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ACQUISITION OF SPATIAL EXPRESSION IN EUROPEAN PORTUGUESE NARRATIVES¹

Inserted in the theoretical framing presented for space by Talmy (1983, 1985), and for language acquisition by Berman and Slobin (1994), our study focuses the acquisition of spatial expression in narratives produced by Portuguese children, confronted with a control adult group, in a situation of absence of mutual knowledge. Narrative productions were elicited with two picture stories: *Horse Story* and *Cat Story*. The study shows how referring to space in narrative discourse develops and changes along the process of language acquisition in European Portuguese.

Introduction

A large part of recent language acquisition research has focused on the organization of information in discourse, with special reference to person, space and time (see Berman & Slobin, Hendriks, Hickmann, Smoczyńska in the References). Special attention is given to two decisive aspects: marking of information status and grounding of information in discourse. In all domains, three recurrent observations are reported that need to be taken into account in any model of mother tongue acquisition (Hickmann, 1995, p. 215): (1) relatively late developmental progression in discourse organization, (2) interrelations of utterance and discourse levels of analysis, and (3) a combination of general developmental cognitive patterns and language-specific ones. Taking into consideration both cognitive-oriented and linguistic-oriented studies it can be postulated that early acquisition is not only based on universal sensorimotor concepts but also on the particular language being acquired². It is claimed that there are two types of linguistic devices both of global and of local character. Local devices include motion and posture verbs, prepositions, adjectives, adverbials, particles, deictics, case markings, etc., whereas

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² Earlier literature (as, for instance, Johnston & Slobin, 1977; Slobin, 1985) predicted that children's production of locative expression across a large number of languages followed a similar sequence determined by cognitive complexity observed in three sequential stages of the acquisition of space markers: (a) *in, on, under; beside*; (b) *between, back, front*, with featured objects; (c) *back and front* with nonfeatured objects. Since the eighties, however, due to the language typology developed by Talmy (1983, 1985) and followed in Bowerman's research (Bowerman, 1989, Choi & Bowerman, 1991), it has been shown that children must acquire a number of linguistic devices in order to mark spatial relations such as static locations and dynamic ones (motion with general locations, or changes of locations).

global devices include word order and event conflation leading to other language-specific factors, such as pre-positions or postpositions, morphological complexity, lexical diversity, synonymy, and others.

It is considered (*ibid.*, p. 201) to be easier for children to interpret sentences when their language has a rich and transparent morphology (e.g., Polish) than when it depends more on word order to express grammatical relations (e.g., English). Studies of sentence comprehension across languages show that, regardless of age, native speakers use the cues that are the most available and reliable in their language, e.g., *word order* in English, and *lexical* or *morphological* cues in Italian, suggesting a model in which children must learn how functions complete and fuse in relation to available forms. Following these claims, we can hypothesize that Portuguese speakers will behave in the process of acquisition of their native language according to the Italian model, i.e., following lexical and morphological cues as the most available and reliable in their language.

The research

Our research (Batoréo, 1996), set in the theoretical parameters referred to above and developed during last four years, examines spatial reference and spatial expression in narratives produced by European Portuguese native speakers, children and adults, in a situation of absence of mutual situational knowledge. Narrative productions were elicited with two picture stories: *Horse Story* and *Cat Story*³ (see Appendix). The corpus of our study is composed of 120 narratives produced by 60 monolingual European Portuguese subjects: 30 adults and 30 children (half boys and half girls) of 5, 7 and 10 years of age, ten children in each age group. The children were tested in a kindergarden and a primary school in the centre of Lisbon. The data were recorded, transcribed and codified in the CHILDES System (MacWhinney, 1994).

Spatial expression: crosslinguistic differences

Our research focusing on the expression of Space in European Portuguese follows Talmy's postulates (1983, 1985) that event conflation in the clause is object of linguistic variation. Some languages – as those from the Germanic family, for instance, – combine Motion with Manner in the verb, while others – like Romance languages (Portuguese, Spanish, French, etc.) – combine Motion with Path in the main verb, while Manner is expressed by other means, such as relative, infinitive or gerundive clauses. Thus whereas English speakers elaborate the trajectories that protagonists follow in their displacement through space, Portuguese, Spanish or French speakers provide simpler displacements with less elaborate Paths and more static information situating protagonists. This means that in English static locations must be inferred from Paths as, e.g., in *The Frog Story*⁴ (Example 1).

Example 1. (Eng.) *The boy put the frog down into a jar.*

In this example the present *inferior* frog's position is given as a result of the boy's movement on the Path directed *down*. In Portuguese or in Spanish, Paths must be inferred from

³ Described since 1982 in Hickmann's studies and developed, among others, by Hendriks (1993) and Smoczyńska (1992).

⁴ Cf. Slobin, 1989; Berman & Slobin, 1994.

Path verbs (e.g. «meter» = put inside) and static locations (e.g. «*haver em baixo*»/ «*haber abajo*» = be located + down), as in the following example.

- Example 2.** (Port.) *O menino meteu o sapo no frasco que havia lá em baixo.*
 (Span.) *El niño metió la rana en el frasco que había abajo.*
 (The boy inserted the frog in/on the jar that was [there] below).

Our research (Batoréo, 1996) shows, however, that it is sometimes risky to overgeneralize the basic characteristics of one group to all the languages classified as its members⁵. The group of Romance languages is considered⁶ as being more static than the Germanic one but we must take into consideration that the degree of stativity may vary from one language to another. Portuguese does not seem very strong on accepting strongly marked stativity on some verbs, even if the verb used in both languages (Portuguese and Spanish) can be considered formally as a cognate, as e.g. *subir* (Example 3).

- Example 3.** (Eng.) *He (= the boy) climbed a tree.*
 (Port.) *O menino subiu a uma árvore.*
 (The boy + moved up + a tree)
 (Span.) *Está subido arriba de un árbol.*
 (Port.) * *O menino está subido em cima da árvore.*
 ((The boy) is located + moved up + the top of [up] the tree)
 O.K. *O menino está encarapitado em cima da árvore.*
 ((The boy) is set up + the top of the tree)

The difference shown by the Romance examples is not only transparent between the dynamic and the static perspective but also on the aspectual marking level. The Spanish example – *está subido* – is Imperfective in character (Present Tense), while the Portuguese – *subiu* – is Perfective (Simple Past Tense). In addition, we must remember that both Portuguese and Spanish are transcontinental languages (officially) spoken in different American and African countries, and originating a great diversity of linguistic variation. As for Portuguese, due to specificity⁷ not only of lexical choice but also of morphosyntactical structure and pragmatic strategies, the distinction on the standard level has been defended between European Portuguese and Portuguese from Brazil, on the claim that research in Portuguese should first be developed separately in each variety and only then globally appreciated within its diversity. Example 4 illustrates the diversity observed in Portuguese.

- Example 4.** European Portuguese: *Há um cavalo a galopar.*
 ([There] is + a [indef. det.] + horse + galloping [infinitive clause])
 Brazilian Portuguese: *Tem cavalo galopando.*
 (Have + 0 + horse + galloping [gerundive])

As the example shows, the difference between the two main varieties of Portuguese is observed in the selection of the determiner, in the choice of the existential introductory verb (*Haver* or *Ter*) and on the morphosyntactic level. The European variety prefers the infinitive clause (though the gerundive construction is still possible both in the standard variety and, especially, in some dialects), whereas in Brazil the gerundive is used.

⁵ Cf. Hickmann, 1995, pp. 207 and 208, as well as Hendriks, 1993, and Batoréo, 1993, p. 113.

⁶ Slobin, 1989.

⁷ Faria & Duarte, 1989.

In the group of Romance languages we can also observe some differences between pro-drop languages (Italian, Portuguese, Spanish), on the one hand, and French – a non-pro-drop language, on the other. Thus, in Portuguese, for example, you will not come upon a left-dislocated construction of the type *Le chat il arrive* (= The cat + he comes) unaccepted by French adults but, as Hickmann argues (1995, p. 208), frequent in French children until seven.

As the examples show, the linguistic marking on local and on global levels can occur as a result of crosslinguistic differences in the acquisition of spatial expression⁸.

Acquisition of spatial expression European Portuguese narratives: findings and conclusions

As stated in our previous studies (Batoréo, 1993, 1995) our interest is specially focused on the spatial anchoring and the setting of the spatial frame in an attempt to define what sort of linguistic means are used for this purpose in European Portuguese. The differentiation between these two phenomena is a very important one. All spatial information throughout the narrative provides a spatial anchoring for the story, whereas the spatial frame is the most important spatial information given at the very beginning of the story providing background information in the absence of mutual knowledge. This distinction has to do with the role that different protagonists play in the story: setting a spatial frame at the very beginning of the narrative implies, in general, introducing the main protagonist, whereas spatial anchoring has to do with all the categories, protagonist as well as instrumental, not only in the introduction but across the whole narrative.

To study spatial expressions in a language means, therefore, to analyse nominal reference, i.e. to determine what sort of linguistic realizations appear for Figure and Ground, as well as verbal reference, i.e., to define the relationship between the realizations of Figure and Ground existing in the text. We realized that studying four variables – *age, language, story and protagonist* – was crucial for our research, in order to answer the following questions: *When* and *how* do Portuguese children provide a *spatial anchoring* for the story, on the one hand, and set a *spatial frame* in their narratives, on the other? «*When*», here, means *at what age* they learn to do it, whereas «*How*» means: (a) what semantic roles do they assign to Figures and Grounds? (b) what kind of noun and verbal reference do they use? (c) what linguistic markers do they choose to establish new spatial information? (d) what kind of linguistic constructions do they select?

The final results of our research (Batoréo, 1996) show the relevance of all the four variables proposed above and give answers to the questions posed, leading to the following conclusions:

⁸ Recent research has begun to examine children's uses of spatial devices in discourse across languages (Berman & Slobin, 1994), showing, e.g., that „typological differences such as those suggested by Talmy affect what spatial information is focused upon and how the flow of information in discourse is organized both on the local and on the global level” (Hickmann, 1995, p. 210). Other analyses (Hendriks, 1993) focus more specifically on how children mark status of spatial information in discourse across languages. According to Hickmann (1995) the results show first a general development progression: with increasing age children become gradually able to set spatial frames and to maintain reference to them by means of appropriate devices. Second, some recent crosslinguistic analyses focus on how children organize discourse in controlled situations, where pictures formed a story and mutual knowledge could not be assumed, with particular attention to NP types and clause structure (Hickmann, 1995, pp. 207, 208, 218; Smoczyńska, 1992). Third, a relatively late development progression in discourse organization is noticed.

(1) It seems easier to introduce the main protagonist, i.e., to set a spatial setting, than other protagonists. This result can be clearly observed in comparing the data for the *Horse Story* where the roles protagonists play are clear-cut and well-defined and the data from the *Cat Story*, where there are at least two main protagonists – the *cat* and the *dog* – and a third one, situated very close to the first two in the protagonist hierarchy. The percentage of introductory constructions decreases with the lowering of status of the type of character in the protagonist category. The lower the role of the character in the protagonist category the later the setting of the space anchoring occurs.

(2) The introduction of the most important protagonists requires well syntactically defined constructions. At the absolute beginning most of them are introduced by existentials (*haver, ser, existir*, or the „*era uma vez*” construction) of the „relative” paradigm (Q-type), with stative constructions (*estar, „estar + a + Infinitive”, „estar + Gerundive”*) or a descriptive one (Example 5).

Example 5

CAVALO (HORSE)				
(1)				
<i>Há</i>	um cavalo	que	passeia	pelos prados
<i>Havia</i>	um cavalo		a galopar	
<i>Era uma vez</i>	um cavalo	que	estava a galopar	no campo
			estava galopando	
<i>Era uma vez</i>	um cavalo	que	estava preso	numa cerca
(Once upon a time)	+ a horse	+ that	+ walks, gallops	+ in the fields
there is/ there was			was galloping	in the meadow
			was imprisoned	in the corral
(e.g. There was a horse that galloped/ ran in the fields)				
(2)				
<i>Andava</i>	um cavalo		<i>a correr</i>	pelos prados
(Used	+ a horse	+ to run	+ across the meadows)	
(There was a horse that used to run across the meadows)				
(3)				
??	Um cavalo		<i>andava a correr</i>	pelos prados
	(A horse	+ used to run	+ across the meadows)	
(There was a horse that used to run across the meadows)				

On the contrary, when the protagonist (even the main one) is not in the absolute initial position, it is introduced either as a result of perceptual (or physical) contact between protagonists, marked by the perceptual verbs (*ver; olhar; avistar*; etc.) or it results from the change of state, marked by the „appear” type of verbs (*aparecer, surgir, vir; chegar*, etc.), frequently in pre-position (Example 6).

Example 6

CÃO e GATO	(DOG & CAT)
(1) O gato (The cat	+ apareceu appeared)
(2) <i>Apareceu / Surgiu/ Chegou Veio</i> (Appeared, came/ arrived)	+ um gato a cat)

In the case of the second protagonist (*cow*), we can observe a mixed situation of plurality of constructions (Example 7).

Example 7

VACA	(COW)
(1) Do outro lado da sebe <i>havia</i> uma vaca Do lado de lá da cerca <i>estava</i> uma vaca (<i>On the other side of the fence there was a cow</i>)	
(2) Do outro lado da cerca <i>viu</i> uma vaca. (<i>On the other side of the fence + he saw a cow.</i>)	
(3) <i>Encontrou</i> uma vaca dentro de uma sebe. (<i>He met a cow + in the hedge = He met a cow in the corral</i>)	

(3) The same Ground can be chosen with different roles for different protagonists: while it is an *entity* for one it can be a *place* for another, as, for instance, in the case of the *fence* that plays different roles for the *horse* and for the *bird* in the *Horse Story* and of the *tree* conceptualized either as an independent Figure or a Ground for the *birds* in the *Cat and Dog Story*.

(4) Only the verbs of Motion (but not the verbs of Location) allow the omission of the Ground (Example 6).

(5) European Portuguese avoids the overload of new information by distributing it in different positions of initial utterances and using three basic strategies to achieve this aim (Examples 5, 6 and 7): (a) verb-first position; (b) sentence final relative clauses and (c) three different positions for the locative phrases.

(6) Age 6-7 is determinant for significant changes on cognitive and linguistic levels and, therefore, should receive more specific studies in a more thorough analysis.

(6a) It is at this time that children start to reorganize their discourse and begin to use cognitive and linguistic structuring strategies in an adult way. This shows clearly at the level of existential/ static syntactic structure. Only very young children and adults prefer static verbs to existential expressions. To acquire the adult way of realizing these constructions takes quite a lot of time, as children of 7 and 10 still show very clear preference for existential constructions.

(6b) The study of linguistic expression is closely related to its interpretation on the cultural, cognitive and social level, as shown by the realization of the COW category (*Horse Story*) and the BIRD category in both of the stories. Young children, for instance, use only *vaca* and *boi* as instantiations of the COW category until the cultural realization *touro* is acquired at about seven. So young children prefer the realization *pássaro* for BIRD, learning later the cognitive hyperonym *ave*, quite common among adults. Specific instantiation of this category depends on its social recognition as a symbol of peace (*Horse Study*) – as in *pomba* (dove) – or as a symbol of parentship (*Cat Story*) – as in *pássaro-mãe* (mummy bird), for instance.

(6c) The study of Space in European Portuguese is closely related to the study of Tense and Aspect, as well the expression of Possession (see e.g.: *bull's field*). The rate at which temporal-aspectual distinctions are acquired at the sentence level (perfectivity) and at the discourse level (grounding) depends on the richness and transparency of the morphology acquired. European Portuguese is rich in verbal inflections – functioning as main anchor tenses and tense shifting – and in temporal-aspectual adverbials and connectives. European Portuguese native speakers show no difficulties in early acquisition of these strategies.

(6d) Our study shows that children have difficulties establishing and maintaining spatial frames until later (around the age 7-10).

(7) While acquiring their native language, Portuguese children must learn the following cognitive and linguistic tasks:

(7a) they must realize the existence of spatial anchoring, and especially setting of the spatial frame, i.e., they must learn to refer to all the types of the LOCALES, even the rarest ones, and to express them as thoroughly as possible;

(7b) they must learn to situate their expressions in all the sentence positions used by adults, especially at the very beginning of the utterance;

(7c) they must learn pre-position of the verbs, especially the existential ones, as well as their contextual synonyms.

Final remarks

Following the conclusions of our study we propose that further research should be devoted to a thorough understanding of the interrelations among general cognitive aspects of children's development, general discourse development, as well as language-specific aspects and their interdependencies. By general cognitive aspects, we mean spatial and temporal conceptualization as well as scripts and narrative schemata. General discourse development includes the acquisition of global and local principles guiding discourse organization, whereas language-specific aspects of acquisition include the impact of formal

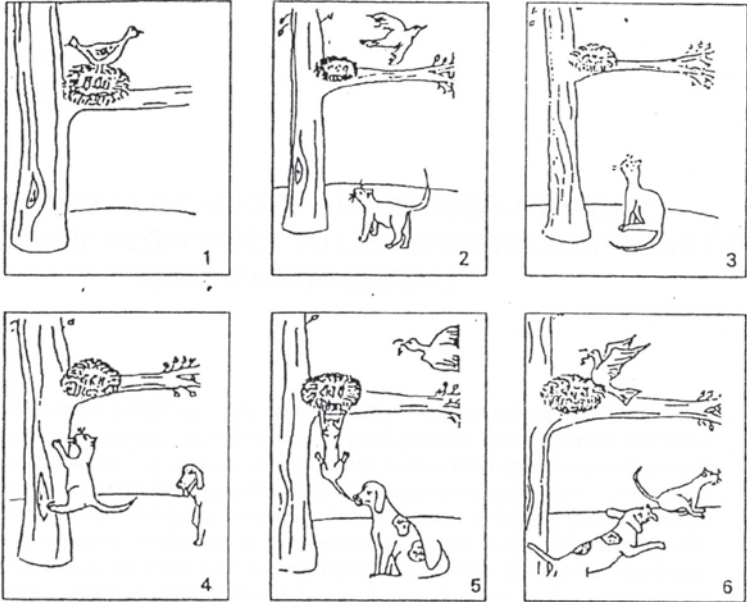
and functional variations on the rate and course of acquisition in specific subdomains of discourse organization, particularly on the level of interdependence among different linguistic expression of Space in relation to categories such as Tense, Aspect, Possession and also Existence and non-Existence.

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Appendix

The Cat Story



The Horse Story

