LEARNING TO TALK ABOUT MOVEMENT THROUGH TIME AND SPACE: THE DEVELOPMENT OF NARRATIVE ABILITIES IN SPANISH AND ENGLISH

DAN I. SLOBIN
University of California at Berkeley

AURA BOCAZ
Universidad de Chile

Narratives were gathered from Spanish- and English-speaking children and adults in response to a pictured story. Child subjects ranged in age from 3 to 11. Comparable samples were gathered in Spain, Chile, Argentina, and the United States. The data were analyzed in terms of the acquisition of grammatical means for expressing aspect, processes and states, event phases, and motion. It was found that children acquiring Spanish in all three countries quickly mastered the range of verbal aspectual inflections. Spanish grammar seems to orient children towards conceptions of the boundedness and extension of events in time. Differences between the verbal systems of Spanish and English seem to lead Spanish-speaking children to be more explicit about states and English-speaking children to be more explicit about processes and movements through space. In all four countries, school-age children learn to flexibly use grammatical devices in the construction of coherent narrative. It is suggested that, in acquiring a mother tongue, one adopts a particular sort of verbalized orientation to experience, as embodied in the set of grammatical options provided by the language.

INTRODUCTION

The grammar of every language provides speakers with a set of options for encoding characteristics of events in time and space. Although all human beings probably EXPERIENCE beginnings and endings, duration, and movement in similar fashion, languages differ in terms of their VERBALIZED ORIENTATION to experience. This can be seen most clearly in the obligatory distinctions that are marked on verbs and in the set of specialized verbs and inflections for marking perspectives on time, place, and manner. In the Spanish past tense, for example, one is obliged to consider an event from an external perspective (perfective) or an internal perspective (imperfective), presenting it as a bounded entity (e.g., *Juan habló* 'Juan spoke-PFV') or an entity with extent or iterativity (e.g., *Juan hablaba* 'Juan spoke-IFV').[1] While the simple English past tense is appropriate for encoding *John spoke with Mary yesterday, John spoke with Mary every day,* and *John spoke Spanish with Mary*, in Spanish one is obliged to distinguish between *Juan habló ayer con María* 'Juan spoke-PFV yesterday with María', *Juan hablaba con María todos*

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[1]The following abbreviations are used in this paper: IFV = imperfective, PA = past, PART = participle, PF = perfect, PFV = perfective, PG = progressive, PR = present, PREP = preposition, REFL = reflexive.

los días 'Juan spoke-IFV with María every day', and *Juan hablaba español con María* 'Juan spoke-IFV Spanish wih María'. Or, to take an example from movement through space, Spanish prefers to use verbs that express DIRECTIONALITY (e.g., *entrar* 'enter', *salir* 'exit'), while expressing manner of movement with separate verbs (e.g., *correr* 'run', *volar*, 'fly'). English, by contrast, prefers directionless verbs of manner (e.g., *run, fly*) with particles indicating directionality (e.g., *in, out, to, from*). Compare: *El perro salió de la casa corriendo* 'The dog exited from the house running' and *The dog ran out of the house*.

One would not want to claim that mental images or nonverbal representations of events differ for English and Spanish speakers. However, there seem to be clear differences in the ways in which one's thoughts are mobilized, moment-by-moment, for purposes of speaking in one language or another—what Slobin has called "thinking for speaking" (1987). Children, in acquiring a mother tongue, must learn to filter their conceptions through the set of options that are codified in the grammar. In this study, we explore some of the ways in which Spanish- and English-speaking children differ in the ways that they talk about the same events. We will see that, already in the preschool years, children show that they are sensitive to particular ways in which the mother tongue codifies experience.

METHOD

The research reported here is part of a larger study that was designed to collect comparable speech samples from children and adults across a wide range of languages. We asked adults and children of ages 3-11 to narrate a picture storybook that presents a clear plot with no verbal text. This method allows us to compare the ways in which speakers of different ages, and speaking different languages, talk about the same events. The overall study was carried out in the United States, Spain, Germany, Israel, and Turkey. More recently, Aura Bocaz, of Universidad de Chile, has collected comparable narratives in Chile and Argentina. The focus of the present report is a comparison between Spanish and English, and, within Spanish, between Peninsular, Chilean, and Argentinian varieties.[2]

The picture book, *Frog, where are you?* (Mayer 1969), consists of a series of 24 pictures. The action centers on a boy whose pet frog has escaped. The boy and his dog go searching for the frog in a forest, encountering various animals and undergoing a series of adventures before finally finding the frog. The plot is rich in causal and temporal sequences, movement from place to place, surprises, and switches of attention between the overlapping endeavors of the boy and the dog. It is a useful stimulus for expressions of tense, aspect, causality, movement and location.

In Spain and the United States, data were gathered from five age groups: 3, 4, 5, 9, and adults, with 12 narrators in each group.[3] In Chile and Argentina, there were seven age groups: 3, 4, 5, 7, 9, 11, and adult, with 12 narrators in each group. The narrator was presented with the picture book and told: "This is a story about a boy, a dog, and a frog." He or she was then asked to look through the book silently, page-by-page, in order to become familiar with the plot. The investigator then opened the book to the first page, asking the narrator to "tell the story." In order not to bias the form of telling, prompts were given without verbs (e.g., "and?...," "what next?"). The texts were taperecorded and transcribed clause-by-clause, where clause was defined as a predicate containing a verb. For example, the following English sentence was divided into four clauses for purposes of analysis: *They walk along / until they find a hole / into which the boy peers / looking for the frog.* The number of clauses in the child stories ranged from a lower bound of 20 in the 3-year-olds to an upper bound of 102 in the 11-year-olds.

RESEARCH AIMS: TENSE AND ASPECT

Aspectual distinctions. Of all the languages in our crosslinguistic sample (Spanish, English, German, Hebrew, Turkish), Spanish has the most elaborated tense/aspect system. It shares with English a perfect and a progressive in past, present, and future tense (*había corrido* 'had run', *ha corrido* 'has run', *habrá corrido* 'will have run', *estaba corriendo* 'was running', *está corriendo* 'is running', *estará corriendo* 'will be running'), along with a simple present (*corre* 'runs'). However, unlike English, Spanish also makes a perfective/imperfective distinction in the past (*corrió* 'ran-PFV', *corría* 'ran-IFV'). This distinction intersects with the past progressive, allowing for a distinction between imperfective and perfective auxiliaries that cannot be expressed in English (*estaba/estuvo corriendo* 'was-IFV/was-PFV running'). (For a full presentation of the Spanish verbal systems, see Bull 1960.) One aim of the study was to determine the development of these systems in child language, with the expectation that Spanish-speaking children may take considerable time in acquiring the full range of distinctions. A further aim was to explore possible differences between the three varieties of Spanish and the influence of these differences on acquisition.

States and processes. We were also interested in the contrasting ways in which Spanish and English express notions of state, process, and motion. In an insightful analysis, Leonard Talmy (1985) has provided a typological framework for "lexicalization patterns" —that

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[3]Only six adult narrations have been analyzed from the Spanish sample.

is, the systematic relations in language between semantic elements and surface forms. Consider the relation between states and processes, taking body posture as an example. There are three basic notions: (1) to be in a posture, (2) to get into a posture, and (3) to put someone into a posture. In English, a simple verb expresses the first notion, while the remaining notions are marked derivatively: (1) *I lay there*; (2) *I lay down*; (3) *I laid the child down*. In Spanish, by contrast, it is the third notion that is expressed by a simple verb, while the other two are derived: (3) *Acosté al niño* 'I-laid-down the child'; (2) *Me acosté* 'myself I-laid-down'); (1) *Yo estaba acostado* 'I was laid-down'. Talmy notes that this pattern is used not only for posture, but is a general feature of languages of various types for expressing (1) to be in a condition, (2) to enter into a condition, and (3) to put into a condition (causative). He cites, as an example, the conditions of water: (1) condition: *El agua estaba congelada* 'The water was frozen'; (2) inchoative: *El agua se congeló* 'The water REFL froze'; and (3) causative: *Congelé el agua* 'I-froze the water'. Note the special role played by participles in Spanish. We have not only the expression of condition in (1), but also the adjectival *agua congelada* 'frozen water' and the perfect *El agua se ha congelado* 'The water has frozen'. We expected that this widespread use of participles would be reflected in Spanish-speaking children's attention to end-states, contrasting with English-speaking children's attention to processes or activities. For example—to anticipate a finding to be discussed below—there are interesting crosslinguistic differences in the descriptions of actions that result in states. Where English speakers tend to say *The boy climbed the tree*, leaving the boy's end-state implicit, Spanish speakers often say *El niño está subido en el árbol* 'The boy is climbed-PART in the tree' (i.e., the boy is in a state of having climbed the tree). The languages differ in what is asserted and what is implied: English asserts the action, implying the result, while Spanish asserts the result, implying the action.

Event phases. In addition to tense/aspect categories marked on the verb by inflections and auxiliaries, Spanish makes use of a large collection of "semi-auxiliaries" (Green 1982) to mark "phases" of events in time. Here we were especially interested in forms that mark INCEPTION (e.g. *empezar, ponerse* 'begin'), PROTRACTION (e.g. *seguir* 'continue', CONTINUATION (e.g., *quedarse* 'remain'), and CONCLUSION (e.g., *lograr* 'succeed'). We expected that, at some point in development, Spanish-speaking children would begin to show special attention to (a) temporal movement towards and away from boundaries of events and (b) to the internal progress of events.

FINDINGS: ASPECTUAL DISTINCTIONS

The two tenses that occur in our texts are present and past, generally depending on whether the narrator chooses to present an ongoing, present-tense narrative with regard to the pictures or to use a "story mode" of narration in the past. The youngest children, however, sometimes use forms of present and past tense to mark the ASPECT of pictured events, rather than to locate them on a narrative time line. These are children who have not yet constructed a "narrative time" distinct from "speech time," and essentially describe what they see in the pictures. In both English and Spanish, there is a tendency in some of the 3-year-old texts to describe PROCESSES with a present-tense form and STATES with a past-tense form. This can be seen, for example, in

the following utterances, in which children described a picture that shows a boy lying on the ground, having fallen from a tree, and a dog running past, chased by bees.[4]

(1) He's *running* through there and he *fell* off. [3;8]

(2) *Se ha caído.* [El perro] *está corriendo.* [3;8, P]
    '(He) *has fallen.* The dog *is running.*'

(3) *Se cayó.* El perro *está corriendo.* [3;4, C]
    '(He) *fell-PFV.* The dog *is running.*'

(4) El nene *se cayó.* El perro *está corriendo.* [3;8, A]
    'The boy *fell-PFV.* The dog *is running.*'

Note that, in all of these examples, the process (running) is described in the progressive, indicating an appropriate sense of aspectual inflection. But, lacking a fully developed NARRATIVE use of the tense/aspect system, these children apparently cannot maintain a perspective in which both states and processes can be described in the past.

When English-speaking children begin to speak in narrative time, they do not have a readily available aspectual contrast, and often report both events in the simple past, as in (5):

(5) The bees *ran* after the dog. And the boy *fell.* [5;3]

It is not until the mastery of the past progressive, between ages 4 and 5, that English-speaking children are able to mark the aspectual contrast; e.g.:

(6) The boy *fell* out and the bees *were flying* after the dog. [5;11]

Spanish-speaking children, by contrast, are faced with a richer set of aspectual distinctions in the past. An event can be reported as PERFECT (*Se ha caído* '(he) has fallen'), PERFECTIVE (*Se cayó* '(he) fell'), IMPERFECTIVE (*Se caía* '(he) fell/was falling'), or PROGRESSIVE (*Se estaba cayendo* '(he) was falling'). When we began our crosslinguistic investigation, we expected that this range of aspectual distinctions would be difficult for preschool children and that it would take them some time to acquire and sort out the several forms. To our surprise, however, we found that Peninsular Spanish 3-year-olds made appropriate use of all four past-tense forms. We came to the conclusion that "the richer the language, the more distinctions acquired" (Slobin, in press). That is, Spanish, with its rich set of aspectual distinctions, actually stimulates children to attend to the relevant temporal orientations towards events. However, it could have been that our sample of preschool children in Madrid was especially precocious for reasons not associated with the structure of Spanish. The addition of Chilean and Argentinian samples allows us to sort out possible factors of sampling bias and linguistic determinism. As shown in Table 1, we have found that 3-year-olds in all three Spanish-speaking countries make full use of perfective, imperfective, and progressive in the past, indicating that it is, indeed, the nature of Spanish grammar that is responsible, rather than other factors inherent in our Madrid sample. At the same time, only the

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[4]Ages are given as "years; months." Varieties of Spanish are given as P (Peninsular), C (Chilean), and A (Argentinian).

Peninsular children use the present perfect, reflecting the relative infrequency of use of this form in Latin American varieties. As we had concluded earlier: "children as young as 3 seem to be guided in how they choose to talk about experience by the most available grammatical means provided by their native language" (Slobin 1987: 443). Table 1 shows the number of children in each age-group and language sample using each of the available tense/aspect forms. (Age-groups 7 and 11 are omitted from the Table, since these groups are not represented in the Peninsular Spanish sample.)

Table 1
NUMBER OF CHILDREN USING TENSE/ASPECT FORMS AT LEAST ONCE
(N = 12)

Tense/Aspect Form	Peninsular Spanish				Chilean Spanish				Argentinian Spanish			
	3 yrs	4 yrs	5 yrs	9 yrs	3 yrs	4 yrs	5 yrs.	9 yrs	3 yrs	4 yrs	5 yrs	9 yrs
PR	11	8	7	10	10	10	8	6	12	8	10	9
PR.PG	6	7	3	5	10	10	4	2	10	7	8	5
IFV.PG	5	5	8	1	4	10	11	9	5	5	9	6
PFV.PG	0	0	0	2	0	1	0	0	0	0	0	0
IFV	9	10	7	11	7	8	12	12	8	11	11	12
PFV	8	10	9	6	12	12	12	12	12	11	12	10
PR.PF	9	4	6	3	0	0	0	0	0	0	0	0
PA.PF	0	3	2	6	0	1	3	9	0	0	0	8

It can be seen in Table 1 that, with the exception of the perfect, all of the forms are already in use at the youngest age level, and show no evident developmental pattern.

Progressive and Imperfective vs. Perfective. Three-year-olds use both the progressive and the imperfective, as well as the gerund, to describe actions in process, as indicated in the following examples:

   (7) El nene se cayó. Los bichos *estaban persiguiendo* al perro. [3;6, A]
       'The boy fell-PFV. The bugs *were chasing* the dog.'

   (8) Se cayó. *Corría* el perro. [3;7, A]
       '(He) fell-PFV. The dog *ran-IFV.*'

   (9) El niño se cayó del árbol y el perro se fue *corriendo*. [3;11, P]
       'The boy fell-PFV from the tree and the dog went-PFV *running.*'

In examples (7-9) we see a match between choice of aspectual form and the inherent temporal characteristics of events (*Aktionsart*): falling is a completed act, depicted in its end-state (boy lying on ground); accordingly it is presented with a perfective verb form. Running/chasing are depicted in progress, and are presented in verb forms expressing a durative or extended temporal contour. In fact, in all of the above examples except for (5), which shows no aspectual contrast, preschool children seem to be guided by *Aktionsart* in their choice of aspectual form. However, by age 5, Spanish-speaking children are able to take different perspectives on events described by the same verbs, choosing aspectual forms not on the basis of *Aktionsart*, but rather on the basis of how

the event is CONCEIVED of by the child. For example, in one picture the boy is watching the dog fall from a window. The dog is depicted in mid-fall, between the window and the ground. In this event, falling is imperfective, and the child says:

> (10)El niño veía que se caía el perro. [5;4, P]
> 'The boy saw-IFV that the dog fell-IFV.'

Note that both 'see' and 'fall' are imperfective in (10), presenting the two events as simultaneous and extended. However, the same child can also take a perfective perspective on 'see' on situations in which seeing is conceived of as momentary. In (11) the boy discovers that the frog's jar is empty, and realizes that the frog has run away. The absence of the frog is durative, and therefore imperfective.

> (11)Vio que no estaba la rana. [5;4, P]
> '(He) saw-PFV that the frog was-IFV not (there).'

In (12) seeing is, again, momentary. The boy and his dog, at the end of the story, have found the frog that escaped. The escape is a single, completed event, and therefore perfective. In this instance, both verbs are perfective:

> (12)Vieron a la rana que se escapó. [5;4, P]
> 'They saw-PFV the frog that escaped-PFV.'

Thus, by age 5, aspect can be flexibly used to indicate the way in which the narrator conceives of events, independent of the *Aktionsart* of the verb. Such contrasts in perspective are not grammatically marked in English, and it apparently does not occur to English-speakers to find means to mark the distinctions that are so natural in Spanish. For example, a 5-year-old presents all of the following verbs in the simple past, with no elaboration:

> (13)The frog crawled out. And then, when he [boy] saw that he crawled out, he was sad. [5;3]

Even English-speaking adults present aspectually unelaborated accounts; e.g.:

> (14)When he woke up in the morning, he saw that the frog was gone.
> And he was very sad. [adult]

Perhaps the most significant use of aspectual contrasts is in the organization of discourse. In a seminal paper, Paul Hopper (1979) has made a basic distinction between FOREGROUND and BACKGROUND:

> It is evidently a universal of narrative discourse that in any extended text an overt distinction is made between the language of the actual story line and the language of supportive material which does not itself narrate the main events. I refer to the former—the parts of the narrative which relate events belonging to the skeletal structure of the discourse—as FORE-GROUND and the latter as BACKGROUND (p. 213).

When children begin to organize their "frog stories" in terms of an overall narrative, rather than a sequence of discrete events, they recruit aspectual contrasts in terms of

foreground and background. Hopper notes a widespread correlation between aspect and grounding:

> Because foregrounded clauses denote the discrete, measured events of the narrative, it is usually the case that the verbs are punctual rather than durative or iterative. ... One finds ... a tendency for punctual verbs to have perfective aspect (i.e., to occur in foregrounded sentences) and conversely for verbs of the durative/stative/iterative type to occur in imperfective, i.e., backgrounded, clauses (p. 215).

This distinction begins to be evident in 5-year-old stories, in contexts where the child gives the reason or motivation for actions and in contexts where an action is carried out against a stative background. For example, one child explains the actions of the dog (foreground, perfective) in terms of the preceding activity of the bees (background, past imperfective progressive):

(15) El perro se asustó y también salió. Se asustó porque
las abejas lo estaban persiguiendo. [5;8, C]
'The dog got-frightened-PFV, and also came-out-PFV. He
got-frightened-PFV because the bees were-IFV chasing him.'

Another 5-year-old adds a background comment (imperfective) about the location from which the boy fell:

(16) Se cayó del árbol en que estaba. [5;7, C]
'(He) fell-PFV from the tree in which he was-IFV.'

By age 9, children are adept at interweaving foreground and background, switching between aspectual forms to construct a continuous, connected narrative. For example, the following segment shows a series of foregrounded, plot-advancing clauses in the perfective (in italics), with interspersed background clauses in the imperfective, giving information about the location of participants and the narrator's outside perspective on a situation not known to the boy. (After the boy has fallen from the tree, he climbs a rock and holds onto what appear to be branches, but which turn out to be the antlers of a deer.)

(16) El niño que estaba parado en el árbol *se cayó de espalda.*
Salió un búho en el hoyo en que él estaba buscando.
El niño trató de esconderse, y se subió a una roca
y se apoyó en unas ramas, pero estas ramas no eran ramas
sino que eran de un venado, *y el niño se cayó encima*
del venado. [9;4, C]

'The boy who was-IFV up in the tree *fell-PFV on his back.*
An owl came-PFV out of the hole in which he was-IFV looking.
The boy tried-PFV to hide himself, and he climbed-PFV a rock
and held-PFV onto some branches, but these branches weren't-IFV branches
but were-IFV of a deer, *and the boy fell-PFV on top of the deer.*'

It is evident that tense/aspect forms have a long developmental history in childhood.

The acquisition of these forms involves more than the matching of verb form and meaning—which appears to be accomplished in the early preschool years. The child must learn to flexibly use verb forms to direct the listener's attention in the flow of connected discourse.

FINDINGS: STATES AND PROCESSES

Perfect vs. Non-Perfect. In addition to the backgrounding of situations with temporal extent, by means of imperfectives and progressives, Spanish and English both provide another kind of grammatical backgrounding device—the perfect—which is used to relate a prior event to a present circumstance. The perfect is rather different from the aspects we have considered thus far; indeed, many linguists prefer to treat it as a "relative tense" or as a special category that partakes of both tense and aspect. As Comrie (1976) notes in his book on aspect: "The perfect is rather different from [perfective and imperfective] aspects, since it tells us nothing directly about the situation in itself, but rather relates some state to a preceding situation" (p. 52). As shown in Table 1, two-thirds of the Peninsular Spanish 3-year-olds make use of the perfect. Their uses correspond fully to Comrie's definition. For example, in one picture the boy has gotten caught on a deer's antlers and the deer is running towards the edge of a cliff to throw the boy down into a pond. (Note the use of present perfect *has gotten caught* and progressive *is running* in the preceding English description of the situation). One 3-year-old said:

   (17) Le ha cogido el ciervo y le va a tirar aquí al agua. [3;8, P]
   'The deer has caught him and is going to throw him here in the water.'

This example clearly illustrates Comrie's general characterization that "the perfect indicates the continuing present relevance of a past situation" (p. 52). Here the fact that the boy has been caught is of continuing relevance to his imminent fall into the water. The perfect combines two time points: the time of being caught (expressed by the participle *cogido* 'caught') and the present (expressed by *ha* 'has'). (As we will see later, it is significant that the Spanish participle also functions as an adjective—e.g., *El niño está cogido* 'The boy is caught'—facilitating Spanish-speaking children's attention to the description of states.)

   We had expected the perfect to be a late acquisition, since it combines two temporal perspectives. Nevertheless, it is widely used in our Madrid sample. However, there are NO uses of the perfect in any of the stories told by English-speaking children, and it is a later development in the Latin American varieties.[5]

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[5] It has frequently been noted that the perfect is more widely used in Europe—both in Great Britain and in Spain—than in the New World. In a comparison of Scottish and American English, Gathercole (1986) found that Scottish adults used the present perfect far more frequently in their speech to children than do American adults, and that Scottish children used the present perfect as young as 3;0, while it did not begin to be used by American children until about 4;6. Apparently the temporal notions encoded by the perfect are accessible to 3-year-olds if they hear the form frequently enough. Our data show a similar contrast between Spain and Latin America.

The present perfect is not used by any of our Latin American children. However, as shown in Table 2, the past perfect begins to make its appearance at ages 4 and 5 in Chile, and by age 7 it is frequently used in both Chile and Argentina.

Table 2
NUMBER OF CHILDREN USING PAST
PERFECT
AT LEAST ONCE
(N = 12)

Country	Age				
	3	4	5	7	9
Spain	0	3	2	—	6
Chile	0	1	3	8	9
Argentina	0	0	0	5	8

The past perfect is used in Peninsular Spanish by age 4 as well. Its use is always RETROSPECTIVE, that is, to indicate an event that occurred prior to the narrative line in stories recounted in the past. This is evident in its earliest use in our samples. A child of 4;6 recounts a series of events in which the dog puts his head in the empty jar of the frog and falls out of a window, breaking the jar and angering the boy. Note that the event is first presented as foreground, in the perfective; then is referred to as a continuing background situation in the imperfective; and then is referred to retrospectively in the past perfect:

(18) El perro puso su cabeza sobre el frasco. ...
    El perro tenía el frasco adentro de la cabeza.
    Saltó corriendo con el frasco,
    y el niño estaba muy enojado
    porque se había ponido el frasco. [4;6, C]

    The dog put-PFV his head over the jar. ...
    The dog had-IFV the jar inside his head.
    (He) jumped-PFV running with the jar,
    and the boy was-IFV very angry
    because (he) had put the jar.

It seems evident that the acquisition of the past perfect reflects an emerging sense of narrative organization. It does not come to be widely used until after age 7, when children show evidence of a sense of plot in their narrations.

Participles. The error in participle formation in the last clause of (18) (the regularization *ponido* instead of the irregular *puesto*) is clear evidence that the participle is already a productive form at age 4;6. Even for children who do not use the perfect, use of the participle indicates the attention paid by Spanish-speaking children to end-states, or the enduring results of processes. We noted this in the introduction, comparing the use

of the participle in *El niño estaba subido en el árbol* 'The boy was climbed-PART in the tree' with the English process-oriented description, *The boy climbed the tree*. The Spanish example comes from a Chilean child of age 3;3. As shown in Table 3, Peninsular and Chilean 3-year-olds make frequent use of such forms (e.g., *subido* 'climbed', *tirado* 'thrown', *sentado* 'seated', *colgado* 'hung').

Table 3
CHILDREN'S USE OF PARTICIPLES

Age	Spain		Chile		Argentina	
	No. of Children	Mean No. of Participles/Child	No. of Children	Mean No. of Participles/Child	No. of Children	Mean No. of Participles/Child
3	7	1.7	7	1.2	0	0
4	8	2.4	10	1.4	5	1.2
5	7	2.4	6	1.8	2	1.0
7	—	—	8	1.8	7	1.6
9	6	2.3	11	1.3	3	1.0
11	—	—	6	3.2	9	1.1

The participle seems to be somewhat more widespread in the speech of Peninsular 3-year-olds, perhaps related to the earlier acquisition of the present perfect in Spain. Chilean 4- and 5-year-olds quickly catch up with Peninsular children, but the participle—like the perfect—is a later acquisition in Argentina, not becoming widespread until age 7. By age 9, both the perfect (present or past) and the adjectival use of the participle are widespread in all three Spanish varieties.

English-speaking children, by contrast, describe postures and locations by the use of active verbs. Note, for example, the following comparisons in parallel English and Spanish sentences from stories told by 4-year-olds:

(19) He sat down.
El niño estaba sentado. 'The boy was seated.'

He climbed a tree.
Está subido arriba de un árbol. 'He is climbed on top of a tree.'

He got onto a reindeer.
Aquí está el niño colgado de un ciervo.
'Here the boy is hung from a deer.'

Spanish-speaking children also make use of other devices to indicate an attention to an event as completed but still currently relevant. The most widespread is the use of the adverb *ya* 'already'. For example, the youngest Chilean child, at age 3;2, uses *ya* in contexts where the perfect would be appropriate, as if indicating an awareness of the category marked by the perfect:

(20) Están durmiendo. La rana ya salió. [3;2, C]
'They are sleeping. The frog already left-PFV.'
(cf. La rana (ya) ha salido. 'The frog has (already) left.')

Another frequent device is the verb *quedar (se)* 'remain', which explicitly encodes a continuing state resulting from a completed process. For example:

(21)El perro metió la cabeza en el frasco.
      Se quedó el frasco ahí. [3;2, C]
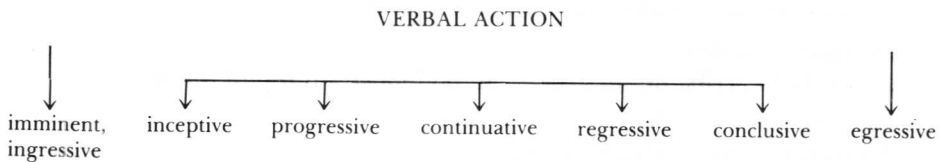   'The frog put his head in the jar. The jar remained there.'

One 3-year-old even used *ya* along with an explicit verb of completion, *terminar*, to graphically describe an end-state:

(22)Los tiró al agua. Después ya se terminó de caer. [3;8, A]
      '(He) threw them to the water. Then they already stopped falling.'

Such examples—and they are highly frequent in our Spanish texts—support our expectation that Spanish-speaking children are guided by their language to pay special attention to end-states. They note that states result from processes, often leaving the process itself to be inferred, and that processes can result in enduring states that continue to be relevant for the action at hand.

FINDINGS: EVENT PHASES

The use of participles and *quedarse* to mark states that persist in time is part of a larger linguistic orientation in Spanish to conditions preceding and following the boundaries of events. Coseriu (1976) speaks of the verbal category of "phase," which deals with "a relationship between the moment of regard and the degree of development (of the course) of the verbal process under consideration" (p. 103).[6] Expressions such as *se quedó sentado* 'he remained seated' (=he ended up in a seated posture) orient to the phase that follows completion of an action (hence the use of *terminar* in (22)). Spanish has special forms for the phases just preceding an event, just following the onset of an event, continuing within the boundaries of an event, approaching the termination of an event, and just following termination. Coseriu labels these phases in the following chart (p. 103).

VERBAL ACTION

imminent,   inceptive   progressive   continuative   regressive   conclusive   egressive
ingressive

All of the phases receive widespread marking in the three samples of children's narratives in Spanish. Although we have not carried out systematic counts, it is our impression that English-speaking children pay less attention to all of these phases, although they can be expressed by a variety of periphrastic means in English. In Spanish they are expressed by a set of forms that Green (1982) has characterized as

[6]"Bei der Kategorie der Phase handelt es sich um ein Verhältnis zwischen dem Augenblick der Betrachtung und dem Grad der Entwicklung (des Ablaufes) des betrachteten Verbalvorgangs."

"semi-auxiliaries" —a class of verbs that exhibit a degree of grammaticization for the expression of aspectual notions. Many of these forms appear in our child texts. Some examples are given below.

Imminent. The most grammaticized expression of this phase is the verb *estar* 'to be' with the preposition *por*. It is shown clearly in the following description of a picture sequence in which the boy and his dog approach a log and then climb over it:

(23) Están por subir, y después ya están subiendo. [4;5, A]
    'They are about to climb, and then they are already climbing.'

Note also the use of *ya* 'already' in the second clause, indicating the child's attention to the preceding, imminent phase of intention to climb.

Imminence is also frequently expressed in the immediate future form, using the periphrastic *irse a* 'go-REFL to' plus the infinitive. Compare the following two descriptions of a picture in which the frog is crawling partway out of its jar:

(24) La rana está por salir. [4;3, A]
    'The frog is about to leave.'

    La rana se va a salir. [4;6, C]
    'The frog is going to leave.'

Inceptive. The most grammaticized form for this phase is the semi-auxiliary *ponerse* (literally 'to put oneself'). It is widely used in our texts to indicate the inception of a state, as in:

(25) Él se puso triste. [3;8, C]
    'He got sad.'

For the inception of processes, children use the more transparent *empezar* 'begin'. This form begins to make its appearance at age 4, becoming more frequent after age 5, when it is used to mark the beginning of a new episode. Its use is thus tied to the development of plot organization in narrative. In the following examples, the boy and dog realize that the frog has escaped, and begin to search in their room; not finding the frog there, they begin to search outdoors.

(26)   Empezaron a buscar por todos lados.
    ...
    Empezaron a buscar por afuera. [5;2, C]
    'They began to look all over. ... They began to look outside.'

Progressive. In addition to progressive aspect, for which Spanish uses the auxiliary verb *estar* 'to be' with a gerund, Coseriu characterizes a progressive PHASE, using the verb *ir* 'to go' with a gerund. This phase is used very frequently in our texts, and seems to be "more progressive than the progressive"; that is, its use reflects an internal perspective in which the narrator seems to place himself inside of an ongoing event. If, indeed, our proposal is correct that Spanish focuses attention on event boundaries and the temporal regions surrounding such boundaries, then the progressive phase may be seen as expressing a focus on an event as ongoing but bounded. One of our youngest examples

of this form already reflects such a perspective. The frog is escaping from his jar while the boy and dog are asleep:

(27) Estaban durmiendo y la rana calladita se iba escapando
del frasco. [4;5, C]
'They were sleeping and the frog very quietly was escaping
(lit. went-IFV escaping) from the jar.'

Of special interest here is the contrast between progressive aspect (*estaban durmiendo*) and progressive phase (*se iba escapando*). Progressive aspect is used here for a process of indefinite duration, while progressive phase is used for the shorter event of escaping— with clear initial and terminal boundaries—temporally situated within the longer event of sleeping. (There is no obvious way of expressing this contrast in English.)

   A similar perspective (also inconceivable in English grammar) is given by the use of the past progressive with a perfective auxiliary (e.g., *estuvo buscando* 'was-PFV looking'). This form is very rare in our texts, being used only by one Chilean 4-year-old and two Peninsular 9-year-olds. It occurs only with the verbs *buscar* 'look-for' and *llamar* 'call', in contexts where these can be conceived of as bounded events with limited temporal extent. As such, in Coseriu's terms, it seems to be more a "phase" than an "aspect." One Peninsular 9-year-old uses the form three times to describe a search that came to an end, yet was extended in time:

(28) Estuvieron buscando por todas partes y no la encontraban. [9;6, P]
'They were-IFV looking everywhere and did not find-IFV it.'

Here the two dominant temporal perspectives of Spanish seem to be cast in clear relief: boundedness plus extension.

Continuative. By use of the semi-auxiliary *seguir* 'continue', with a gerund, Spanish allows for focus on the PROTRACTION of an event which is, itself, progressive. The form begins to be used by age 5. In the following example, the narrator has earlier noted that the bees were chasing the dog. After commenting on the simultaneous activities of the boy, he returns to the dog:

(29) El perro seguía corriendo. [5;6, A]
'The dog continued running.'

Younger children show their attention to the protraction of an event by simple repetition of the verb—again reflecting a particularly Spanish concern with this phase; e.g.:

(30) Vino el perro, y corrió corrió. [3;8, C]
'The dog came-PFV, and ran-PFV ran-PFV.'

Regressive. Coseriu uses this term to indicate attention to imminent termination, looking back, as it were, from an already accomplished conclusion. He cites the forms *estoy/voy terminando de hacer* 'I am/go terminating doing', which do not occur in our texts. However, this phase is expressed by the adverbial *hasta que* 'until', which begins to be used by age 7. Apparently this phase is more complex conceptually than the others, due to its "regressive" or "retrospective" semantics. Note the attention in the following

example to two event boundaries: the owl starts to chase the boy, and continues to do so until the boy terminates that phase by climbing a rock:

(31) Lo empezaba a perseguir el búho entonces hasta que se subió a una piedra. [7;4, C]
   'The owl started-IFV to chase him then until he climbed-PFV a rock.'

Conclusive. This phase is least grammaticized, marked by the semantically transparent verb *terminar.* We have already seen a 3-year-old example in (22): *Ya se terminó de caer* 'He already stopped falling'. Coseriu concludes, on the basis of the fact that the Romance languages have no specialized grammatical forms for the regressive and conclusive phases, that in these languages "the idea of the objective completion of an activity draws very little attention" (1976: 106). However, abundant examples from our texts would suggest that, on a broader level, Spanish does, indeed, pay a great deal of attention to the BOUNDEDNESS and BOUNDARIES of events—both inceptive and conclusive.

Egressive. Coseriu notes, by contrast, that Spanish (along with Portuguese and French) does have special periphrastic means for attending to an activity as seen from the viewpoint AFTER its completion. He cites the Spanish form *acabo de hacer* 'I have just done'. Although this form does not occur in our stories, it is clear that the perfect, the adjectival use of the participle, and the adverb *ya* 'already', discussed above, indicate that Spanish-speaking children make use of ample grammatical means for expressing the egressive phase.

RESEARCH AIMS: MOTION EVENTS

With regard to states and processes, we have noted that Spanish and English differ in what is asserted and what is implied. A similar difference between the two languages with regard to assertion and implication is reflected in verbs of motion. Following Talmy (1985), we can distinguish the semantic elements of MOTION, PATH, and MANNER. As pointed out above, in Spanish (as in all of the modern Romance languages) Motion and Path are conflated in the verb root, and Manner is given by the gerund of a separate verb. In English (and the rest of the Indo-European languages), Motion and Manner are conflated in the verb root, and Path is expressed separately by adverbial particles or prepositional phrases. The English lexicalization pattern allows for detailed description of a trajectory of motion by adding Path expressions onto a verb root. For example, in the sentence, *The bird flew down from out of the hole in the tree*, the verb simply specifies Motion in a particular Manner, leaving it to a series of particles to specify the trajectory of the Path: *down-from-out-of.* This trajectory corresponds to the Spanish verbs *bajar* 'descend' and *salir* 'exit', but they cannot be combined in a single compact expression as in English. Rather, one must say something like, *El pájaro salió del agujero del árbol, volando hacia abajo* 'The bird exited of the hole of the tree, flying towards below'. Note that Spanish prepositions provide minimal locative specification: *de* occurs twice in the preceding example. In *del agujero* it receives the meaning 'out-of' from the associated verb *salir*, while in *del árbol* it receives the meaning 'in' from general world knowledge about relations between holes and trees. When world knowledge is not sufficient, the

Spanish-speaker is often required to provide a static "sketch" of the relevant compo-
nents of a scene, so that the appropriate trajectory can be inferred. For example, while
in English one might say, *The boy put the frog down into the jar*, a Spanish-speaker might
say, *El niño metió la rana en el frasco que había abajo* 'The boy inserted the frog *en* (=in/on)
the jar that was below'. The verb *meter* 'insert' implies that the preposition *en* is to be
interpreted as 'in', and the relative clause *que había abajo* gives the meaning of 'down'.
Thus in Spanish the trajectory 'down-into' must be inferred from a combination of Path
verb and a static description of the location of the goal (jar), while in English the static
location of the goal must be inferred from the Path description.

   Note also that the Spanish participle, discussed above, provides a convenient means
for encoding the static locations of participants in scenes. For example, we have found
that English speakers say *He sat down in the water*, while Spanish speakers often say *Estaba
sentado en el agua* '(He) was seated in the water'. Again, as we have seen above, where
Spanish is more explicit about state, English is more explicit about process. We expec-
ted that Spanish children would come to provide elaborated static descriptions of the
components of scenes, implying detailed trajectories, while English-speaking children
would come to provide elaborated descriptions of trajectories, implying the static
arrangements of scenes.

FINDINGS: MOTION EVENTS

As expected, English children as young as 3 rarely use verbs of motion without locative
particles. Although they sometimes simply say things like *climbing the tree*, they tend to
elaborate the path, with additions such as *climbing up the tree, climbed on the tree, going up
there*. Some path elaborations are quite complex even at this age; e.g., *going up all the way
over in there, fell out of it, fell up onto something*. Three-year-olds use many verbs that
conflate motion and manner, along with locative particles, such as: *jumped down, jumped
out of the room, running down the hill, crawled on his back*.
   By contrast, Spanish children tend to use simple verbs of direction, as shown in the
following examples:

   (32) El nene arriba de la vaca está corriendo. Se cayó. [3;6, A]
        'The boy on top of the cow is running. (He) fell.'

   (33) Está subido en el árbol. Salió un búho y lo botó. [3;8, C]
        '(He) is climbed-PART in the tree. An owl came out and threw him.'

Often the source or goal of movement is indicated by a prepositional phrase, as
indicated in the italicized segments below:

   (34) Se subió *al árbol*. Se cayó el niño. [3;3, C]
        '(He) climbed *PREP the tree*. The boy fell.'

   (35) El niño se subió *en un árbol*. ... Y luego el niño
        se cayó *del árbol*. [3;10, P]
        'The boy climbed *PREP a tree*. ... And then the boy
        fell *from the tree*.'

   (36) Se cayó *al agua*. [3;6, A]
        '(He) fell *PREP the water*.'

(37) La rana salió *de la botella*. [3;6, A]
  'The frog left *PREP the bottle*.'

Note that the prepositions (indicated by PREP in the English glosses), like the verb, indicate only general direction. The prepositions *a* and *en* both indicate movement toward a goal (compare *al árbol, en un árbol, al agua* above); *de* indicates movement away from a source (compare *del árbol, de la botella*). The actual trajectory must be inferred from the semantics expressed by the verb and the objects involved (e.g., *salir* and *botella, subir* and *árbol*). In English, by contrast, the trajectory can be easily specified: *from out of the bottle, up into the tree*, etc.

Spanish-speaking children seem to be aware of these features of their language. They tend to devote more effort in their narratives to establishing the static locations of objects and participants in scenes, as if sensing that it is difficult to independently specify trajectories. English-speaking children, by contrast, devote less attention to static description, attending more to the elaboration of trajectories, and leaving much of the arrangement of objects and participants to be inferred. These differences are consistent with our findings with regard to the encoding of states and processes, discussed above.

All of these language-specific characteristics of the encoding of states and processes, scenes and trajectories, seem to have consequences for the eventual construction of narrative discourse in the two types of languages. By age 9, English-speakers are quite adept in "compacting" a large amount of information about trajectories in a small number of clauses, while giving little attention to scene description. Consider, for example, the following narrations of an episode in which the boy, stuck on the deer's antlers, is thrown down into the water:

(38) The deer ran away with him, and dropped him off a cliff, in the
  water. And they fell in the water. [9;9]

(39) He [boy] lands on his [deer's] head. And he starts running and
  he tips him off over a cliff into the water. And he lands. [9;11]

Spanish narrations often give much more circumstantial description, setting the scene in separate locative phrases, especially relative clauses with existential or stative verbs, and then referring back to this scene with a general verb of motion. The following examples are typical of some of the older children:

(40) El ciervo le llevó hasta un sitio, donde debajo había un río.
  Entonces el ciervo tiró al perro y al niño al río.
  Y después, cayeron. [9;2, P]
  'The deer took him towards a place, where below there was a river.
  Then the deer threw the dog and the boy to the river.
  And then, they fell.'

(41) El reno salió corriendo, con el perro a los pies. Cayeron juntos
  a un precipicio, donde cayeron juntos al agua. [9;8, C]
  'The reindeer came out running, with the dog at his feet.
  They both fell at a precipice, where they both fell to the water.'

There are no evident differences between the three varieties of Spanish with regard to descriptions of movement, and most narrators do not provide the degree of elaboration shown in (40) and (41). However, this is clearly more a Spanish than an English pattern of narration, and may well have further consequences in the structure of literary narrative in the two languages.

CONCLUSIONS

As suggested in the introduction, languages differ in terms of their verbalized orientation to experience. We have seen that significant components of the differing orientations of Spanish and English have already been acquired by 3-year-olds, and that most of the major grammatical devices for talking about movement through time and space are acquired during the preschool period. It seems that these devices play a role in structuring "thinking for speaking." Although we have no evidence beyond our narrations of the "frog story," it seems that Spanish- and English-speaking children are acquiring different strategies for directing their attention to features of events for the purposes of describing them in words.

Acquiring Spanish as a mother tongue seems to orient one to features of the boundedness and extension of events, with careful attention both to what happens around temporal boundaries and between boundaries. This is evident in the systems of aspect and phase, with their wealth of grammaticized distinctions. The use of participles in a variety of grammatical frames orients one to the description of resultant and enduring states, often considered from the vantage point of the boundaries of the processes from which they emerge. Motion through space is attended to within the framework of aspect and phase, and the detailed mapping of path trajectories is less important than their relations to the boundary points of source and goal, themselves often conceived of as states. These features are common to all three of the varieties of Spanish we have studied, and seem to have a similar impact on the development of narrative.

We have paid less attention to the conceptual frameworks embodied in English grammar. But we have noted that acquiring English seems to orient one more to processes than to states, and that movement through space is more elaborated grammatically than conceptions of boundaries and boundedness of events in time. A wide range of lexical choices, combinable with locative particles, orients one to details of the manner of motion. The only grammaticized aspectual contrast is between progressive and a neutral non-progressive, and the retrospective nuance of the perfect seems to be relatively unimportant.

In learning to talk about events in Spanish or English, the child learns to take perspectives such as the ones we have attempted to sketch out in this study. The perspectives go beyond the semantics of individual verbal inflections and constructions, developing into an interconnected framework for the direction of attention in extended discourse.

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