterial for evaluating a narrative as well-formed in our study; either present or past can be considered normative as a temporal anchor. And indeed this is what we found for the more mature English narratives, as shown by the English 9-year-old and adult texts reproduced in Chapter IIA: They are told in the present — examples (29) and (34) — or in the past — examples (30) and (35). However, the younger English narrators do not always manage to adhere to a single grammatical tense. Table 1 below compares figures for those favoring either past or present tense in at least 75% of the clauses they produce compared with temporally "mixed" texts, which use both tenses to a similar extent.

TABLE 1
Number of English Texts Favoring Past or Present Compared with Mixed Tense Usage, by Age [N = 12 per group]

Age Group	Mean Age	Mean No. Clauses	Dominant Tense PAST	PRESENT	MIXED
3 yrs	3;7	22	1	3	8
4 yrs	4;7	27	5	5	2
5 yrs	5;7	42	6	4	2
9 yrs	9;7	45	8	4	0
Adult		75	2	9	1

Table 1 shows that a third of the English-speaking preschoolers (among the 3-year-olds, as high as two-thirds) shift back and forth between present and past tense. In contrast, all the older children and adults (except for one) provide a consistent temporal thread to the texts by anchoring them in either past or present tense — with most 9-year-olds favoring past tense and most adults favoring present tense as dominant. The following 3-year-old text exemplifies the back-and-forth shifting between present and past characteristic of the more juvenile English narrations.

(3) **PRESENT**: *Look at this frog, look when he's sleeping, and ... his frog getting out!*

TRANSITION: *Look what happened to the guy!*

PAST: *Oh no! He licked on his face, and he fell out the window.*

PRESENT: *Bee - er - beehive. He's standing on two toes.*

PAST: *He broke it. A owl flew out of here.*

PRESENT: *And he's running away. Look at the dog, he's sad.*

PAST: *A reindeer - he threw them down.*

TRANSITION: *Now look what happened to the dog. Frogs! A whole family of frogs!*

[Investigator asks: "What about the boy?"]

PRESENT: *He doesn't have a family.* [*E3a-3;1*]

This child knows how to use present and past tense at the level of the single sentence, but is incapable of maintaining a consistent narrative flow across more than two consecutive clauses. Another juvenile narration, produced by a 5-year-old, contains rather larger chunks of text in each tense. The text in (4) starts out in conventionally narrative vein, anchored in a block of consistently past-tense clauses. The child then shifts to present tense for the rest of the narration, slipping back into past for only two isolated sentences.

(4) **PAST**: *One day, he woke up from his bed, he seed the doggie looking at the frog. And then, they turn the page. And then in the night, when he was sleeping, and his dog - er the frog tried to get out!*

PRES [+IRREALIS]: *And then he's, oh my gosh! My frog is gone! He couldn't be in the shoe. What if he bangs this? He could get cut easily this way, because what if he bangs on the floor, all the glass breaks and goes into his mouth. That might - er - see, it broke. But he's mad, he thinks that he's happy. Bumblebees coming out of the honeyhive. Oh my gosh! What if he stings me on the nose! Uh oh, he sees the gopher, oh my gosh!*

PAST: *He had an accident. He knocked me down there.*

PRES: *Uh, you know what, you don't know where the deer is. I do. His horns ...* [Child points to picture]. *He's mad, deer's mad.*

PAST: *He fell in the water.*

PRES: *It's very ... he can't swim. Lookit, how deep it is for him, but it's not very deep for him. We're dry.* [Singsong tone of voice]. *Wow! We see a family of frogs! That's the end.* [*E5a-5;1*]

This veering between past and present coincides with a shift from a narrative to a picture-description mode. The personal comments which the children address to the investigator in examples (3) and (4) also reflect departures from the narrative mode. In contrast, children whose stories demonstrate a well-defined plot structure are typically consistent in their choice of a dominant tense. Thus failure to select either present or past tense for temporal anchoring reflects lack of narrative discourse structure at a developmental phase where children already have command of tense usage at the level of the simple clause — as in (3) and — as in (4) — even in stringing adjacent clauses in more complex sentences.

1.1.2. Tense shifting

All the 9-year-olds and all but one adult demonstrate consistent use of a single dominant tense. This need not entail total avoidance of **tense shifting**, as a legitimate device for switching temporal perspectives within an ongoing narrative (Bamberg, 1987; Schiffrin, 1981). Three of the English-speaking 9-year-olds and no fewer than eight adults shift one or more times out of their dominant past or present tense to its converse. Tense switches are commoner from present-tense anchors to past tense — one 9-year-old and seven adults, compared with two 9-year-olds and only one adult (*E20d*) who shift from past-tense anchors to present tense. These switches perform one of two complementary functions — local and extended. Local tense shifting meets requirements of grammatical "sequence of tense" (Comrie, 1986; de Clerck, 1990). This is the case, for instance, in past tense complement clauses semantically anterior to the dominant present tense of the main clause — e.g., *The dog is coming back, looks like he's either stunned or is just very frightened and ashamed that he* ***was*** *outdone by the bees. The owl is looking for the boy ...* [*E20b*]. Adults also freely shift to past tense in relative and adverbial clauses which describe situations viewed as **anterior** to the main eventline — e.g., *The boy falls out of the hole because an owl* ***came out*** *of the hole* [*E20g*], *The dog has a jar on top of his head, which* ***was*** *where the frog was originally located, and he seems not to be so happy* [*E20c*].

The "extended" function of tense shifting is motivated by the thematic organization of the narrative as a whole. For example, a 9-year-old narrative starts out in present tense, to meet the scene-setting function of background to the ensuing events, for a total of nine clauses. The second of these clauses shifts to past with the "local" function of expressing the anteriority of the boy's having found the frog prior to the scene-setting situation of the "exposition" (Sternberg, 1978). The exposition continues in present tense, until the onset of the narrative action, from which point the entire narrative adheres strictly to past tense (see Chapters IVA and IVD). The relevant section is reproduced in (5).

(5) *It's a story about this kid who* ***found*** *a frog, and he has - er, he keeps it as a pet. And overnight the frog gets out of the jar that he's in, and jumps out the window. The next morning they find out that he's gone and they, they look for him.*

And the dog ***stuck*** *his head in the jar, looking for him, and he peeked out the window. Then he fell, and the glass broke. And they went out the window ...* [*E9i-9;10*]

Extended tense shifting in the adult English narratives may also function to distinguish between two series of events going on concurrently — one set in the past and another in the present (see Chapter IVA). This is a strategy adopted throughout the single adult narrative which manifests several blocks of past-tense forms embedded in present-tense contexts (the adult assigned to the "mixed" category in Table 1), as excerpted in (6).

(6) *The dog is shaking the tree where the beehive is connected to, while the boy climbs on top of the tree and starts yelling in a hole for the frog. While the dog* ***shook*** *the tree so much that the beehive fell down ...*

And the dog is being such a loyal dog, he runs after the elk trying to persuade him to let go of his master. Well, it ***was*** *of no use because the dog ran off the edge of the cliff, while the boy was thrown off by the elk.* [*E20c*]

Nearly half the adult English narratives shift tense liberally, manifesting a kind of rhetorical flexibility not evident in the children's stories. Moreover, the adults are **selective** in their use of this device. Some avoid it altogether; others use it sparingly for local purposes of temporal and aspectual departures from the main plotline; one adult (*E20e*) uses it to set off the initial scene-setting and the final coda parts of the narrative (in past tense) from the main substance of the story; another (*E20c*) does so to set concurrent blocks of events off from one another. For adult English narrators, tense shifting is an expressive option which they may, but need not use in relating these events.

The 9-year-olds shift tense relatively rarely. The example in (5) is not typical of the English schoolchildren, who tend to adhere more strictly to their chosen anchor tense than the adults (or the younger children). Only three 9-year-olds shift tense, no more than one to three times per narrative, with their shifts typically local in scope, rather than across thematically motivated blocks of text. The school-age children clearly prefer a straightforward, uniform narrative mode rather than flexible tense switching for purposes of plot-motivated backgrounding or for shifting from current to anterior and from ongoing to generic temporal reference.

The 5-year-olds shift tense more often than either 9-year-olds or adults. Ten of the children in this group switch from one tense to another, between two and seven times per text. Several use local tense shifting felicitously, generally to move from a past-tense plotline to personal digressions or generic descriptions in present tense — e.g., *He was playing with the bees again, he was trying to kid them, and then a rugrat came.* ***I call them rugrats because***

they go in holes. *And then the dog was still trying to kid the bees* [*E5b- 5;2*]; *Then they fell where there* ***is*** *a stream. But the dog got on his head* [*E5c-5;3*].[3] Temporally well-motivated use of tense shifting to express "relative tense" between a matrix predicate and its associated complement clause is rare among the 5-year-olds, and among the English-speaking preschoolers in general. One 5-year-old text [*E5i-5;10*] manifests an **incipient** reliance on this device, as follows. The narrative is anchored in past tense, starting with *Once upon a time there was a little boy who had a frog and a dog. And it was time to go to sleep, so he went to sleep*; and ending with *And they saw a family of frogs, first they saw two frogs, and then they saw a family, a whole family!* In between are six blocks of present-tense clauses, representing **direct speech**, e.g., *So they went to look. "Is that you in there, is it, is it?" But it was only a squirrel. Then he looked in a rock. "Is, oh - Frog, frog, are you here?"* This is an idiosyncratic means of using tense switching to avoid syntactic embedding by complement clauses and the sequence-of-tense constraints they impose.

The 5-year-olds' uses of tense shifting reflect two extremes of narrative ability. At the more mature end is a 5-year-old narrative told entirely in the present tense, until it shifts to the past tense to describe the boy's mistaken clutching onto antlers in lieu of branches and the entire denouement of the story. The relevant part is given in (7).

(7) *The bees come out of the beehive, and the boy's looking in the hole, and the boy falls. The bees go after the dog, and the boy - he's gonna climb the rock, and then he calls up on the rock for the frog. And then he um - he - um he* ***thought*** *it was sticks and he got on that and the deer came and carried him and the dog was in front, and he throwed the boy and the dog into the water ...* [*E5k-5;11*]

The 5-year-old excerpt in (7) is from a narrative which makes explicit mention of all three major plot components; it relies on the connectives *and* and *and then* to chain events sequentially; and it is anchored consistently in present tense until a specific turning point in the narrative, where it shifts to past. At the opposite end of the scale is the juvenile 5-year-old text in (4), liberally sprinkled with erratic switching from one tense to another. Between these two extremes, preschoolers' shifting between the two tenses is locally governed, and lacks the thematic motivation in older narrators' use of this

3 Such "local" tense shifting to generic present is restricted in syntactic scope, yet it reveals a semantically sophisticated distinction between transient or occasional events and generic states. A parallel adult example is *The dog, being the rambunctious animal that it is, found a beehive and decided to have some fun* [*E20d*].

device.

1.2. Grammatical Aspect

This section deals with the grammatical constructions of **progressive** (Section 1.2) and **perfect** aspect (1.3), and how they interact with simple present and past tense. They take the form of an auxiliary combined with the main verb — *be* plus the participial *-ing* form in the progressive and *have* plus the participial *-ed* or *-en* form in the perfect. Morphologically, they are more marked than their simple counterparts. One might thus hypothesize that children would prefer the simplex verb forms; instead, our study reveals a tendency to **avoid** the unmarked simple aspect in the texts of the younger children.

1.2.1. Progressive aspect

Progressives focus on the internal contour of events characterized as having temporary duration. They are used in describing situations which are construed as episodic, hence as less stable or constant, as lacking in the intrinsic permanence associated with simplex predicates (Goldsmith & Woisetschlaeger, 1982; Hatcher, 1951; Langacker, 1987a; Smith, 1983). In present tense, progressive forms thus also serve as the immediate present in English, contrasting with the simple form of the "extended present" used to describe habitual or generic situations. This deictic function of progressives as anchored in speech time explains the finding that the progressive was identified as the first of 14 grammatical morphemes acquired by the (American) English-speaking children studied by Brown (1973). Initially, children use it in its "primitive" form, without the requisite auxiliary *am, is*, or *are*, and they continue to use the bare *-ing* form of verbs as late as Brown's Stage V.

We analyzed the distribution of *-ing* forms across all clauses in the English frog stories which contain an explicit main verb.[4] Table 2 below shows the breakdown of these *-ing* forms among the different age groups.

4 These account for only 57% of the 3-year-old utterances, as compared with around 80% of the clauses produced by 4- and 5-year-olds. With age, there is a clear tendency to prefer lexically explicit verbs rather than copular constructions with the verb *be* alone, e.g., *And leaves are there, and leaves are everywhere!* [*E3d-3;5*]; *There's a dog, and there's a frog* [*E3e-3;8*]; and also *He went somewhere else, cause it wasn't as quiet there* [*E5b-5;2*]; or *And the boy thinks those are twigs* [*E9b-9;3*].

TABLE 2
Distribution of *-ing* Forms out of Total Lexical Verb Tokens, by Age [N = 12 in each age group]

	3 yrs	4 yrs	5 yrs	9 yrs	Adult
Total verbs	252	297	428	500	790
Percent of *-ing* forms	39	25	19	20	25
Total *-ing* forms	99	74	81	99	194
Percent "bare" progressives	31	20	3	0	0
Percent present progressive	60	59	58	29	40
Percent past progressive	7	13	35	33	8
Percent nonfinite *-ing* forms	2	7	4	38	52

Table 2 shows that English narratives make wide use of verb forms with suffixal *-ing* — approximately one-quarter of all lexical verbs across the age groups. The 3-year-olds rely most heavily on *-ing* forms — around 40% of their verb forms, compared with around 20% to 25% from age 4 years up. Moreover, nearly one-third of the *-ing* forms used by 3-year-olds are ungrammatical "bare" forms with no overt form of the auxiliary *be*, as in (8) and (9).

(8) *And that - he floating off, uh - sitting down.* [*E3c-3;4*]

(9) *And here, he trying to get the bees, trying to get the bees!* [*E3l-3;11*]

Such tenseless main clauses are rare from age 5 years up.[5]

The distribution of *-ing* forms is affected by choice of tense. Preschoolers, in particular, use progressive forms in present far more than in past tense. There is also a steady decline in proportion of progressive forms out of total present tense forms used with age. Fully two-thirds (66%) of all the present-tense forms used by 3-year-olds take progressive aspect, compared with around half among 4-year-olds (48%), a third (30%) among 5-year-olds, and even less out of all the present-tense forms used by older narrators (22% of 9-year-olds present-tense clauses, 17% among the adults). This suggests that for younger children, progressive aspect is treated as the unmarked, most basic way of describing events construed as applying to the time of speaking.

[5] Only one child outside of the 3-year-old group (*E4h-4;8*), consistently favors this "bare" *-ing* form of verbs.

This claim is supported by occasional 3- and 4-year-old extensions of progressive forms from process verbs to **stative verbs** which typically disallow their use. These appear to contradict the findings of Brown (1970, 1973) and Kuczaj (1978) for American-English children's "error-free" acquisition of the progressive, but they are in line with Mapstone and Harris (1985), who found that nearly half of the British 4- to 6-year-olds whom they tested "made at least one generalization of the progressive to a stative verb" (p. 439). The frog story shows such uses mainly with the verb of perception *see* — e.g., *He's seeing if there's honey in there* [*E3j-3;10*], *He's seeing that the frog got out* [*E4h-4;8*], *And then he was seeing a lot of frogs* [*E3d-3;5*]. These "errors" are made by children who favor *-ing* forms across their texts, and who treat them as neutral, rather than as semantically restricted by verb *Aktionsarten*.

Past progressive forms with *was* or *were* are never numerous, and account for only 10% of all past-tense forms across the sample (from 9% among 3-year-olds to 12% among adults), although even 3-year-olds can produce them correctly. Out of the total *-ing* forms distributed as shown in Table 2, those marked for past tense account for only 10% among 3- and 4-year-olds, going up to around one-third among 5- and 9-year-olds. This relative increase in past progressive with age reflects the rise in older children's favoring of past tense in general. Younger children favor present progressive as a means to present events as ongoing at the time of narrating, construed as identical to the time of speaking. For them progressive is largely identified with immediate present tense. Older children, in contrast, rely increasingly on past progressive as a relative tense, for distinguishing different events within the ongoing narrative.[6] They are able to deploy progressive aspect for the backgrounding function of indicating the temporal overlap between events narrated in the past and a clear separation between speech time, narrative time, and reference time.

Another related change in use of *-ing* forms with age concerns the distribution of **nonfinite** *-ing* forms in different syntactic contexts. We defined an *-ing* form as nonfinite if it occurs with a verb in present or past tense, other than the auxiliary *be*, within the same simple clause or in an adjacent dependent clause. These forms are rare among preschool children, but constitute over a third to more than a half of the *-ing* forms used by 9-year-olds and adults (see last line of Table 2). Only 11 out of all 36 preschool children use

[6] The relative few past progressive forms in the adult texts compared with the 9-year-olds (8% versus 33% of total *-ing* forms) is accounted for by the fact that most English adults chose the present as anchor tense for their narratives (nine adults versus four of the 9-year-olds).

such forms, never more than once or twice per narrative, compared with nearly all the 9-year-olds and adults (19 out of 24).

Nonfinite *-ing* forms serve different functions at different stages of development. Among the preschoolers, they occur as **complements** in relation to three types of predicates: (a) following presentative *There + be* expressions — e.g., *And see! There's a mouse coming [E3f-3;9], There's a deer hiding up there [E4f-4;7]*; (b) with aspectual verbs — e.g., *Then he started playing around [E4e-4;7], He kept on calling frog [E5h-5;10]* (see Section 1.3);[7] and (c) following clauses with verbs of perception — e.g., *He's looking at all the bees flying out of the honey [E3g-3;9], I see him snoring [E4j- 4;9]*. In addition to complements like these, older narrators also use nonfinite *-ing* in dependent, modifying clauses. Nearly one-quarter of the nonfinite *-ing* forms of 9-year-olds, and well over half those used by adults, have **adverbial** functions, typically in describing two concurrent events or attendant circumstances, e.g., *And the deer carried him to the edge of a cliff, with his dog* ***chasing*** *after [E9a-9;1], The three were just sitting around,* ***doing*** *nothing [E20d]* (Chapter IVA). Nine-year-olds and adults also use nonfinite participials with the modifying function of **relative clauses**, e.g., *The dog was shaking the tree with the beehive* ***hanging*** *from it [E9i-9;10], The dog is curious about some bees* ***flying*** *overhead [E20c]*. None of the preschoolers use these forms in syntactic subordination, for purposes of adverbial or relative modification.[8] The figures in Table 2 thus reflect a change in the function of *-ing* forms with age. For the younger children, they frequently constitute the favored verb form within the bounds of the simple clause — from age 4 up, nearly always with the auxiliary *be* carrying marking for present or past tense. For schoolchildren, they may serve as a means of subordinating one event to another, in nonfinite complement or adverbial clauses.

Use of progressive aspect also reveals different ways in which speakers relate to the text as a whole, beyond sentence boundaries. The tendency of younger children to avoid simple present-tense verbs reflects their reliance on the **picture-description mode** adopted by the 3-year-olds across the languages. They treat the events depicted in the storybook as ongoing, and so

[7] Older children use these constructions with a wider range of aspectual verbs (e.g., *And the dog came whimpering over [E9i-9;10]*) and also with occasional modal verbs, e.g., *The dog tried running after the deer [E9c-9;8]*.

[8] The single exception is a 5-year-old who uses a nontensed *-ing* form in a dependent adverbial clause, thus: *And he was standing on a stone, calling [E5c-5;3]*. The comma between the main clause and the gerundive *calling* in fact represents a longish pause, suggesting that these two predications are not fully knitted together in a single prosodic or syntactic package.

describe them from the temporal perspective of immediate present rather than the generic or narrative stance of simple present. Compare the following descriptions of the same series of events in a 4-year-old compared with an adult narrative.

(10) *When the boy wakes up, he's gone. Here he's looking in his boot. Now he's looking out the window. Now the dog jumps down, and now he's hugging the dog. Now all the leaves are falling down. [E4l-4;11]*

(11) *The next morning the boy and the dog wake up and find the empty jar. The boy looks in his boots, while the dog looks in the jar for the frog. They look out the window for the frog. The dog falls out the window, breaks the jar. The kid goes down out the window as well, picks up the dog ... [E20b]*

The 4-year-old in (10) clearly knows how to use the simple present, but is incapable of sustaining the narrative perspective which it entails across entire stretches of text. In contrast, the adult relies consistently on the simple present to anchor her narrative. Some of the 5-year-olds, and all those from age 9 years up who select present tense as their anchor (22 out of the 36 in these age groups, see Table 1) favor simple aspect. The few older children who rely relatively heavily on progressive aspect use it as a bridge between picture-description and fully narrative mode.[9]

Shifting from simple to progressive aspect thus occurs across the sample. Every text from age 3 years through adults contains two or more clauses in progressive aspect — except for two 9-year-old texts, both anchored in past tense (*E9c-9;6* and *E9f-9;8*).[10] But these shifts perform different functions across the age groups. Among the 3- and 4-year-olds, either progressive is a favored tense form, indicative of picture-description mode, or it is used to mark local contrast between durative and punctual activities, or between speech time and reference time. The older children use progressive aspect to mark departures from the narrative backbone of the plot, not as the unmarked form across their texts. Adults, in contrast, use progressive forms across blocks of text, for highlighting or backgrounding specific segments of their story. Adults' use of *-ing* forms reveals several different patterns — in line with what we noted for individual preferences (Chapter IIA, Section 4.4). Some adults use them very liberally. Other adult narrators adhere strongly to

[9] The only 5-year-old who does so (*E5j-5;10*) is still adhering to more juvenile picture description, with no explicit reference to any of the three major plot-components (Chapter IIA).

[10] And both of these include several nonfinite uses of *-ing* following aspectual verbs like *start, keep on*.

simple aspect, in either present — (*E20g*) — or past tense — (*E20i*). Unlike the younger children, adults never anchor their narratives predominantly in progressive aspect; but unlike the 9-year-olds, none of them avoid progressives altogether. Rather, they use progressive aspect with a more global, plot-based motivation, for events which form a durative background to the plot-advancing sequentially unfolding course of events described in simple narrative present or past.

1.2.2. Perfect aspect

Unlike progressives, verbs in perfect aspect cannot be interpreted in purely deictic terms of the temporal relation between the time of speaking (or narrating) and the time of the event's occurrence. They involve consideration of some **other** reference point, to which the situation being described has current relevance or to which it is anterior (Klein, 1992; McCoard, 1978; Reichenbach, 1947a, 1947b; Smith, 1980a, 1980b). In our English narratives, verbs marked for perfect aspect serve two related functions, both characterizable as expressing **relative** tense: (1) They express **anteriority**, that is, they mark one event as having occurred prior to another, for which it constitutes a temporally backgrounded event, and so departs from the normal temporal sequence of the unfolding plot — e.g., *The boy, who **had climbed** the tree, looked in it* [E9i-9;10], *The boy **has climbed** a tree and is looking in a hole* [*E20h*]. (2) They meet the requirements of traditional **sequence of tense** rules (Comrie, 1986), that is, they serve to "backshift the tense forms from direct speech when the introductory verb is in the past tense" (de Clerck, 1990, p. 1), e.g., *They asked the gopher and the bees where ... if they **had seen** the frog* [*E9b-9;3*] — and, by extension, to the relationship between the introductory matrix verb and the verb in complement clauses in general — e.g., *He's all happy **he's found** his frogs* [*E20a*], *It seems that **they've raised** this happy family* [*E20b*], *The next morning they discover that the frog **has escaped*** [*E20g*].

The frog story provides numerous opportunities for backwards temporal reference to events which occurred at some prior point in the plot. Examples include the scene where the dog gets his head stuck in the jar in which the frog **had been kept** or from which the frog **had escaped**, or the situations illustrated above where the owl pops out of the hole in the tree which the boy **has climbed**, as well as the final scene in which the boy recovers the frog which **had run away** or which he **had lost**. Despite this "objective" reality, we hypothesized that perfect forms would be relatively rare in the young children's narratives, since they are known to be a late acquisition compared to other tense/aspect forms in American English. This delay is more marked in the language acquisition of American compared with British children, since

adult American English allows simple past tense in many contexts where British speakers require a perfect form (Gathercole, 1986; Slobin, 1987, in press-b; Wells, 1985).

These predictions are strongly borne out by our findings. Perfect forms are used only twice across the preschool corpus. A 3-year-old uses it as a means of switching from ongoing, durative to a **perfective** perspective on the scene of the boy falling off the deer's back into the water: *He's trying to get off. **He's falled off!** He falled off!* [*E3k-3;10*].[11] And a 5-year-old uses it in a typical "sequence of tense" context of a complement clause, thus: *And then they saw - the frog **had married** another frog* [*E5c-5;3*]. Three 9-year-old schoolchildren use the perfect, only in **past** tense, only once or twice per text (a total of four out of all their clauses, the bulk of which, as noted, are in simple past tense). The vulnerability of this system is revealed, moreover, by an occasional ungrammaticality, e.g., *And then the dog's running away, cause the bees were all chasing him, and he **had fell down*** [*E9l-9;11*].

In contrast to the children's avoidance of perfect aspect, no fewer than **eight** of the adults use such forms at least once, while three adults use them four or more times in their narratives (*E20b*, *E20f*, *E20k*). The adults use perfect aspect exclusively in **present-tense** contexts. In contrast to the few 9-year-olds we noted, there is not a single instance of past perfect in the adult corpus, no doubt because the bulk of the adults relied on present as an anchor for their narratives (see Table 1). For these speakers of American English, formal "sequence of tense" requirements as well as expression of anteriority with a wider discourse scope are neutralized by reliance on **simple past tense**, as shown in (12). That is, in present-tense contexts, simple past may serve where present perfect is still largely mandatory in British English.

(12a) *The owl is angry that the boy **interrupted** his home.* [*E20c*]

(12b) *The dog's head **gets** stuck in the little bottle that the frog **was** in.* [*E20l*]

(12c) *He's even happier when he **sees** the frog **had** little kids.* [*E20l*]

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[11] A problem arises due to the ambiguity of contracted *'s* as between *has* and *is*. Fletcher (1979, 1981) suggests that this blurring of the distinction between a verb in the present perfect and a copula plus adjective combination may constitute a problem for children in acquiring perfect aspect. This is particularly relevant at one point in our sample. As many as six preschoolers describe the scene where the boy sees the empty jar by some combination of *is* plus *gone*. Among the smaller children, this is always in the ambiguous form of *the frog's gone* [*E3g-3;9*] or *he's gone* [*E3k-3;10*] and [*E4l-4;11*], but the 5-year-olds disambiguate this to some overt form of *be* — e.g., *And then the frog is gone!* [*E5e-5;8*], *The frog was gone* [*E5l-5:11*].

The bulk of the 25 adult uses of present perfect do, in fact, observe the local-anteriority, "sequence of tense" requirements between present-tense matrix clauses and their associated dependent clauses describing prior events. The examples in (13) correspond to those in (12), but present perfect is used in place of past simple.

(13a) *He's all happy he's **found** his frogs.* [E20a]

(13b) *They're probably angry that the dog **has knocked** their hive out.* [E20b]

(13c) *The next morning they **discover** that the frog **has escaped**.* [E20g]

(13d) *He **looks** in his boots to see if the frog **has taken up** quarters for the evening.* [E20k]

The contrast between the dependent clauses in (12) and (13) — simple past versus present perfect respectively — is found only in the adult narratives and reflects different expressive options available to fully proficient speakers of American English. They can be more or less conservative, depending on personal choice of style in local tense/aspect shifting and the extent to which they observe the traditional grammar of "sequence of tense" constraints.[12]

1.2.3. Developmental trends

The dominant themes of our book are manifest in how the English-speaking narrators avail themselves of the formal tense/aspect options provided by the grammar of their native tongue. The 3-year-olds reveal incomplete grammatical mastery, with a relatively high rate of "bare" progressives with no overt auxiliary *be*. Their over-reliance on progressive forms shows

[12] In general, adult narrators differ in the extent to which they choose to overtly mark perfect and durative event characteristics through recourse to grammatical aspect. Compare the following descriptions of the same sequence — being caught by the deer to the fall from the cliff — in different adult texts. The first is from a highly elaborated text, the only adult with mixed tense as well as progressive and perfect aspect, with much use of nonfinite *-ing*; (b) mixes simple and progressive aspect in the dominant present tense; while (c) remains anchored in simple present. (a) *Now the boy **has been picked up** by some antlered beast, looks like a deer, and the deer **is running** to a cliff, and the dog **is barking** at the deer ... This dog is pretty useless, all he **does is cause** trouble and **bark** at things. Now the deer **has thrown** the boy over the cliff into - looks like they'**re heading** for a pond, and the dog **goes** too, as the dog **has** throughout the entire story.* [E20b] (b) *So now they **go back to looking** for the frog, and the - er - the deer **pops out** of the rock and - after **being disturbed**, the deer **starts giving** him a ride, unintentionally, and the boy and the dog **go running** with the deer and **get thrown off** the cliff.* [E20e] (c) *Then these branches **turn out to be** antlers of a deer. The boy **gets snagged** on it. The deer **runs away** with the little boy on its head to the edge of a cliff. The boy **falls off** into a pond.* [E20l]

that they are not yet liberated from the picture-description mode. On the other hand, children from as young as age 3 do demonstrate knowledge of both present and past tense, in both simple and progressive aspect, and by age 5 years syntactic command of these forms is well-established. And even the younger children show some ability to alternate between durative **states** described by copula predicates, change-of-state **events** with verbs in simple aspect, and durative **activities** marked by *-ing*. This is illustrated by the opening to the following 4-year-old narration.

(14) *The frog and the dog, and the boy's here. The dog's climbing out there, when he's sleeping! And the dog's somewhere else, maybe he must be in his cage, sleeping too, right there.* [Child points] *When he wakes up in the morning, he sees he's not there. And they keep going around, and the table, the stool's knocked over. And he gets dressed ...* [E4f-4;7]

Nine-year-olds use a wider range of forms — including nonfinite gerunds, past progressives, and past perfect constructions. Like adults, they shift more consistently than preschoolers from one tense and/or one aspect to another to mark departures from the narrative backbone and to distinguish foreground events from background attendant circumstances. And they are capable of using these shifts on a less local level, in a more discourse-motivated fashion, than the younger children. Adults go beyond the 9-year-olds in deploying an even wider range of forms — e.g., nonfinite auxiliaries as in *The dog's rescued from **having** his head stuck in the jar* [E20b]; *The boy is very happy **to have found** his frog* [E20k]; ***Being** very worried, they searched in their room* [E20d]. Not only do adults make fuller use of a broader range of formal devices, they each construct their texts in accordance with a personal narrative rhetoric which is expressed, inter alia, by the different ways they deploy the tense/aspect options available to (American) English speakers. And these options, as noted in Chapter IIIo, are far richer than those of Hebrew speakers (Chapter IIID), but narrower than the ones to which Spanish speakers (IIIC) can have recourse in telling this same story.

1.3. Lexical Marking of Aspect

Languages also make use of noninflectional devices for encoding aspectual distinctions. Here we consider three periphrastic means of expressing lexical aspect in English: particles like *down*, *off*, and *on* (Section 1.3.1); verbs like *go*, *start*, and *keep (on)* (1.3.2); and adverbials like *already*, *all over (the place)* (1.3.3). These devices combine to express different types of "extended" aspect in the English frog stories (1.3.4). Focus here is on **inchoative** aspect — expressing inception of activities and changes of state — and **protractive** aspect — continuation of activities and extensions of states, since these are particularly relevant to the frog story narratives.[13]

[13] For example, particles like *down*, *up*, and *off* are rarely used for expressing **completive** or perfective aspect in our English texts. Compare, for example, durative *the house burned*

1.3.1. *Aspectual particles*

The most typical function of particles in the English frog stories is in describing **locative trajectories** — e.g. *And the boy's looking* ***down*** *the hole* [E5k-5;ll], *The dog started jumping* ***up*** *toward the beehive* [E9h-9;9], *They fall* ***off*** *the edge* [E9b-9;3] (see Section 2). Particles are used aspectually rather than locatively in two main ways in these texts: (1) with change-of-state predicates, as a means of marking **inceptive** aspect (in contexts favoring the reflexive particle *se* in Spanish [Chapter IIIC] and *binyan* verb-morphology in Hebrew [Chapter IIID]); and (2) with durative predicates — the particle *around* marking **iterativity** and *on* for **protraction**. A verb commonly marked by a particle as inchoative in the English frog stories is *wake up*. It is used by three 3-year-olds, by half the 4-year-olds, and in the great majority of the older narratives, as such or in idiomatic *get up*. Inchoative is also expressed with a verb of stative process — *sit, lie*, or *stand* with inceptive *down* or *up*; for example, compare the change-of-state predicate followed by a durative predicate at the beginning of a 4-year-old narration: *He* ***sat down.*** *And he* ***laid*** *there with this thing* [E4a-4;0]. This usage is not common, and is confined to 3- and 4-year-old texts in picture-description mode, to describe *sitting down, lying down*, or *standing up*. Elsewhere in the English texts, the particles *down* and *up* typically mark direction of movement — e.g., *fall down, throw down, knock down*, and *climb up, pick up* (see Section 2).

The particle *around*, which combines temporal and locative connotations, is used with an iterative sense, to describe an activity repeated over and over again and/or to express protraction of an activity over a period of time. Four-year-old texts express this idea in describing the dog jumping at the beehive hanging from the tree — *And he started playing* ***around*** [E4f-4;7] — or looking for the frog before getting stuck in the jar *Like he was looking* ***around*** [E4i-4;9], and the bees swarming out of their hive *Now there's bees going* ***around*** [E4l-4;11]. A 9-year-old uses a more canonically aspectual combination with a verb specifying manner of motion — *And an owl started flying* ***around*** [E9f-9;8], as does an adult — *And the dog sees some bees flying around* [E20l]. Adults also use *around* to combine aspectual and locative description, e.g., *One night the three were just sitting around doing nothing* [E20d], *So they began looking everywhere around the little boy's room*

with completive *the house burned* ***down***, or *he was cleaning the room* versus *he was cleaning* ***out*** *the room* and *fill the tank* versus *fill* ***up*** *the tank*, where the particle implies that the process of cleaning or of filling will necessarily reach an endpoint. That young children can use particles in this sense is demonstrated by the 3-year-old who on reaching the end of the picturebook, says to the investigator: *We are finished. I think we could close the book* ***up*** [E3h-3;9].

[E20f]. Another means of combining temporal with locative color is use of *all over* to express **recurrence**. This occurs from age 5 years up with durative activities like running, e.g., *He [= the dog] was running* ***all over*** *the place* [E5b-5;2], and in older texts is designated to the thematic search motif, e.g., *So he and his dog* ***look all over the place*** *for it* [E9k-9;11]; *The boy and the doggie* ***went looking*** *for the froggie,* ***all over*** [E20i].

The form *on* also functions mainly in **locative** contexts, e.g. stative *The boy is on the deer* [E3i-3;9] and dynamic *climbing on a log* [E3l-3;11]. It is used as a particle to express continuative or protracted aspect only four times across the English sample, usually with a verb like *keep* which also expresses protraction, thus: *They keep going on and on* [4f-4;7], *He kept on calling "frog"* [E5h-5;10], *They went on to look* [E5i-5;10], and also *Then he kept on calling for the frog* [E9i-9;10]. In the English narratives, grammatical particles are thus not highly favored as means of expressing aspectual phases of situations; rather, their main function is in elaborating locative trajectories (Section 2.2).

1.3.2. *Aspectual verbs*

These narratives also use tense-marked verbs followed by an infinitival or *-ing* participle to express periphrastic, lexical aspect — for instance, **lative**, *They both* ***went*** *looking for it*, or **incipient**, *He* ***started*** *playing around* [E4e-4;7]. Again, two kinds of "extended aspect" feature prominently in these narratives: inchoative entry into a state or inception of a process and protractive continuation of a state or durative activity.[14] Inceptive or inchoative aspect is marked by **latives** (mainly the general-purpose motion verb *go + to do something*), by the inchoative verb *get*, and by marking initiation of a process with the verb *start*.[15] The verb *start* is used by two children in each preschool age group. The 3-year-olds use it with a punctual, change-of-state verb in the infinitive — *He's starting to wake up* [E3g-3;9], *He started to wake him up!* [E3h-3;9]. The 4- and 5-year-olds, in contrast, use it with durative verbs of ongoing activities, in the *-ing* participle form, e.g., *He started running* [E4e-4;7], *And they start calling* [E5c-5;6]. As noted, these are rare in the preschool texts, but most 9-year-olds and adults use *start* for inception of activities, generally with verbs of movement like *climbing* and *running*.

[14] We noted earlier that **completive** aspect is not common in our sample. Nor does the frog story lend itself to **cessive** aspect. There are very few instances of verbs like *finish, stop*, or *end* in either the English texts or the other languages.

[15] The verb *begin* occurs only **once** in this function, compared with 54 instances of *start* plus main verb: *So they began looking everywhere around the little boy's room* [E20f]. Preference for the verb *start* reflects the colloquial, spoken register of our narrations.

Moreover, as distinct from the younger children, older narrators use *start* to mark the inception of plot-motivated activities, most often with *chasing* for the bee's pursuit of the dog, but also to describe the more global search-motif of *calling, looking*, and *searching* (Chapter IVD).

The polysemous verb *get* is favored for marking inception of a **state**, rather than higher register terms like *become, turn, grow.* (The latter occurs only once, in an adult text *Eventually the boy and dog grow tired* [E20c]). The verb *get* is used with an adjective by several preschoolers — mainly *get mad, angry* to describe the boy's reaction to the dog's behavior, or *get wet* for what happens when the boy falls into the pond. Older narrators use *get* with a wider range of adjectives — e.g. *get ready, get scared, get upset* — in around half their texts. The verb *get* also occurs with past participial forms in passive voice — e.g., *The dog's getting chased by bees* [*E4k-4;10*], *The dog gets stung on the nose* [*E9l-9;11*] — and in adjectival passives with a clearly change-of-state sense, e.g., *get dressed* or adult *get interested in*. These are used occasionally by preschoolers and by over half the 9-year-olds and adults (see, further, Section 3.2).

The general motion verb *go* marks inception in the lative sense of moving in the direction of doing something, of going towards an activity.[16] The verb *go* — with or without some directional particle — is used with an aspectual function by two younger children, *And then they both* ***went looking*** *for it* [*E4e-4;7*], *And after* ***went out calling*** *for the frog* [*E5b-5;8*], and by half the 9-year-olds and adults. From age 4 years, lative aspect is used mainly to mark inception of the **search** as the central plot-motif, with age increasingly with nonparticipial forms of the main verb, e.g., *He goes outside, er -* ***goes and looks*** *for him* [*E9d-9;3*], *The little boy* ***went and climbed*** *up on a big rock* [*E20i*], *They* ***go call*** *in the woods* [*E20a*] and, among adults, with adverbial particles, e.g. *They* ***go back to*** *looking for the frog* [*E20e*]. This mature use of a lative verb of inception with a particle of recurrence is used for the complex plot-motivated notion of **reinstantiation**, and ties together the two distinct aspects of inception and retrospection (Chapter IVD).

Continuative, protractive aspect is expressed by verbs like *go on, keep on*, with one adult using higher-register *continue* — *They continue their search* and *After that, he continues and climbs up on this tree* [*E20f*]. The verb *keep* is used without another verb from the youngest age — *And I think he keeped his head up* [*E3g-3;9*], in a way close to the stative sense of *hold*, as in *He keeps it as a pet* [*E9i-9;10*]. Aspectual *keep* occurs only a few times

[16] We do not count formulaic uses of *go to bed, go to sleep*, used by many narrators from age 4 years for the background to inception of the plot.

across the sample, with a participle-form verb, e.g., *They keep going around* [*E4f-4;7*], *The deer kept running ahead with the boy* [*E9c-9;6*], occasionally with double marking of protractedness by the continuative particle *on*, e.g., *He kept on calling frog* [*E5h-5;9*], *He kept on calling for his frog* [*E9h-9;9*]. The two adult uses of *keep* apply when the same situation continues across different scenes — *The owl kept bothering the little boy* [*E20i*], *The dog keeps playing with the beehive* [*E20g*]. The relatively low use of these and other verbs of protraction (only one text has *go on* in this sense) might be due to the ready availability of grammaticized progressive aspect in English to specify activities as durative, hence inherently continuative.

1.3.3. Adverbials of aspect

Adverbials also function minimally to express aspectual distinctions in the English frog stories. In comparison with the other languages in our sample, adverbs like *meanwhile* (or *meantime*), which could be used to express concurrently ongoing activities, or *suddenly* to express inception of a new event, occur only once each across the entire English corpus, each from an adult, thus: *Meanwhile, the dog is being chased by the bees* [*E20j*], and in a false start *Suddenly the owl, oh no! Now the boy is running away* [*E20b*]. Similarly, although, as noted, grammatical marking of perfect aspect is rare in the English texts, the adverb *already* occurs only twice across the corpus, both times from young children. Thus the function of the perfect does not seem to be carried out by alternate means. When the investigator asks the child "And the dog, what about the dog?" a 3-year-old replies *I already said dog!* [*E3i-3;9*], while another uses it in describing a static array of pictured objects as: *His clothes are already out, at the night time!* [*E4g-4;7*]. Adverbial expressions of protraction or recurrence are likewise few and far between: The phrase *all the time* is not used at all, while *again* occurs several times in two 3-year-old narrations, and in them alone, evidence of the picture-description mode — e.g. in describing the dog and the beehive as *Now, and then he's trying to eat it again* [*E3d-3;5*], or *Fell in the water again* [*E3g-3;9*]. This immature use of *again* is akin to the "additive" sense of quantifying expressions — e.g., *And here's another one* [*E3h-3;9*] when the child sees another picture (of the same rock) on the next page.

The one aspectual adverb which is widespread in the English corpus is the word *still*. In contrast to the low use of verbs of protraction like *keep, go on, continue*, it occurs in around half the texts from age 5 years on. At first it is used only with verbs in progressive aspect, so marking continuativity both lexically and grammatically, e.g., *And the dog's still doing that* [*E5k-5;9*], *And the dog was still playing with the bees* [*E5b-5;3*], [E9e-9;76], [*E9j-9;10*]. Older children and particularly adults use this adverbial to mark the protractedness of **states** as well, e.g., *And the bees are still after the dog [E9l-9;11]*, *The dog is still intrigued with the beehive [E20b]*, *The dog still has the jar on his head [E20g]*.[17]

The English frog stories thus demonstrate a generally low reliance on adverbial expressions — particles like *down* or *off*, words like *already*, *meanwhile*, and phrases like *again and again*, *all the time* — for encoding aspectual distinctions. The only lexical device favored for periphrastic expression of what we have termed "extended aspect" is verbs of inception such as *get*, *start*. Elsewhere, particles and adverbials like *around* or *all over* have mixed temporal and locative connotations, confirming the impression that rhetorical elaboration in these narratives centers around locative trajectories (Section 2.1, 2.2). Less attention is accorded to temporal distinctions, beyond those afforded by the morphosyntactic devices of tense and aspect alternations, on the one hand (Sections 1.1 and 1.2) and by lexical markers of temporal sequentiality like *then*, *later* or *eventually*, on the other (Section 4).

1.3.4. Developmental trends

Several devices for specifying aspectual contours of events cluster together mainly in adult usage. For example, *And then the deer **went running off** with the little boy [E20i]* combines a lative motion verb used inceptively with the durative *-ing* suffix on the main verb plus the particle *off* for separative or completive aspect — as in *The reindeer takes **off** with the boy on him [E20a]*. This use of *off* is confined to the adult narratives. Yet younger children also use a variety of such devices, sometimes even combining them within a single predicate. One 4-year-old story ends with *And they keep going on and on [E4f-4;7]*, with extended protraction expressed by combining a verb of continuative aspect *keep* with the durative suffix *-ing* and repetition of the continuative particle *on*. A 5-year-old uses a variety of devices to express protracted aspect in the excerpt in (15).

(15) *Uh- and in this (picture) he's **still** calling frog, he **kept on** calling frog. And then um - a deer pulls him up, and then it **runs and runs** to get the dog. [E5h-5;10]*

Adults do this together with syntactic subordination (Section 4). For instance, one describes what the dog is doing as background to what happened to the boy as follows: *The groundhog ... bites the boy on the nose while Helmut [=dog] **is still busy** barking up the tree at the bees [E20k]* — combining the durative subordinator *while*, the continuative adverb *still*, the semi-modal of ongoing activity *be busy*, and the durative suffix *-ing* on the verb *bark*.

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[17] This also has a plot-level function: to return to a participant or scene.

This narrator also uses *still* to describes a continued **state** which serves as background to a series of punctual, plot-advancing events, as follows: *The dog loses his balance and slips and lands right on the glass jar which is, up to the point he hits the ground, **still attached** to his head.* These passages describe the protracted or continuative aspect of an activity as part of an isolated scene. Less local, **plot-motivated** repetition is characterized by different devices — e.g. the adverbial *all over* is used to describe the search as distributively recurrent by two 5-year-olds, two 9-year-olds, and four adults (Section 1.3.1).

Narrators can thus avail themselves of a rich range of nongrammaticized expressive devices for describing protractively extended activities or states and for specifying aspectual contours like inchoativity and iterativity. Some of these forms of expression are favored across the sample, others are selected as rhetorical options by individual narrators. Many are familiar to even the preschool children, but in general periphrastic markings of aspectual distinctions are quite sparingly deployed in these English narrations.

2. EVENT CONFLATION

This section concerns how information is apportioned between verbs and their associated satellite elements. "Event conflation" applies when in elaborating on events beyond the bounds of a bare verb, speakers choose to compress different facets of the situation within a single clause rather than arranging them linearly across successive clauses. Descriptions of an event may refer to the **manner** or **cause** of its occurrence (Section 2.1) and to composites of locative trajectories like **direction**, **source**, or **goal** of movement (2.2). The excerpts in (16) illustrate five different ways of expressing these components in English adult descriptions of the events depicted in the "fall of the beehive" scene. In Picture 10, the dog is shown looking up at a beehive hanging from a tree which he is shaking; in Picture 11 the dog, still holding onto the tree, has turned around to look at the beehive lying on the ground.

(16a) *And in the meantime, the dog is barking up the tree at the bees ... Then the hive falls. [E20l]*

(16b) *The dog shook the tree so much that the beehive fell down. [E20c]*

(16c) *The dog gets the beehive down. [E20e]*

(16d) *The dog knocks the beehive down. [E20g]*

(16e) *To the dog's amazement, he knocked the beehive off the tree. [E20d]*

In (16a), the dog's action and the beehive's change of state are described by two distinct utterances, linked by the temporal connective *then*. The two clauses in (16b) are also nonconflated, but are more tightly linked by syntactic subordination and the resultative connective *so that*. (16c) expresses tight conflation of cause and direction, to which (16d) adds the element of manner — in place of the all-purpose causative auxiliary *get* there is a lexically specified action verb *knock*. (16e) illustrates the most elaborated path, with cause, manner, and direction plus source encoded in the prepositional phrase *off the tree*. We will see that English-speaking narrators are able from a young age to elaborate on several facets of a predication, along the lines illustrated in (16a) through (16e).

In contrast to its elaborate system of grammatical tense/aspect marking (Section 1.1), English has no inflectional means for specifying either causation, on the one hand, or direction of movement, on the other. Instead, English speakers use distinct verb stems to express the manner and causal source of movement (Section 2.1), or they extend the verb by "satellite" particles or prepositional phrases to elaborate locative trajectories and the path from source to goal (Section 2.2).

2.1. Lexically Incorporated Manner and Causation

One relevant device for conflating composite facets of a situation is by lexical **incorporation**, with a semantic distinction encoded as an inherent part of the verb stem. English, as discussed in Chapter IIIo, is a satellite-framed language, in which the verb often conflates manner and/or cause. Compare, for example, the vocalizations characterized by *call, cry, howl, scream, shout, shriek, yell, yelp* and the manners of walking by the stems *march, limp, plod, stride, stroll, toddle, totter, trot*, or *trudge*. These lexical distinctions are an important part of vocabulary enrichment and rhetorical expressiveness in English, and their acquisition begins from a young age (Section 2.1.1). Another semantic category often implicit in the verb stem is **causativity** — compare verbs like *throw* or *push* with periphrastic *make fall* (Section 2.1.2). Moreover, manner and causation may be conflated, in verbs like *fling* or *jolt*.

2.1.1. Manner of movement

Even the youngest children rely on a fairly differentiated vocabulary of movement verbs.[18] Three-year-olds use from two to as many as 12 different

[18] The frog story involves numerous motion verbs which lend themselves to different syntactic and/or semantic classifications (Levin, 1989; Levin & Rappaport, 1990). Here, we distinguish four types of verbs of movement relevant to the events described in the frog story: (1) **activity** predicates in the sense of Dowty (1979) and Van Valin (1990), in which a volitional actor performs a durative activity like *go, walk, run*, or *fly*; (2) change-of-state verbs or **achievement** predicates, where a protagonist shifts to another location, primarily *fall*, and verbs with related semantic content such as *drop, plunge*; (3) the **causative** counterparts of such verbs, in which an agent causes the protagonist to undergo this change, e.g., *push, throw*; and (4) a noncausative category of optionally transitive **interactive** verbs, in which two

such verbs per text. One 3-year-old uses the verbs *climb, fall, fly, hang, jump*, and *run* as well as several "general-purpose" verbs (Clark, 1978, in press) combined with particles to express movement — e.g. *get past, go away, put on*, and *pick up* [*E3d-3;5*]. Across the English texts, the following motion verbs occurred, including verbs of self-movement and caused movement. A plus-sign following the verb indicates that it was used with one or more satellites (verb particles), and see, too, the examples in (18) in Section 2.2.1 below.

(17) **English verbs**: buck+, bump+, buzz+, carry, chase+, climb+, come+, crawl+, creep+, depart, drop+, dump+, escape, fall+, float+, fly+, follow, get+, go+, head+, hide, hop+, jump+, knock+, land, leave, limp+, make-fall, move, plummet, pop+, push+, race+, rush+, run+, slip+, splash+, splat+, sneak+, swim+, swoop+, take+, throw+, tip+, tumble+, walk+, wander+

There are 47 such verb types in the English frog stories (compared with 27 in Spanish), reflecting the variety of English verbs that conflate motion and manner (*crawl, creep, plummet, splat, swoop*, etc.)

With age, children use a greater variety of lexically more specified motion verbs. They rely less on polysemous verbs and idiomatic VERB + PARTICLE combinations — e.g., *chase* instead of *run away*, *escape* instead of *get out*. And they make increased reference to **manner of motion** — e.g., *The boy* ***splashed*** *into the water* [*E4c-4;6*], *The frog* ***hopped*** *into the boy's hand* [*E4f-4;7*].

A scene in which manner of motion verbs are common is where the frog climbs out of the jar (Picture 2) — also described accurately, but statically, as follows: *And the frog's - only one leg's out, the other leg's in* [*E5g-5;9*]. The event is mentioned by three-quarters of the narrators from 3 years on, most often simply by the predicate *get out*.[19] Yet even 3-year-olds use some verbs specifying manner — e.g., one otherwise juvenile text describes the boy in different contexts as ***stepping*** *out of bed* and ***climbing*** *over the log* [*E3l-3;11*]. From age 5 years, children add *crawl out, hop out, creep out*, and *sneak out*, with one adult using *tiptoe out*. The main difference is that adults often use the Latinate verb *escape* which, like *get away*, is ablative in implying movement **from** some source, and also entails an aspectual element of **achievement**. Speakers may use *escape* "linearly" rather than in conflation. But they

protagonists are involved in a durative activity, such as *run after* or *chase, run away* or *flee*. We also consider (5) a nonmotion group of verbs which relate to the **plot-based** theme of *looking, searching*, or *calling* for the frog in various locations (Section 2.2).

[19] From age 5 the **source** is also generally specified, e.g. *The frog got* ***out of*** *his bowl* [*E5b-5;2*].

also use it as a motion verb, conflated with specification of the source, e.g., *The frog is escaping from his jar right now* [*E20c*], or else they combine conflated and linear description of the event sequence, e.g. *The frog gets out of the bottle and escapes through an open window* [*E20g*].

Other scenes of "exiting" yield similar results, e.g., the gopher emerging from a hole in the ground (Picture 10) or the owl from a hole in the tree (Picture 12). Most of the children simply use *come out*, but even preschoolers encode some manner elements — e.g. *flew out* [*E3i-3;9*], *buzzing out* (of the bees) [*E4g-4;7*] — and one or two respondents in each group from age 5 up specify the sudden, abrupt nature of these exits by *pop out* or *pop up*. Children and adults thus rely on similar devices for describing emergence of an entity from some source — with encoding of manner elements a function of semantic specificity of the verbs used for this purpose.

Manner is also encoded in verbs describing movement **downward**, most typically by the verb *fall* or a causative verb like *push, throw* — e.g., for the boy and his dog's descent from the edge of the cliff (Picture 17) into the water below (Picture 18). Some preschoolers describe the boy's contact with the water by the verb *splash* — e.g., *He splashing in water* [*E3c-3;4*], *And they splashed in some water* [*E5l-5;11*]; and several 9-year-olds combine **causation plus manner** of movement in the same stem — e.g., *The deer* ***bucked*** *him off* [*E9j-9;11*], *He* ***tips*** *him off* [*E9k-9;11*], *Then he* ***dumped*** *them into the water* [*E9g-9;9*]; and two adults specify manner of falling in describing the dog's fall from the window (Picture 6) — e.g., *The dog was* ***plummeting*** *to his fate* [*E20d*], *The dog* ***tumbles*** *out of the window* [*E20f*]. English speakers thus have a rich repertoire of verbs with which to color their descriptions of how the protagonists get from one place to another, whether volitionally or by an external agency.

2.1.2. Causation of movement

Reference to event causation applies to three "falling" scenes: Where the deer's abrupt stopping causes the boy and dog to plunge down into the pond below, where the emergence of the owl leads to the boy's falling from the tree, and where the dog brings about the fall of the beehive. English allows different levels of event conflation to express causation. At one extreme, clauses can be stacked linearly, with causation only implicit — e.g., *And this owl comes out and the boy falls* [*E20a*] or *The owl came out of the hole and* ***scared*** *the boy. The boy fell off the tree and landed on his back* [*E20c*]; or a causative relation between separate clauses can be explicitly marked as in *The boy falls off the tree because the owl came out of the hollow* [*E20l*]. At the other extreme, both causation and manner may be conflated within a single verb — e.g., *There's an owl in there who* ***bumps*** *him down to the ground*

[*E20j*], *He had fell down cause an owl* ***poked*** *him out of the tree* [*E9e-9;7*], or *An owl came out and* ***bammed*** *him on the ground* [*E5e-5;8*].

Three-year-old children can talk about causative activities of this kind, even if they have not mastered all the relevant lexical constraints (Bowerman, 1974). The single instance of the kind of overextension of an intransitive verb to a causative context noted by Bowerman occurs when a 3-year-old describes the fall from the tree scene as *Owl in there - fall him down!* [*E3c-3;4*]. Periphrastic causatives with an auxiliary verb *get* or *make* are used mainly by preschoolers, e.g., to describe the beehive's fall from the tree — *And then the dog tried to* ***get*** *that thing down* [*E4c-4;6*], *The dog* ***made*** *the hive fall* [*E4b-4;4*], *And then the dog* ***made*** *the beehive fall* [*E5l-5;11*]; or the fall from the cliff — *And he* ***makes*** *him fall in* [*E5g-5;9*]. Older children and adults do **not** use these highly productive means for expressing causation.[20] In these English narratives, causation tends to be lexicalized within the stem of a transitive verb, which may be further semantically specified for manner, and which usually occurs together with an additional satellite element specifying **path** — e.g., *knock down, bam on(to), poke out, tip off over into*.

2.2. Locative Trajectories

Across our sample, the frog story elicits rich allusion to the **location** of protagonists — e.g., *in the jar, on top of the rock, at the edge of the cliff*; and it affords numerous opportunities for narrators to specify **movement** from place to place by such means as *falling, climbing*, or *running*. This section considers how subcomponents of events are aligned in the expression of directional paths or locative trajectories. In expressing these facets of event configuration, English deploys linguistic forms which may be identical to those used for elaboration of temporal contours — most particularly, verb particles and adverbial phrases. The satellite elements which cluster around the verb, rather than the bare verb alone, convey different pieces of information associated with a movement-event. Thus, in specifying **direction** of movement, English typically uses polysemous monosyllabic verbs of Germanic extraction combined with a locative particle, where Spanish, Hebrew, or Turkish rely on simplex verbs which incorporate both movement and direction of movement within the bounds of the verb stem. The English corpus contains not a single instance of the monolexemic, Latinate equivalents used in the 3-year-old Spanish, Hebrew, and Turkish texts (Chapters IIIC, IIID, and IIIE).[21] A related finding for the English narratives is that they contain few

[20] One exception is where an adult explains why on reaching the edge of the cliff the boy and dog but not the deer fall into the water, thus: *The deer stops abruptly, which* ***causes*** *the boy to lose his balance and fall ...* [*E20f*].

instances of **bare verbs** used without further specification of the scope of the event. Across the sample, this elaboration is typically **locative** in content.[22] The details of locative trajectories take various forms of expression in English. Several such devices occur in the otherwise immature text of the youngest child in the sample [*E3a-3;1*]. It describes the frog as *getting out* — by a verb plus particle combination; the reindeer *threw them down* — a particle with a transitive verb plus direct object (Section 2.2.1); the dog as *standing on two toes* — a verb followed by prepositional phrase (2.2.2); and the owl *flew out of here* — the verb elaborated for direction by the particle *out* and for source by the prepositional phrase *of here* (2.2.3).

As noted, there are few predicates which consist of the verb alone in the English descriptions of events entailing a locative trajectory, even among the 3-year-olds. Clauses which contain only bare verbs, never more than once per text, are: *A owl's flying* [*E3d-3;5*]; *And then the deer comed* [*E4e-4;7*]; *Now the dog's running* [*E5j-5;10*]; and *The beehive fell* [*E9i-9;10*]. Where such forms occur, they tend to be followed either in the next clause or one soon following, by an explicit elaboration. This method of **event stacking** is illustrated by the clause *And the boy's falling* followed immediately by *He falled into the water* [*E3b-3;4*]; *And then they started swimming* and a few clauses later *Then he got to it, then he swam over to the log* [*E4e-4;7*]; *Then they're about to drop. Then they dropped* and a few clauses later — *And they drop down* [*E4f-4;7*]; or *And then the boy fell out and the owl was* ***flying,*** *and the bees were* ***flying after the dog*** *and the boy got up on some rocks and the owl* ***flew away*** [*E5l-5;11*]. These strings show that English speakers tend to supplement motion verbs by explicitly specifying the path of motion followed by the protagonist(s). Where clause-internal conflation is beyond the online processing capacities of younger narrators, they will do so by clause stacking.

2.2.1. Locative particles

Semantically, locative particles add a directional element to motion verbs — as in expressions like *go in, climb up, swim over.* In the frog story,

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21 English does occasionally lexicalize directionality within the verb stem, often in denominal verbs — e.g. in describing the fall of the boy and dog from the cliff into the water down below, *They're* ***heading*** *for the pond* [*E20a*], *And he* ***lands*** *(in the water)* [*E9k-9;11*]. These are relatively rare, since English has such a rich assortment of satellite particles for expressing directionality, as well as the source and goal of movement.

22 The high proportion of locative compared with other descriptive elements may be due to the contents of this picturebook, in which plot progression is aligned to the protagonists' movement from one place to another in their search for the missing frog. In general, a search motif entails detailed reference to **location** rather than to the time or duration of the activity.

the commonest uses are with *down* in the falling scenes and *out* in the emergence scenes (Section 2.1). The forms termed **particles** in English have the following syntactic properties: (1) They can occur alone with a verb, constituting a "two-word verb" predicate, e.g., *The dog jumps down* [*E4l-4;11*], *And then a bird comes over* [*E9b-9;3*]. (2) They can occur with a transitive predicate, taking a direct object, where the particle may be shifted to follow the object noun phrase — e.g., *The deer lifted the boy up* [*E5c-5;3*], *The dog knocked the beehive down* [E9g-9;9].[23] (3) Verb plus particle combinations can take oblique objects in the form of prepositional phrases — e.g., *A owl flew out + of here E3a-3;1*], *He swam over + to the log* [E4e-4;7], *The boy climbs up + in a tree* [*E5h-5;10*], *The dog is running away + from the bees* [*E20c*].

In our English narratives, 3- and 4-year-olds use a variety of directional particles, including *down* and *up*, *in* and *out*, *off* and *on*, as well as *around, away,* and *over*. And they use them in all three constructions defined as providing syntactic contexts for such forms in English — e.g., (1) *the dog's going to fall over* [*E3c-3;4*], *he's falled off* [*E3k-3;10*]; (2) *trying to pick it up* [*E3d-3;5*], *knocked all the bees down* [*E3g-3;9*]; and (3) *fell down in the water* [*E4a-4;0*], *climbs up on the log* [*E4f-4;7*].[24] Younger children use particles relatively less in contexts (2) and (3), that is with transitive verbs and an object noun or prepositional phrase. But even the 3-year-olds show command of the syntax of these constructions, with no instances of word order or other errors in the grammar of particle distribution.

Initially, particles are used mainly with the general-purpose motion verb *go* or the polysemous inchoative *get*, but with age, they occur increasingly with verbs specifying manner of motion like *step, hop,* or *jump* — e.g. *He splashed right in* [*E4e-4;7*], *The frog sneaks out,* [*E5e-5;8*] or *The owl swooped down* [*E9c-9;6*]. Older children also use them with verbs which conflate manner and causation — e.g., the owl *pokes the boy out (of the tree), bumps him down (to the ground)* (Section 2.1.2). When the 47 types of motion verbs found across the English frog stories, as listed in (17) above, are

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23 This permutation is obligatory if the object is a pronoun, e.g., *The reindeer pushing him down* [*E4h-4;8*], *He knocked me down there!* [*E5a-5;1*], *The deer lifts him up* [*E9b-9;3*].

24 Several children treat *out* as a preposition rather than as a particle, e.g. *the dog jump out the window* [*E3d-3;5*], as is common in colloquial American English in general, e.g., an adult says *And the frog crawls out the jar* [*E20b*]. Others add the linking prepositional *of*, mandatory in British English, e.g., *And here (he's) stepping out of bed* [*E3l-3;11*], *He went out of it* [*E4g-4;7*], *bumblebees coming out of the honeyhive* [*E5a-5;1*]. Indicative of the unstable nature of these alternatives in English is a child [*E3a-3;1*] who uses both forms four clauses apart, thus: *And he fell out the window* — clause 6, *A owl flew out of here* — clause 10.

combined with the satellite particles used in the English sample, we arrive at no fewer than 123 types of such expressions, as shown in (18).

(18) **English verbs + satellites**

buck + off
bump + down
buzz + out
chase + after, in
climb + down, on, out, over, up, up in, up on
come + after, down, off, on, out, over, up
crawl + out, over, up
creep + out, up
drop + down, off
dump + in, off
fall + down, in, off, on, out, over
float + off
fly + after, away, off, out, over, up
get + away, down, in, off, on, out, over, past, up, up on
go + down, down out, home, in, off, out, outside, over, through, up
head + for, to
hop + in, on, out, over
jump + down, off, out, over, up
knock + down, down out, in, off, out
limp + in
pop + out, up
push + down, off, off in, out
race + after, away
run + after, along, away, by, from, in, off, out, over, through
rush + out
slip + on, over
sneak + out, over, up
splash + in
splat + in
swim + out, over
swoop + down
take + away, off with
throw + down, down in, in, off, over, over in
tip + off over
tumble + down, out
walk + along, down, over to
wander + out

The satellite particles can also assign directionality to nonmotion activity verbs, both transitive and intransitive — e.g., *He's trying to bite the tree down* [*E3d3;5*], *the deer pulls him up* [*E5h-5;10*], or *They looked over to the other side* [*E9e-9;7*], *The dog's smiling down* [*E9l-9;11*]. These provide a means for specifying direction of movement which is common across the English narratives, and which is very different from what we find with children speaking languages defined as verb-framing, such as Spanish, Hebrew, and Turkish, with directionality lexicalized within the verb stem.

2.2.2. Prepositional phrases

Many forms that meet the syntactic definition of particles in English also function as casemarking and adverbial prepositions, i.e., as forms which must be followed by a noun phrase (either lexical or pronominal).[25] Prepositional phrases serve two main purposes. (1) They mark case relations between the predicate and its associated nominals — e.g., *to* marks dative recipient in *He gave one of its little frogs to the boy* and *with* marks comitative accompaniment in *They went home with the boy* [*E9c-9;6*]; and (2) they mark adverbial relations which elaborate on some facet of the relation between an event and the circumstances of its occurrence. Our concern is with their adverbial function in describing properties of the locative trajectories followed by the protagonists in the frog story. Prepositions differ semantically from particles in this respect, too, since they can specify **stative** location as well as directionality, e.g., *The boy's* ***in the bed*** [*E3d-3;5*], *They find the frogs* ***behind a log*** [*E4d-4;6*], *The dog has the jar* ***on his head*** [*E5j-5;10*].

The 3-year-old texts include numerous different prepositional phrases describing change of location or movement from place to place, e.g., *out the window*, *in the can*, *up the tree*, *from a tree*, *over a log*, *into the bowl*, *to the frog*, *onto the deer*. These constructions are readily accessible to the youngest children for locative elaboration. Only two of the 3-year-olds (*E3c-3;4*, *E3k-3;10*) use no prepositional phrases, although both do use VERB + PARTICLE expressions.[26]

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25 English is one of the relatively few languages which allows "dangling" or "orphan" prepositions, separated from their associated noun phrase by processes like question formation ("Where are you going **to**?," "Who will you go **with**?") or relative-clause formation. Compare the relative clause with *in* + (PRONOMINAL) *which* in *They find a hole* ***into which*** *the boy peers*, and relatives with dangling prepositions used by the same adult [*E20f*] a few clauses later — *The dog has found something new to look* ***at****, which is a beehive which he starts barking* ***at***. In such cases, too, the prepositions still have associated, though not necessarily adjacent, noun phrases. Particles, in contrast, may occur alone in the clause with a verb and no associated nominal.

26 This supports the assumption that English VERB + PARTICLE combinations are an earlier

Age-related progression in use of prepositions, like particles, is lexico-semantic rather than syntactic, since nearly all the 3- and 4-year-old texts include prepositional phrases, and these are grammatically well-formed. A few prepositions occur in the narratives of 9-year-olds and adults which are not found in those of younger children, e.g. *a deer caught him **between** his horns* [*E9c-9;6*], *with the boy strewed **across** his antlers* [*E20f*], *they're looking **towards** the trees* [*E20h*]. A general semantic shift is also evident in the **contexts** in which prepositional phrases are used. The younger children use them almost exclusively for locative elaboration, to describe static locations or dynamic trajectories, whereas older speakers use them for a variety of functions. Nonlocative contexts for prepositional phrases, common in the adult narratives but rare among the children, include (1) oblique objects of verbs which govern prepositions lexically — e.g. *concentrating on his beehive* [*E20e*], *interested in this beehive* [*E20f*]; and (2) abstract nominals specifying circumstances or states — e.g., *in pain* [*E20f*], *in a dangerous position* [*E20g*], *in full force* [*E20f*], *in shock* [*E20h*], *under the boy's attention and care* [*E20k*], *to the dog's amazement* [*E20d*].

This progression is clearly reflected by the preposition *after* in the English texts. The 3- to 5-year-olds use it with movement verbs — mainly in the scene where the dog is chased by the swarm of bees — e.g., *chased after the dog* [*E3f-3;9*], *running after the dog* [*E4h-4;8*], *flying after the dog* [*E5l-5;11*]. Among older narrators, this form serves more often to mark **temporal** relations, e.g., as a subordinating conjunction followed by a finite clause *after he goes to bed* [*E9k-9;11*] or, among the adults, by a nonfinite gerund — *after being disturbed* [*E20e*], *after saying goodnight to the frog* [*E20k*] (Section 1.2.1). That is, children first learn to use prepositional phrases with a spatial function for specifying locative trajectories (Section 2.2.3), only later assigning these forms more abstract semantic content and using them in more complex syntactic constructions.

Structurally, 3-year-olds use prepositional phrases with both intransitive and transitive verbs — e.g., both *hanging **from a tree*** and *put the boot **on his head*** [*E3d-3;5*], *going **up the tree*** and *throwing the dog and the boy **in the water*** [*E3i-3;9*]. As with particles, the younger children add prepositional

acquisition than VERB + PREPOSITION phrases. Prepositions are essentially relational elements, connecting verbs to the argument or adjunct nominals associated with them within the clause, whereas particles can be attached to bare verbs to provide semantic information about aspect or directionality. Particles also have some stress, whereas prepositions are pronounced without any stress, with lax vowels reduced to schwa. Particles like *down* and *off* are used at the one-word stage, and in early multiword speech when children's utterances still lack prepositional phrases (Bloom, 1973; Braine, 1976; Brown, 1973).

phrases to intransitive verbs more often than to transitive verb plus object combinations, reflecting the generally smaller number of arguments included in young children's utterances. The major structural advance with age is an increase in the proportion of "doubly elaborated" locative trajectories. These constructions consist of VERB + PARTICLE + PREPOSITIONAL PHRASE, e.g., *hanging down + from his neck* [*E5f-5;8*], *look down + at a gopher hole* [*E9e-9;7*], and are rare among the younger children, e.g., *some bees came out + of the tree* [*E3f-3;9*], *he climbs back up + on the log* [*E4f-4;7*]. These combine particles specifying directionality of movement — *out, up, down, away*, etc. — with prepositional phrases which specify the **source** or **endpoint** goal of movement. In languages like Spanish or Hebrew, such content is typically expressed by a directional verb plus a prepositional phrase, a construction which appears simpler than their Germanic counterparts (although it occurs only rarely in our narratives in these two languages). Yet young English speakers are able to express relations between major lexical categories — the verb specifying nature of motion and the noun the source or goal of motion — by stringing together two (and sometimes more) closed class formatives like *up on, down into*, and so on.[27]

Prepositions can also be strung together, where a verb is followed by an oblique (prepositional) phrase, e.g., *coming from + behind the log* [*E9f-9;8*], [*E20b*]. Such stringing of particle and prepositional phrases is commoner from age 5 years on. But younger children do not necessarily avoid these forms. On the contrary, they sometimes **overuse** such linking elements, adding a redundant *of* in ablative contexts, e.g. *they're coming off of the tree* [*E3h-3;9*], *he knocked them off of the cliff* [*E3j-3;11*]. This again suggests that these particle and prepositional elements are highly salient and readily accessible to English-speaking children from early on in their development of language structure and language use.

2.2.3. *Path, source, and goal*

In the locative trajectories relevant to the frog story, the boy or some animal or group of animals move in a certain direction and/or manner along a path from source to goal. Such notions, which are expressed inflectionally in some languages by ablative and purposive case markings, are accessible to children as young as 3 years of age, even though they may not always use the conventional lexical items for expressing them (Clark & Carpenter, 1989, 1991). This is confirmed by the findings for our 3-year-olds, who use the

[27] In fact, many of these can be analyzed into even more subparts, if one considers the directional prepositions *into* = *in* + *to*, and *onto* = *on* + *to* — e.g., *climbing onto the deer* [*E3i-3;9*], *slipped onto a deer* [*E4b-4;4*].

formal devices described in Sections 2.2.1 and 2.2.2 for expressing both source — e.g. *fell off the tree [E3b-32;4]*, *jumped out the window [E4c-4;6]*, *hanging down from his neck [E5f-5;8]* — and goal, e.g. *fell over into the pond [E3d-3;5]*, *slipped onto a deer [E4b-4;4]*, *looking down the hole [E5k-5;11]*.

The frog story provides ample opportunity for speakers to describe both ends of the trajectory in the falling, climbing, and emergence scenes which it involves. The degree of event conflation required by specifying both source and goal within a single clause seems beyond the capacities of our younger narrators. In order to test this, we analyzed the "cliff scene" (Picture 17), where the deer is shown standing at the edge of the cliff and the boy and dog are in midair, falling down into the water below with a splash (Picture 18). This provides us with a diagnostic for the expressive options deployed by English narrators in expressing the start and/or endpoints of a series of change-of-location events resulting in a highly salient change of location from up above to down below. Speakers selected four major methods of expression:

(19a) Reference to the endpoint goal alone — e.g. *The reindeer knocked the boy and the dog* ***in the water*** *[E5b-5;2]*, *It runs and runs to get the dog, and then they fall* ***into the water*** *[E5h-5;10]*, often together with some specification of the downward direction and/or the manner of movement — e.g., *They fell straight down into the water [E4e-4;7]*.

(19b) Reference to both the origin and the endpoint of the movement in two separate utterances, with no implication of any temporal or other relation between them — e.g. *Ah! He [=deer] knocked them off of the cliff. And here he's [= boy] in the water [E3j-3;10]*; *And then there was a cliff. And then they both fell straight down into the water [E4e-4;7]*.

(19c) Reference to both source and goal in two separate clauses, with some temporal adjacency or chronological sequencing either overt or implied — e.g. *And they both fell off the cliff, and the deer didn't. And they fell in the water, and the deer was happy that they fell in* [E5e-5;8]; *Then they're on a cliff, and the elk pushes the boy off, and the dog falls off too. Then they land in a pond [E9d-9;6]*; *Now the deer has thrown the dog - no, the boy - over the cliff into ... it looks like they're heading for a pond. And the dog goes too, as the dog has throughout the entire story. And they both fall in the water [E20b]*.

(19d) Event conflation in which the cliff source and the water-goal are combined in a single clause — e.g., *The deer ran away with him, and dropped him off a cliff, in the water [E9h-9;9]*, *He pushed him off the side of the cliff into water [E9e-9;7]*, *They're both falling off the little*

cliff into what seems to be a pond [E20c], *And (he) deposits the boy off the side of the ravine into the creek [E20k]*.

The distribution of these descriptions across age groups reflects the development of quite general expressive abilities. Three patterns emerge — a juvenile form of description typical of the picture-description mode (Chapter IIA); transitional expressions in children who are in storytelling mode, but encounter difficulties at the local level of event packaging (Chapter IVC); and mature choice of extended or conflated forms of expression. **Juvenile descriptions** are provided by nearly all the 3- and 4-year-olds (20 out of 24) and several of the 5-year-olds, in the form defined in (19a); they mention only the endstate point of falling or being thrown ***into the water*** — sometimes with reference to direction of movement down. The 3-year-olds in particular avoid mention of the cliff as source of the event, even though they express source in other contexts, such as falling ***out*** of the window or ***off*** the tree. Nor is the problem one of the the causative link between the events, since three of the youngest children do talk about the deer as *throwing the dog and the boy in the water [E3i-3;9]*. These facts suggest that the younger children encounter a genuine difficulty in relating **both** to the source and to the endpoint of a movement event within the same conceptual frame, and hence they are unable to combine them even in successively sequenced syntactic frames.

Only three of the children in the two youngest age groups show some incipient ability to connect between these facets of the event complex, by adopting a type (b) description, mentioning the cliff-source and the water-goal in two separate and unrelated utterances. Not a single 3-year-old explicitly mentions both in a single syntactic package; the most they do is describe the two events serially, with no explicit syntactic, temporal, or logical linking. One child implies a source by a directional particle, but fails to specify it explicitly: *He fell off. And he fell off of - in the pool [E3e-3;8]*, while another 3-year-old describes the source scene by *He knocked them off of the cliff* and, after a prompt from the investigator, goes on to describe the next picture as *And he's in the water [E3j-3;10]*. Similarly, the goal facet is appropriately described by another 3-year-old in the lone clause *(deer's) throwing the dog and the boy in the water [E3i-3;9]*. Further elaboration is achieved by means of syntactic coordination, with two successive clauses conjoined by "event serialization," as in these 4-year-old excerpts: *He pushed them both* ***off the cliff***, *and they landed* ***in some water*** *[E4b-4;4]*; *And then there was a cliff, and then they both fell straight down into the water [E4e-4;7]*.

These two 4-year-olds demonstrate **transitional abilities**, although the transition from picture-description to narrative mode generally characterizes the English 5-year-olds — in this particular scene, as across their texts. Half the 5-year-olds provide only type (a) descriptions of the fall into the water, but almost as as many provide type (b) serial descriptions of both the fall from the cliff and into the water. One 5-year-old even conflates both source and goal into a single clause, but does so, as befits this transitional phase, with much backtracking and hesitation. This is illustrated in (20).

(20) *And this time a deer - or, um - a male deer got the um .. the boy, and threw him over a cliff and th ... and - and on this page, he threw him over a cliff into a pond.* [*E5j-5;10*]

The last clause in (20) — *He threw him over a cliff into a pond* represents mature event conflation, but it takes the child a long time and much hesitation and repetition to produce this description. Thus the 5-year-olds demonstrate a transitional phase of narrative abilities between the juvenile and mature. This is in line with a more general finding: By age 5, children deploy **different** devices for specifying type and direction of movement and for elaborating locative trajectories. One child differentiates between the frog's exiting from the jar as *crawled out* compared with the dog's exiting from the window as *jumped out* [*E5c-5;3*]. This child also uses directional adverbs and directional verbs in suitably contrasting ways, thus:

(21) *And there was some bees* ***ahead****, and then they - the dog barked at them, and then they* ***headed for*** the dog. [*E5c-5;3*]

But the 5-year-olds are not yet able to use this rich array of lexical and other devices for purposes of "event packaging" in general, and for conflating different facets of a locative trajectory within a single syntactic frame in particular.

Mature expression is demonstrated by the 9-year-olds and adults, most of whom select **either** type (c) event serialization **or** type (d) event conflation. Only three of the older narrators select the favored juvenile option of not referring to the source at all. Where this is the case, they elaborate on some other facet of the event, typically the manner or nature of the fall — e.g., *The boy was on his horns, and then he* ***dumped*** *them into the water* [*E9g-9;9*], *And the dog falls in that pond with him. My goodness! It's quite a fall!* [*E20j*]. The fact that 9-year-olds and adults favor equally both expressive options — the serialized Type (c) or the conflated Type (d) — demonstrates a central theme of this book. Mature narrators are free to select from a range of expressive options which their language makes available to them structurally and which their knowledge of the language makes accessible to them in the process of narrating the events depicted in this storybook.

3. PERSPECTIVE

This section considers how narrators organize the surface configurations of predicates and their associated arguments so as to present the information they entail from a particular point of view. These different arrays demonstrate choices available to speakers for verbalizing the same events — in this case, ones depicted in the frog storybook.

3.1. Perspectives on a Chase Scene

The "interactive" nature of chase scenes allows for different perspectives, typically expressed in English through converse pairs of verbs like *chase* versus *flee* or *run after* versus *run away from.* They can be described as pursuits, from the point of view of the actor-chaser who pursues, follows, chases, or goes after the pursued; or as flights, from the point of view of the undergoer-fleer who flees or runs (away) from the pursuer. Or both perspectives can be combined, through use of passive voice, so that the pursued is described as being chased by the pursuer. Compare, for example, the following descriptions of the scene in which the bees are shown flying after the dog or, alternatively, the dog running away from the bees — a scene in which "both participants are animate and highly active, and neither is new" (Slobin, 1993b; see also Chapter IVC).

(22) *The dog is running away.* [*E3g-3;9*]

(23) *He ran away from the bees.* [*E4i-4;9*]

(24) *The bees chased the dog.* [*E4c-4;6*]

(25) *The dog was being chased by the bees.* [*E5f-5;8*]

(26) *The dog's running away because the bees were all chasing him.* [*E9e-9;7*]

(27) *Both of them are in kinda chase scenes, running away from the other animals.* [*E20e*]

As these examples show, speakers can choose to focus on the bees, as the topic of this predication, as in (24), or they can present the scene from the point of view of the dog — either as an actor, the one who is running away, or as a patient, the one who is being chased. From the point of view of event conflation (Section 2), both facets of the situation can be compressed into a single clause, as in (23) through (25), or they can be expressed in two temporally or causally linked clauses, as in (26). A higher level of compression is expressed by the adult in (27), the only one out of 55 English descriptions of this scene which generalizes across the boy and the dog as participants in a global set of chase events.

Over half the 3-year-olds, and two other preschoolers, refer **either** to the dog or to the bees, as in (22), whereas 9-year-olds and adults all refer to **both** parties. These older, hence "normative" narrators, can select either the dog-undergoer or the bees-perpetrators as grammatical subject, and they can express the interaction between them within a single clause or extended across two clauses. The most favored perspective (over 50% of 9-year-old and adult descriptions) is illustrated in (24): The bees are described as *chasing, racing, going*, or *flying after* the dog. Two other forms of description are selected by narrators in each group from age 4 up: The dog-undergoer is presented as grammatical subject, hence the focus, through use of passive voice — as in (25); or both dog and bees are focused on in turn, through two separate clauses, with the dog as subject in the first and the bees as subject in the second — as in (26).

The perspective most favored for this scene is thus of the bees as the active focus of the situation. This was selected by nearly all the 9-year-olds, highlighting what we noted in Chapter IIA: Across the sample, the school-age children tend to be conservative in their choice of expressive devices. They know the grammar, and can use it to perform the narrative task felicitously, and so differ from the preschoolers, but they fail to vary perspective in an adult fashion. Only the adults elaborate on the protagonists' inner states and the motivational circumstances surrounding this situation. Some add details of **manner**, e.g., *The dog runs howling by with this swarm of bees chasing him* [*E20f*]; others provide causal motivation, as in (28) to (30).

(28) *The dog is being chased by the bees because he wrecked their hive.* [*E20j*]

(29) *A bunch of bees start following the dog, probably angry that the dog has knocked their hive out of the tree.* [*E20b*]

(30) *The dog is running away from all the bees, who seem to be quite angry because the dog broke their beehive.* [*E20c*]

Younger children are able to encode different, and appropriate, perspectives on this scene — as in examples (22) to (25). This ability is demonstrated by even 3-year-olds in different languages with respect to different scenes (Chapter IVC; Berman, 1993). What older narrators can do **further** is **alternate** perspectives on a particular scene, by switching reference back and forth from one protagonist to another (dog — bees — dog — bees) within a single, plot-motivated syntactic package (Section 4).

3.2. Passive Voice

Simple re-orderings of the linear array of arguments with respect to their associated predicate are relatively rare in English compared with languages like Spanish, Hebrew, and Turkish (and see further, Section 3.3). Instead, in order to vary perspective so that, for example, the patient-undergoer rather than the actor-perpetrator is presented as the topicalized focus of a sentence, some further grammatical modification is required. For example, cleft and pseudo-cleft constructions with embedded relative clauses can serve to topicalize a particular NP; or an indirect object can be given relative focus by dative shifting, which promotes it to a syntactic direct object stripped of its dative casemarker. Passive voice is another example of such a grammatical operation. Passives enable speakers to deviate from identifying surface SVO order with the thematic roles of actor-action-patient, by promoting the patient NP to the status of grammatical subject, hence of sentence-topic, thereby demoting the actor-agent to an oblique prepositional phrase, or else downgrading it even further by not mentioning it at all (Keenan, 1985a). Passives have traditionally been treated as a "late acquisition," as they are in a language like Hebrew, in which patient-topicalizing or agent-downgrading can be achieved by straightforward changes in word order (Berman, 1979a, in press-b). Yet in other languages, children have been shown to use passive constructions from as young as age 2 to 3 years (Demuth, 1989; Pye & Paz, 1988). And there is growing evidence that passives are acquired quite early even in English (Budwig, 1990; de Villiers & de Villiers, 1985; Marchman, Bates, Burkardt, & Good, 1991).

Our findings, too, suggest that English-speaking children do, in fact, make use of passive constructions from early on, in order to focus on a non-agent participant in a situation (Slobin, 1993b; Chapter IVC). Passives are used at least once across the English frog texts by half of the children and all the adults. For example, several children at all ages except 3-year-olds describe the dog getting or being chased by the bees in passive voice (Section 3.1). There is a clear developmental increment in this respect. Only two 3-year-olds but nearly half the 4-year-olds and three-quarters of the 5-year-olds use passives. And full passives with an agentive *by* phrase, like those in (31) to (33) account for as many as one-third of these forms across age groups.

(31) *I think the dog's hiding so he doesn't get chased by that big deer.* [*E3g-3;8*]

(32) *The dog's getting chased by bees.* [*E4k-4;10*]

(33) *He got picked up by a reindeer.* [*E5f-5;8*]

Young children can thus use passives with different verbphrase types: negative (31), progressive (32), and verb particle (33). And they use them correctly and appropriately, with few structural errors, apart from an occasional incorrect auxiliary form, e.g., *the dog was be chasing by the bees* [*E4b-4;4*], or choice of preposition — *the boy got knocked over* ***from*** *all the bees* [*E5j-5;10*].

There are, however, age-related differences in use of passive voice. Children use *get* passives far more than *be* passives: 61% of all their passives compared with 31% of the adults' passive constructions. They use passives with dynamic change-of-state predicates, generally in the aspectually perfective past tense, whereas adults use them in other tenses, too — e.g., *the dog is intrigued by this beehive* [*E20c*], *the dog has been picked up by some antlered beast* [*E20b*]. In general, the adults use passives in a wider range of semantic and syntactic contexts than the children, including stative predicates like *be disturbed, be frightened* and nonfinite forms — e.g., *An owl pops out of the rock after* ***being disturbed*** [*E20e*], *The dog is not real happy about* ***being disturbed*** [*E20j*], and *The dog is, happily, rescued from* ***having his head stuck*** *in the jar* [*E20b*]. Moreover, the bulk of children's passive forms occur in the inchoative context of *getting stuck* to describe the dog's entry into the jar (Berman, 1993) and/or of *getting caught* to describe the boy's entanglement with the deer (Berman & Slobin, 1987). These two scenes, which represent accidental entrapments of the protagonists, and the two punctual verbs *stuck* and *caught*, account for 70% of all the passive constructions used by the children. (The chase scene noted in 3.1 accounts for most of the others.) That is, children treat passive as a means of encoding inchoative changes of state with a patient-oriented perspective. The adults, in contrast, use passive voice in describing different situations in the story, with a variety of predicates — e.g., *The hive was* ***knocked down*** *out of the tree by the dog* [*E20b, E20k*], *He got* ***bit*** *(in the nose) by a gopher* [*E20c, E20d, E20f*].

Our findings show passive forms to be available to children from a young age. Claims to the effect that English-speaking children avoid passives until quite late may therefore be biased by being confined the level of isolated sentences rather than relating to extended discourse (see Budwig, 1992, and discussion in Chapter IVC). But older narrators deploy passive constructions both more selectively and more extensively than children. They use them in more syntactic constructions, with more varied semantic predicate types, and with a more flexible range of narrative discourse functions.

3.3. Word-Order Alternations

Departures from the canonical or favored word order of a given language (Payne, 1987) are an important means of marking discourse-motivated shifts in perspective (Giora, 1986). English is a language with severe structural constraints on the ordering of elements, compared with languages like

Spanish or Turkish, in which word order is pragmatically rather than grammatically governed (Thompson, 1978). We therefore predicted that narrators across the age groups would adhere to SVO for ordering of major clause-level constituents, and to the canonical ordering of manner, then place, then time, in ordering adverbial elements following the main verb. And we assumed that the youngest **and** the most mature narrators might show relatively more variability of word order, the former because they have not yet mastered the grammatical constraints on the accepted ordering of elements, whereas adults are able to alternate word order for pragmatic purposes of how information is organized and presented in ongoing discourse.

The English frog-story corpus strongly confirms the favored, unmarked status of SVO word order. Contrary to our prediction, however, there are very few departures from this ordering of major constituents across the sample. Word order plays a marginal role in presenting different perspectives on a particular scene, or in changing topic focus in the ongoing narrative. Rather, narrators treat English as an extreme instance of a "right-branching" language, stacking additional information both within and across clauses **after** the initial subject-predicate core constituents (Van Valin, 1993). Across the texts, there is one single favored ordering of elements. This can be schematically represented as the surface string (C)SVX: "C" stands for markers of clause linkage or syntactic connectivity such as the coordinating conjunctions like *and, but*, markers of sequentiality like *then, later*, or markers of logical and temporal contingencies like *so, however*, and *while, because* (see Section 4); "S" stands for the grammatical subject — pronoun, lexical noun, or noun phrase; "V" is a lexical main verb — with or without preceding modals, auxiliaries, or aspectual verbs; and "X" stands for verb complements and adjuncts, including verb particles, direct objects, oblique objects, and particle or prepositional phrases in simple clauses and also nonfinite phrases and subordinate clauses which follow the main clause.

In line with our observation that the English texts contain almost no instances of "bare verbs," minimal well-formed clauses contain at least some elements to the right of the verb, e.g., *The frog got out* [*E3h-3;9*], *He sat down* [*E4a-4;0*]. Moreover, even the youngest children go beyond simple one-place elaboration of the verb — e.g. *He trying to put his whole body in the can* [*E3d-3;5*], *They find his frogs behind a log* [*E4d-4;6*]. The younger children make no errors in ordering of elements: Auxiliaries and modals precede the main verb, complements and adjuncts follow it in the correct order, subject-auxiliary inversion is correctly constrained in questions — for example, the same child produces both *Why is he putting the nose in the glass* with the correct subject-auxiliary inversion and *I wonder why he's not swimming out* with no such inversion in an embedded question [*E3g-3;9*]. Even the most juvenile text, in which the child makes errors of form in a number of grammatical systems — e.g., *He see them fall down, Owl in there, fall him down, He no don't like that [E3c-3;4]* — contains not a single error in word order. The constraint of SVX ordering thus appears strongly internalized by English-speaking 3-year-olds.[28]

The younger children never prepose elements — before the subject or between subject and predicate — to highlight or focus on a particular facet of a situation. This (C)SVX ordering produces a rather monotonous effect in the texts of the older children, particularly when accompanied by constant reiteration of the same "C" element (Sections 4.2, 4.3). The 9-year-old excerpt in (34) is typical of this stacking of clauses with the same internal ordering of constituents over and over again.

(34) *The boy jumped out of the window too, to get his dog.*
The dog started to lick him.
And, so then he went calling for the frog,
and he looked in a gopher hole,
and the dog - nah - the gopher came out
and the dog was chasing the beehive,
and then he knocked it down.
The dog knocked the beehive down.
And then, the boy climbed the tree,
he looked into this hole,
and then an owl came out of the tree,
and the boy fell down
and the bees started to chase the dog. [*E9g-9;9*]

Some children deviate from this consistent word order, particularly when they move out of the main narrative mode. One such strategy is by locative or temporal reference to the task itself. For instance, nearly every utterance of child [*E5j-5;10*] is introduced by expressions like *and on this page, and this time.* Another departure from (C)SVX order occurs when children move out of the descriptive or narrative mode to address a comment or query to the investigator, as in (35).

[28] On the other hand, several 3-year-olds (although almost no children from age 4 years and up) fail to provide a surface subject where it is grammatically required in the context of a lone clause. The same surface phenomenon, of clauses with finite, tense-marked main verbs, but no overt grammatical subject, increases from age 5 years up, particularly among 9-year-olds and adults. But with them it functions as a means of achieving narrative connectivity, not as a violation of sentence-level grammar (see Section 4.5).

(35) *And the boy's looking down the hole and calling in the frog, and the dog is looking at the bees. And then -* **What are those called?** [Investigator says: gophers] *A gopher comes out, bites his nose, and the dog's still doing that.* [*E5k-5;11*]

Another way of breaking up the otherwise uninterrupted chains of (C)SVX strings is by using direct speech for one of the protagonists, as in (36).

(36) *So in the morning, the little boy said "Where is my frog?"* [a few clauses later] *He says "Is that you, frog?" So they went to look. "Is that you in there, is it, is it?"* [*E5i-5;10*]

Such departures from (C)SVX order are commonest among 5-year-olds, suggesting they use it as a transitional device not required by either the younger or the older children. As noted, however, such word-order variations — engendered by a shift from a narrative to an interactive mode of discourse — are not found among the older narrators.

Nor is there much use of **inversion** for pragmatic effect. This is notable, considering that even the 3-year-olds can perform grammatically based inversions, as in the earlier examples of question formation. And older children occasionally use grammatical inversion in comparative constructions, too — e.g., *A boy got a new frog, and the dog was looking at it, and* ***so was he*** [*E9h-9;9*]. Across the English narratives, there are no more than three instances of pragmatically-motivated inversions.

(37) *And then ... and then, pow!* ***Over they went***! [*E3d-3;5*]

(38) *And they were coming to an - end, where the deer was bringing (them). And* ***down he went***! *"Help!" he cried. He went right into the water.* [*E5i-5;10*]

(39) *Out of the reeds* ***come some baby frogs*** *that obviously are the little baby frogs of his frog and his frog's wife.* [*E20j*]

(37) through (39) are instances of **locative fronting.** In the children's case, a locative particle *over* or *down* is preposed in a highly dramatic context (enunciated with high pitch and exaggerated intonation contours), whereas the adult preposes a locative prepositional phrase followed by a very marked, literary-sounding VS word order.

The forms in (40) and (41), like the example in (39), are **presentatives,** where a new object or participant is introduced into the narrative (see Chapter IVB). Thus:

(40) *And then they go in the water.* ***And behind that log*** *is frogs.* [*E5d-5;6*]

(41) *And they're looking over on the other side ...* ***On the other side*** *are two frogs.* [*E20h*]

Presentatives provide a context where languages with SV / VS alternation may prefer VS order (Chapter IIID), but where English narrators typically retain a surface SV order by means of the expletive subject *there*. Children make broad use of this construction from age 3 years, and they clearly distinguish this introducing, pleonastic subject *there* from the stressed locative use of *there*, as shown in (42) to (44).

(42) *There's a frog in there.* [*E3c-3;4*]

(43) *Cause there's a top on the thing right there.* [*E3g-3;9*]

(44) *He's seeing if there's honey in there.* [*E3j-3;10*]

One or two narrators in each age group use this construction with a verb in the participial form (see Table 2, Section 1.2.1), as a means of highlighting the presentative sense of existence or emergence, as in (45) to (48).

(45) *And see, there's a mouse coming!* [*E3f-3;9*]

(46) *And there's lots of bees coming.* [*E5e-5;8*]

(47) *Then there was a deer living behind the rock.* [*E9j-9;11*]

(48) *Cause there's a gopher looking out of his hole right now.* [*E20c*]

Once again, the major development in deployment of this form is not strictly structural.[29] Rather, use of *there* to introduce new entities into the narrative, and so depart from the strict SVX order we have observed for English, is increasingly preferred at specific points in the story. The 9-year-olds to some extent, and the adults very markedly, use expletive *there* at the outset of the narrative, to introduce the boy, the dog, and the frog as its protagonists, and at its resolution, remarking on the fact that when they look behind the log, *There was the frog, with another little lady frog and little frogs of his own* [*E9c-9;6*], or *They see that there was not only two happy frogs, but there is an entire family of little frogs there!* [*E20b*]. The younger children, in contrast, use *there* to describe entities shown in the pictures, or to mention novel entities and objects unrelated to their role in the story as a whole.

Another device for operating on simplex SV order in English is by means of the expletive or pleonastic subject *it*. This also shows an age-related change in function in the English narratives, but in a rather different way than presentative *there*. The younger English children use it as a pronominal, either deictically in relation to picture content, or as a neuter-gender pronoun referring to entities like the jar or the owl. From 4 years, children also use it as a impersonal or nonreferential pronoun, in copula constructions, e.g., *It was*

[29] Adults also use expletive *there* in syntactic contexts not found in the children's narratives: with a modal *He realizes there might be some danger involved here* [*E20e*] and introducing a relative clause *There's an owl in there who bumps him down to the ground* [*E20j*].

nighttime [*E4c-4;6*], *It wasn't as quiet there* [*E5b-5;2*]. Only older children and adults use expletive *it* with modal and affective predicates antecedent to a postposed proposition, e.g., *It turns out they're a deer's antlers* [*E9j-9;11*], *It seems they've raised this happy family* [*E20b*], *The frog feels that it's time that it can now get out and explore* [*E20f*]. This use of expletive *it* relates to an increase with age in use of modal and other devices for **evaluative** commentary (Chapter IIA). In English, this function is served by this particular construction, providing a form-function relation that is rare in the younger children's texts.

Word order can also be alternated by left-dislocation of topicalized nominals with a resumptive pronominal copy in the main clause, as in (49) and (50).

(49) *And poor Ralph, the whole beehive was chasing after him.* [*E9i-9;10*]

(50) *And then, the um - the beehive falls down. The dog, he probably knocked it down.* [*E20c*]

But these were the sole examples of this device across the English narratives.

In sum, then, although English has a variety of options for alternating perspectives, our narrators preferred to do this by alternating between agent-actor and patient-undergoer as surface subjects (Sections 3.1 and 3.2) rather than by varying the linear ordering of elements. The availability of alternations such as *The bees chased after the dog* and *The dog ran away from the bees* or between *The deer pushed the boy*, *The boy fell*, *The boy got pushed* and *The boy was pushed* enables English speakers to adhere to the standard SV(O) order of their basic clause structure, while at the same time expressing differing perspectives on the events and situations depicted in the story.

4. CONNECTIVITY

Here we are concerned with the way speakers link parts of their narrations to construct a unified, organized piece of text. These connections are minimally between one predicating clause and another — e.g., *He's getting out of the glass* ***so*** *he can run away* [*E3g-3;9*]; ***When*** *the boy and the dog were asleep, the frog jumped out of the jar* [*E5l-5;11*]; *The owl came out of its tree* ***and*** *scared the little boy* [*E9c-9;6*]. They can also be manifested across extended chunks of discourse, as in the following two excerpts.

(51) *Well, a boy got a new frog,* ***and*** *the dog was looking at it* ***and so*** *was he,* ***and then, while*** *he's sleeping overnight, the frog got out.* ***And when*** *he woke in the morning, he saw the frog was gone.* [*E9h-9;9*]

(52) ***So what happened overall is that*** *all the animals* ***that*** *they disturbed* ***looking*** *for the frog somehow, you know, chased the boy to the frog.* [*E20e*]

Overt markers of connectivity, like those bolded in (51) and (52), are typically clause-initial in a right- branching language like English, yielding the surface order CSV(X) noted in the preceding section.

Even the youngest children are able to link one utterance to the next, but this is motivated by the shift from one picture to another, rather than by demands of discourse connectivity. Older children chain **clauses** (as distinct from **utterances**) by temporal and causal stringing in sequence. Five-year-olds are, again, a transitional group, since some of them are quite adept at expressing connectivity at a local level of two or more clauses. Older children occasionally, and the adults quite often, use global, plot-motivated markers of connectivity which relate to the narrative as a whole — as shown in (52) by the prospectively introducing phrase *So what happened* combined with the generalizing term *overall.*

4.1. Development of Forms and/or Functions

Devices which express connectivity — in English as in other languages — can be described orthogonally in terms of form or function. For example, the forms *then* and *after* both express **temporal sequentiality**. However, syntactically, one functions to introduce a clause which can stand alone as in independent sentence, as in (53), the other is a subordinator which introduces a dependent clause attached to an associated main clause, as in (54).

(53) *Then the little boy climbed up the tree and said "Hello in there!"* [*E5f-5;8*]

(54) *After he and his doggie went to sleep one night, the frog got out of the jar and escaped.* [*E20i*]

The words *but* and *however* share the same adversative meaning, yet syntactically *but* is a coordinating conjunction which joins two main clauses, while *however* is a sentence-modifying connective in a higher register of style.[30] Compare the bolded forms in (55) and (56).

(55) *The dog tried running after the deer,* ***but*** *the deer kept running ahead, with the boy on his head.* [*E9c-9;6*]

(56) *The dog ... hopped onto the ledge,* ***but*** *∅ hopped out a little too far. ... The dog was plummeting to his fate,* ***but*** *luckily for the dog he was unharmed.* ***However*** *the boy was quite perturbed.* [*E20d*]

Similar forms are used as markers of connectivity across the English sample. However, the same forms function differently at different

[30] The corresponding subordinating conjunction *(al)though* does not occur in these English narratives.

developmental phases. This was shown by the distribution of nonfinite *-ing* verb forms earlier in this chapter. Young children use them ungrammatically, in lone clauses — e.g. *And he was - he getting out. And that - he floating off. Uh - sitting down* [*E3c-3;4*]; older children use them as grammatical complements of modal or aspectual verbs — e.g., *He started climbing up the rocks* [*E9f-9;8*], *He went calling for the frog* [*E9g-9;9*]; in more mature usage, they serve for **clause linkage** by grammatical subordination: in complements of perception verbs — e.g *They both hear something coming from behind the log* [*E20b*], *He felt someone playing with his horns* [*E20c*]; in noun modification — e.g., *The boy gets his nose sniffed at by some little animal living in the hole* [*E20b*]; and as adverbial clauses of circumstance — e.g., *He's looking all over his room, messing it up* [*E9l-9;11*].

Each language has its own particular forms for marking connectivity. For example, there is nothing exactly parallel to English participial and gerundive *-ing* in the other languages in our sample. Yet the language-particular forms for marking connectivity in the English frog stories reflect different levels of textual cohesiveness which apply across the languages we have examined. Three-year-old texts show mainly "utterance connectivity," stringing consecutive utterances in juvenile picture-description mode (Section 4.2); 5- and 9-year-olds demonstrate "grammaticized connectivity," sequential chaining of clauses which form pieces of a linearly unfolding narrative (4.3); mature texts achieve "thematic connectivity," constructing chunks of discourse subordinated to an overall plot-motivated theme (4.4).

4.2. Juvenile Utterance Connectivity

Three-year-old English texts fail to provide any explicit marking of connectivity between one clause and the next much of the time. Nearly half (43%) their clauses are "free" (Dromi & Berman, 1986), in the sense that they are neither lexically nor syntactically related to the following or preceding utterances. The text in (57) shows how such "lone utterances" follow one after another, with investigator prompts in square brackets.

(57) *Bees aren't supposed to come around there. They're coming off of the tree! Off of the tree. These are bees right here.* [Yeah, that's right.] *That's what they eat all up. They like to eat those!* [Right, right you are.] *The dog wants to eat it.* [That's right. What about here?] *The mouse wants to eat the boy.* [Uhhuh. Here, here we go.] *He saw something in the tree! Bees in there!* [Yeah, look!] *A thing come out of there, a dinosaur!* [*E3h-3;9*]

The large proportion of "free-clause utterances" in the younger children's texts relates to their need for constant verbal prompting and their strong reliance on interactive comment. Expressions definable as "interactive introducers" account for nearly one-third (30%) of all connectivity markers in the 3-year-old texts, but are used by only two of the 5-year-olds, and not at all by the 9-year-olds or adults. These interlocutor-addressed comments, lying outside either a narrative or descriptive mode of discourse, differ from one child to the next. One 3-year-old starts out with *Look! Look at ..., Look what happened* most of the time [*E3a-3;1*]; another introduces around half his utterances by exclamatory *Look what happened!* [*E3f-3;9*]; a third [*E3g-3;9*] hedges over one-third of the utterances by a modal or other mental predicate, including *I wonder, I think, I guess, I hope*; and of the two "interactively" oriented 5-year-olds, one starts numerous utterances by modal *What if* [*E5a-5;0*], the other initiates most utterances by spatial deictics like *On this page, in this picture* [*E5j-5;10*].

Among 3-year-olds, then, markers of discourse connectivity typically serve to inform the interlocutor that "more is to come," either another utterance and/or a new picture. And children select their own favored strategy to signal the progression of their narration. Three-year-olds make little use of standard lexical and grammatical means of clause linkage. Subordinating conjunctions, temporal *when* and *while*, and causal *(be)cause* are used only occasionally, by only half the children. Even the one child (with the highest level of language use among the English 3-year-olds) who uses *because* quite liberally is not subordinating two semantically related events in the unfolding plot, as shown in (58).[31]

(58) *Uh oh, owl again. I think that's the baby owl. I didn't see it* ***cause*** *he has a little nose right there. Uh oh,* ***cause*** *I think his dog is running away,* ***cause*** *I can see his legs are moving.* [*E3g-3;9*]

Coordination is also used in a nonstandard way by 3-year-olds. Around one-quarter of all their "linked" or nonfree clauses are initiated by the word *and*, the only coordinating conjunction used by most of the younger children. (One 3-year-old also uses *so* and another uses an occasional *but*). But *and* only occasionally entails genuine clause linkage by syntactic conjunction with same-subject ellipsis, as in (59).

(59) *I hope he doesn't fall down* ***and*** *∅ crack his head with all the glass.* [*E3g-3;9*]

Rather, *and* serves 3-year-olds predominantly as an utterance-initial discourse filler, with no semantic or thematic motivation other than to indicate that "more is still to come," as in (60).

[31] This use of *because* to express reasons is its earlier function in children's conversations (Kyratzis, 1991; Kyratzis, Guo, & Ervin-Tripp, 1990).

(60) *A owl's flying. Snow in there.* ***And*** *the boy tried to climb up it.* ***And*** *he did.* ***And*** *the dog is going away. A deer trying, jumping over,* ***and*** *a dog's running away with the deer.* ***And*** *the boy on top of the deer.* [*E3d-3;5*]

Markers of temporal sequentiality like *then* and *after that* are also rare among the the 3-year-olds. Only two 3-year-olds initiate clauses with the words *and then*, and they do so for different reasons: as a deictic marker for shifting from one picture to another, like bare *and*, to indicate that another utterance is about to be produced, or more felicitously, to mark the next event in a series of temporally sequenced events. These alternatives are shown in (61), which reflects a transition between juvenile utterance linking and more mature sequentially marked connectivity.

(61) ***And****, um this dog is looking into the bowl.* ***And then****, the frog is still in there.* ***And now*** *look what happened!* ***And now*** *he got away.* ***And then****, look what happened! He tried to go in ...* ***And then*** *he licked the boy and he was mad!* ***And then*** *some bees came out of the tree.* ***And then*** *he tried to get the bees, but he couldn't.* [*E3f-3;9*]

The sequential marker *then* occurs alone, without a prior *and*, only **once** across the younger children's texts. (62) is from the concluding clauses of a short narration.

(62) *He fell off.* ***And*** *he fell off of - in the pool.* ***And*** *there's no head!* ***Then*** *there's a frog.* ***See****, he caughted ... a frog.* [*E3e-3;8*]

This excerpt reflects how different clause-initial elements — interactive *see*, utterance-introducing *and*, and sequential *then* — function as incipient markers of connectivity in early extended discourse. By and large, as noted, the 3-year-old texts simply juxtapose bare utterances strung together in ongoing picture description, or else they overtly initiate fresh utterances by some signal that they have more to say.

4.3. Grammaticized Sequential Chaining

The middle phase of connectivity marking is strongly "additive" in character. At this phase, children tend to explicitly mark each clause as connected to what follows in a chronologically sequenced chain of events. This is reflected in the low proportion of "free" clauses among the 5- and 9-year-olds: Over 85% of all the clauses they produce carry overt marking of a syntactic, semantic and/or thematic relation to the preceding or following clause (compared with less than half the 3-year-olds').[32] Many of the 5- and 9-year-old clauses start with the conjunction *and* (71% and 68% respectively compared with only 40% of the 3-year-olds' — utterances, if not clauses). This reveals a similar functional development in English as in other languages. Among the older children, it serves a dual purpose: between clauses with shared subjects as a means of syntactic coordination (Section 4.5), and with same or different subjects as a means of indicating that another event is about to be described.

The single most favored connective device among these children is *and then*, which is used by every single 5- and 9-year-old. *And then* is evidently a criterial marker of narrative construction in English. It marks a clear distinction between the 3-year-old and 5-year-old texts (26% of the latter's clauses), it falls off somewhat among the 9-year-olds (15% of their clauses), and is marginal among the adults. Most of the adults do not use it even once, a quarter use it no more than once, while the narratives of those two adults who use it more widely (though still more sparingly than the children) are in many other respects also quite similar to those of the 9-year-olds. This "middle-phase" marker of sequentiality contrasts with options available to children in the same age range in the other languages — for instance, the use of expressions meaning *afterwards* and *after that* in Hebrew (Chapter IIID). Not a single English text contains the sequential conjunction *afterwards* or *after that* — although one child does (mis)use *after* in this sense, in (63).[33]

(63) *And then he put his boot on his head, and then his other boot on his foot.* ***And after*** *went out calling for the frog. And then the dog fell out and the boy jumped out.* [*E5e-5;8*]

Instead, half the 5-year-olds and most of the 9-year-olds use the sequential marker *then* without any prior *and*, as in (64).

(64) ***And then*** *the little boy hollered in a hole,* ***and then*** *a mole came out.* ***Then, then*** *the dog barked up at the hive.* ***Then*** *it shoo - he shook the tree.* ***Then*** *they fell down.* ***Then*** *then the dogs got -* ***Then*** *he, the little boy, climbed up the tree and said ...* [*E5f-5;8*]

Several older children rely very widely on these chaining devices, initiating most of their clauses with *and* or *then* alone or in combination. Two highly typical 9-year-old texts which resort to this device are excerpted in (65) and (66).

by subordination, with little "chaining" overall.

[33] This contrasts with mature use of *after* as a subordinating conjunction illustrated in Section 1.2.1.

(65) ***Well,*** *the boy, he finds a frog* ***and*** *... he's sharing it with his dog.* ***Then*** *he goes to sleep* ***and*** *the frogs gets away.* ***Then when*** *the boy wakes up, he finds that the frog's gone.* ***Then*** *they're looking for him.* ***Then*** *the dog, he - he gets stuck in the bowl,* ***and*** *they're - he's looking for him up there.* ***And then*** *... the dog falls,* ***and*** *he breaks the glass,* ***and*** *the boy gets mad at him.* ***And then*** *he goes looking for him in the woods.* ***And*** *he's going down, like in a hole,* ***and*** *the dog's looking in a tree, over here.* ***And then*** *he knocks the beehive over,* ***and then*** *the boy's looking in a crack in the tree,* ***and then*** *the bees run over it ...* [*E9b-9;3*].

(66) *The boy's looking at the frog,* ***and*** *- the dog's smiling down.* ***And then*** *he's going to bed,* ***and*** *the frog is sneaking out.* ***Then*** *it's morning* ***and*** *the frog is gone. He's looking all over his room,* ***messing*** *it up.* ***And then*** *the dog gets caught in the frog's bowl,* ***and then*** *the frog jumps,* ***and*** *the bowl breaks,* ***and*** *the boy gets mad at his dog,* ***and*** *his dog licks his face.* ***And then*** *they go out looking for the frog* ***and*** *the dog gets interested in a beehive,* ***and*** *∅ gets stung on the nose.* ***And*** *then the beehive breaks* ***and*** *the bees are coming after the dog,* ***and*** *he's looking in an old tree ...* [*E9l-9;11*].

These children increasingly use other devices for connectivity, mainly subordinators like *when* in (67), nonfinites like *messing* in (66), and a somewhat wider range of introductory markers of sequentiality. These are bolded in the excerpt in (67), taken from the most sophisticated of the English children's texts from the point of view of connectivity marking.

(67) ***Once*** *there was a boy* ***who*** *had a pet frog and a dog.* ***And that night*** *he was watching it,* ***and when*** *he went to sleep, the frog got out of his jar* ***and*** *∅ ran away.* ***The next morning, when*** *he woke up, he saw that the frog was gone.* ***So*** *he put on his clothes, and the dog, acci - accidentally got his head stuck in the jar* ***which*** *the frog was kept in. They called out the window* ***and*** *the dog fell down ...* [*E9a-9;1*]

But the children use such devices sparingly. They obviously have grammatical command of various forms of coordination and subordination as well as other types of clause linkage. And they can doubtless use them in complex sentences as well as isolated utterances in interactive discourse. Yet they have difficulty in deploying them felicitously to organize longer stretches of integrated ongoing discourse.[34]

[34] This might not apply to schoolchildren at the same age as these, when required to give the same accounts in **writing**.

4.4. Mature Thematic Chunking

The adult English texts together can be taken to represent a relatively complete repertoire of connective devices for oral English narratives, even though no one such text illustrates a single, canonical endstate model in this, as in other respects (Chapter IIA). This section considers markers of connectivity which occur in several of the adult narratives and which afford relevant contrasts to those of the children.

First, in terms of linear ordering, adults use connectivity devices in clause-medial and clause-final position, in contrast to the children's tendency to restrict them to the introducing slot in the frame CSV(X). This is illustrated by different kinds of **sequentiality** markers scattered across the adult texts — e.g., *And the dog **eventually** does fall, And he **finally** got the jar off his head* [*E20c*]; *The bees are **now** coming out in full force* [*E20f*]. Adults also use far more evaluative and epistemic modal expressions, in the form of clause-internal sentence modifiers which relate one event or state to another — e.g., *He's [=frog] **apparently** gone* [*E20k*].

Adults stack connectivity devices across chunks of clauses, creating longer stretches of event packaging than noted among the children. These yield tightly woven texts constructed of units that are highly cohesive in both syntactic organization and thematic relevance, as illustrated in the following two excerpts.

(68) ***In the morning** the boy wakes up **and** ∅ sees that the jar is empty. ∅ Decides to look in his big hiking boots, his big wading boots, **to see if** the frog has taken up new quarters for the evening. **But** he hasn't ∅. He's **apparently** gone. **In the meanwhile**, the boy's dog, Helmut, puts - sticks his head into the glass jar, **trying** to get the scent of the frog. The boy is **so** preoccupied with his frog **that** he doesn't notice.* [*E20k*]

(69) ***After a while**, the boy and his dog went out into the forest **in search of** their frog. They looked **everywhere** - in the woods and even in the gopher holes. The dog, **being** the rambunctious animal **that** he is, found a beehive **and** ∅ decided to have some fun, **while** the boy, **searching** frantically for the frog, was bit in the nose by a gopher.* [*E20d*]

These excerpts show that mature narrators can organize their texts from a thematically-motivated perspective, and they use a variety of expressive options for this purpose. These go far beyond the coordinating and subordinating devices of more linearly sequenced texts, including nonfinite participial and prepositional-phrase adverbials, verb gapping, and noun phrase ellipsis. These forms are also found in the children's narratives, but only occasionally, across subjects and texts. Moreover, children use them with a more local scope of application, rather than over large stretches of hierarchically

organized pieces of discourse.

4.5. Null Subjects as a Linking Device

The occurrence of subjectless clauses in the English texts reveals a development which links knowledge of syntax with the narrative function of connectivity, and provides a further example of a single surface form serving different purposes at different developmental phases. In a sentence-based characterization, all simple clauses in English must have a surface grammatical subject, since English is a language which prohibits null subjects (Hyams, 1987). Yet in fact, subject ellipsis is found across the English frog stories, occurring in finite clauses with tensed verbs in nearly all the preschool and in several the 9-year-old and adult texts. Among the 3-year-olds, subjectless sentences occur in one of two contexts: as elliptical isolates, which may appear ungrammatical (70) or as elliptical responses to investigator queries (71) — represented in square brackets.

(70) *Here, bong bong! ∅ can't get out right here.* [Child points to picture of hollow log.] *∅ go in there, ∅ too big right in there.* [*E3c-3;4*.]

(71) *What's the dog doing there?* [Well, I don't know, what do you think?] *∅ running away ...* [Wait, let's slow down a bit. What about the dog?] *∅ climbing up the tree.* [*E3bg-3;4*]

Juvenile usage of null subjects is thus either ungrammatical or interactive, suited to conversational rather than narrative mode.

In contrast, children in the middle age range use null subjects for syntactic linking of strings of clauses with a shared surface subject. This is usually grammatically governed by elision rather than pronominalization of the repeated subject of coordinated clauses — e.g., *He climbed on a big rock and ∅ called out for him* [*E5b-5;2*]; *An owl comes out and ∅ knocks him down* [*E9d-9;6*]. Only one of the 3-year-olds has such phrasal conjunction, compared with nearly all the 5- and 9-year-olds.[35] Five- and 9-year-olds also use subject elision under conjunction without any surface marker of coordination, as in (72) to (75).

(72) *And then they woke up, ∅ decided it wasn't there.* [*E5f-5;8*]

(73) *And the boy's looking down the hole, and ∅ calling in the frog, and the dog is looking at the bees. And then a gopher comes out, ∅ bites his*

[35] Adults also conjoin clauses with shared-subject ellipsis, but they use the coordinators *or* and *but* as well as *and* — e.g. *The frog feels it can now get out **and** ∅ explore or ∅ go home* [*E20f*]; *Looks like he's either stunned **or** ∅ is just very frightened and ashamed* [*E20b*]; *The little doggie doesn't appear too concerned **but** ∅ sticks his nose in the little jar anyway* [*E20j*].

nose, and the dog is still doing that. [*E5k-5;11*]

(74) *And um - then the boy wakes up, ∅ puts his clothes on, and ∅ goes outside.* [*E9d-9;6*]

(75) *And the dog fell out of the window. ∅ Broke the jar. And the boy ...* [*E9f-9;8*]

Again, children use subject ellipsis as a local grammatical device, whereas mature narrators, in English as in other languages, employ it as a means of organizing chunks of discourse with a shared topic — as in the excerpts in (76) and (77).

(76) *Um, there's this little boy sitting in his room. ∅ has a pet frog in a jar, and a dog is trying to get into the jar. ∅ wants to be playing with the frog.* [*E20h*]

(77) *The boy sees the boulder, ∅ follows the owl, and ∅ climbs up on the boulder all the while yelling the frog's name. ∅ Leans against what he thinks are ...* [*E20k*]

Comparison of two quite distinct connectivity devices — use of *-ing* forms for nonfinite clause embedding (Section 4.1) and null subjects for topic maintenance (this section) — reveals a similar developmental progression. They start out being used in unconventional, nonfelicitous ways; later they occur more sporadically, but show signs of emergent mastery of grammatical devices; subsequently they function as grammatical means for achieving text connectivity at the level of individual pairs of clauses; and eventually they are used with a thematic, more global motivation.

5. A NOTE ON RHETORICAL DEVICES

A further example of the "same form, different function" phenomenon is provided by use of the lexical item *now* in these texts. It occurs most frequently in the texts of the youngest children (five of the 3-year-olds and three 4-year-olds, but only once in the 5-year-old texts and never in the 9-year-old texts), and is again quite common among the adults, half of whom use *now* several times in their narratives. Among the 3- and 4-year-olds, it has a **deictic** sense, either in an interactive context, e.g., *Now look what happened to the dog* [*E3a-3;1*] or *Now let's turn the page* [*E3j-3;10*], or in a picture-description mode, moving from one picture to the next — as in the case of one 4-year-old, over a third of whose clauses start with *now* [*E4l-4;11*], e.g., *Now there's bees going around, Now the boy's stuck on a deer; Now there's the frogs*, and when asked by the investigator "How about this one?," the child replies *Now he's climbing down. Now they have little baby frogs.* For some of the preschoolers, *now* is an immature chaining device, and they intermix *and now* with *and then* — e.g., when a 5-year-old says ***And then** the bees'*

thing fell down. ***Now** the dog's running and the boy got knocked over* [*E5j-5;10*]. The adults, in marked contrast, use *now* in sentence-medial or final position nearly half the time — e.g., *But it's all okay now* [*E20e*], *Consequently the dog feels that it can now get out and ...* [*E20f*], rather than as a mechanical means of stringing utterances deictically, or of chaining clauses sequentially. Besides, adults do not necessarily use the term as an isolate; they typically embed it within a context which is lexically and/or syntactically more elaborated, e.g., *Right now, in the beginning of the story, the boy and his dog are ...* [*E20j*]; *Now, with the frog busily on his way, ...* [*E20e*]; *The boy is also in danger now that the owl has been disturbed* [*E20e*]. For them, *now* serves a discourse- motivated purpose, to mark narrative sequentiality in the sense of "at this point in the story" — e.g., *The dog gets the beehive down and now realizes that ...* [E20e] or to indicate a logical inference — as in *Now the boy has been picked up by some antlered beast ...* [*E20b*]. Unlike for the children, the word *now* is not so much a deictic anchor as an anaphoric means of marking different kinds of narrative connectivity.

A similar pattern is manifested by use of the rhetorical device of **repetition** by the English narrators.[36] The youngest children repeat lexical items mainly because of problems of lexical retrieval and disfluencies in the online production of extended discourse. Children in the middle age range use repetition to express semantically-motivated aspectual distinctions. For example, a combination of protracted and iterative aspect is expressed by a 5-year-old who describes the dog's involvement with the beehive as follows: *He was playing with the bees. He was playing with the bees again, he was trying to kid them* [*E5b-5;2*]. This is then extended to discourse-based reiteration several clauses (and pictures) later, when the child repeats *And then the dog was **still** trying to kid the bees ....* Another 5-year-old makes similar use of repetition as a rhetorical device, thus: *And then he called for his frog again. He called in a hole, and the dog called in the beehive* [*E5-5;11*]. Adults' use of repetition has similar motivations, but they are more clearly relying on the deliberate rhetorical device of **syntactic parallelism** combined with semantic alternation. For example, two participants in the same scene are counterpoised as: *The gopher seems angry and the boy seems hurt* [*E20c*]. (78) shows a combination of all the different uses of repetition in a mature narrative.

[36] Preliminary analyses of this device in other languages indicates that these findings may not be peculiar to English. But it is particularly noteworthy in English, since repetition as such is not an approved rhetorical device in the way that has been noted for Semitic languages (Berman, 1979b; Williamson, 1978).

(78) *The boy is looking down a hole to see if the frog is in the hole* [=disfluent lexical repetition], ***and the dog is intrigued by this beeehive.*** *The boy gets his nose either bitten or sniffed at by some little animal living in the hole.* ***And the dog is still intrigued with the beehive*** *... . Now the beehive has been knocked down out of the tree by the dog,* ***and the bees are intrigued with the dog,*** *while the boy is sitting in the tree ...* [*E20b*]

Development in the use of forms in the English texts is thus revealed in several interrelated ways over a range of expressive devices, syntactic constructions, and lexical items. Children learn to use them in a wider range of syntactic constructions, in a richer variety of lexical and semantic contexts, and with more globally organized discourse-based motivations.

6. SUMMARY AND CONCLUDING REMARKS

This chapter concludes — like the four which follow in this part of the book — with a short summary of the main trends in the development of linguistic forms along the different dimensions selected for crosslinguistic analysis and comparison (Chapter IIIo): tense/aspect, event conflation, perspective, and connectivity. In this chapter, additionally, we note in concluding some more general themes which emerge very clearly from analysis of these dimensions in the frog stories as told in English, the language in which this book is written.

6.1. Tense/Aspect Marking

Three-year-olds are able to use both present and past tense correctly at the level of the individual clause, although the youngest children occasionally make morphological errors in past-tense forms, or omit the third-person suffix in present tense. However, as many as a third of the English preschoolers fail to anchor their narrations in either present or past tense, with 8 out of the 12 3-year-olds using what we characterized as a mixture of present and past, in a rather unsystematic fashion. All the 9-year-olds anchor their narrations clearly in either present or past tense, reflecting adherence to a consistent temporal frame of narrative. Most children with a clearly dominant tense prefer the past, but the English-speaking adults favor present tense in this particular narrative setting.

As for grammatical aspect, perfect forms are rare across the children's texts, though adults do use present perfect quite commonly in present-tense anchored texts. This reflects the late acquisition of present perfect, and the low reliance on perfect forms in general in American compared with British English or, as we shall see, with a language like Spanish. In contrast, progressive forms are extremely common, being used by young children as a basic present tense, and by older narrators increasingly for the aspectual and

backgrounding functions associated with past progressives in English.

Lexical aspect is rarely expressed by particles in the English frog stories, while use of aspectual verbs such as *start* for inception is found mainly among the older children and adults. Aspectual adverbs are also quite rare in the English texts, except for quite common use of *still* which is used to mark protraction more commonly than verbs like *go on* or *keep on*. In general, the English corpus lacks rich elaboration of temporal contours beyond the distinction between simple and progressive markings on the verb.

6.2. Event Conflation

The richest devices meeting this function in the English texts are verbs of movement which incorporate the expression of **manner** within the verb stem, e.g., not only *fall* or *drop* but also *swoop* and *plummet*, and locative particles expressing the source and/or goal of a movement, e.g., *knock something down off a tree*. These devices are richly used from the youngest age groups, although they increase in variety and precision with age, culminating in mature packaging of manner, source, and goal within a single clause, e.g., *deposits the boy off the side of the ravine into the creek*. The younger children, in contrast, while paying considerable attention to locative contours in general, fail to conflate more than one facet of an event within a single lexical or syntactic package.

6.3. Perspective

The English texts rely relatively heavily on use of passive constructions to present a nonagentive perspective on an event, with children favoring *get* passives (although even the 3-year-olds occasionally use *be* passives), to express an inchoative, patient-oriented perspective. Adult use of passive voice occurs with a wider range of predicate types (states as well as changes of state) and in more varied narrative settings.

The English frog-story sample is strongly SVO in orientation, with little variation of word order for marking a change in perspective. Even the youngest children generally elaborate the predicate beyond a bare verb, typically by means of particles or prepositional phrases, so that the clauses out of which the English texts are constructed quite generally have an SVX structure. The major developmental trends are in the tendency of the younger children to precede nearly every clause by some utterance-initial element such as *and* or *and then*, with older children increasingly making use of expletive *it* as a means of varying this stereotyped linear ordering of information, for example with epistemic modals like *it seems* or *it turns out*.

6.4. Connectivity

The youngest children merely string utterances together without any overt markers of interclause connectivity, or else they pick on a particular, often idiosyncratic element to mark each ensuing utterance, such as interactive *Look!* or *I think* or more typically *and* used as an empty discourse filler. The 5- and 9-year-old English narrators, in contrast, rely heavily on *and then* as a means for chaining one clause after another in narrative sequence. Only adults use a variety of linking devices, including nonclause-initial markers of sequentiality such as *finally* or *eventually* as well as nonfinite participial clauses for embedding some events or states as backgrounded to others. Similarly, adult English speakers occasionally use null subjects for topic elision in a discourse-motivated fashion, whereas 5- and 9-year-olds use same subject elision as a grammatical device in conjoining, in a way the 3- and 4-year-olds appear unable to do in our English sample.

6.5. Concluding Remarks

Our findings for the development of forms in the (American) English frog stories highlight two themes central to this study. First, the youngest children in our sample, aged 3 to 4 years old, can in some sense be said to "know" the bulk of the forms analyzed in this chapter. Yet this knowledge is only partial, since with age, these same forms take on different functions within the context of an extended narrative text. This development applies to forms from different linguistic domains, including: a verbal inflection like the suffix *-ing* as an unmarked immediate-present tense, marking progressive aspect, in verb complement constructions, and as a nonfinite adverbial subordinator; closed class function words like the prepositions *in* or *after*, which progress from static and dynamic locative to temporal marking, to adverbial use with nonfinite verbs and abstract derived nominals; a syntactic construction like passive voice, which develops from being used with change-of-state situations to marking shifts in narrative perspective; and subject ellipsis, initially symptomatic of ill-formed simple-clause construction, later serving for clause-linkage through syntactic coordination, eventually to achieve discourse connectivity through a shared discourse topic.

A second theme affirmed by the findings for our English corpus relates to the development of narrative structure and discourse abilities in general (Chapter IIA). The texts of the youngest children in our sample manifest considerable individual variation and idiosyncratic choice of discourse mode. They are largely interactive in tenor, and they combine a fair command of lexical and grammatical forms with difficulty in constructing coherent, well-organized extended texts. Some 4- and 5-year-olds narrations are very similar to those of 3-year-olds, whereas some 5-year-olds tell stories much like

school-age 9-year-old children. The latter have well-established command of grammatical constructions and an extended lexical repertoire, and they are familiar with the demands of the narrative mode and plot construction. But their texts tend to be stereotyped, describing, generally in past tense, one event after the other in a linear chaining of clauses from onset to resolution. The adults, in contrast, make use of more expressive options, and they reveal individual predispositions in choice of rhetorical style. We noted that younger children's texts include a large proportion of isolated clauses, whereas older children tend strongly to stack clauses linearly. Adults use both expressive options: The text of E20h consists mainly of isolated simple clauses, with occasional coordination or use of nonfinite verb forms; that of E20f in contrast manifests heavy "chunking," with only some 15% syntactically isolated clauses. Some of the adult texts are similar in most respects to the straightforward accounts of the 9-year-olds (e.g., E20a); others provide long and elaborate, highly detailed narrations with higher register items and self-consciously literary usages (E20c, E20f); yet others are short, concise, almost abbreviated accounts with plot summations, generalizations, and lexical or grammatical ellipsis (E20d, E20i).

In sum, the English texts are peculiarly English in some ways, yet they share features noted across the languages in others. The same duality emerges in the following chapters, which analyze linguistic forms in the narratives of children and adults in four other languages.