26. BECOMING PROFICIENT EDUCATED USERS OF LANGUAGE

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INTRODUCTION

One of the central concerns in Ruth Berman's work, mainly during the late nineties, is the characterization of linguistic knowledge beyond core grammar. Berman is particularly interested in defining the features of language that make us "proficient users" and not only native speakers of a language. She is clear as to the effect of schooling on language proficiency, and unlike many linguists who focus on the linguistic knowledge of the "universal mind", she is convinced of the relevance of tapping the linguistic knowledge of the "educated mind" (Morais & Kolinsky, 2001).

In Berman's view a main characteristic of proficient educated language users should be adaptability to a diversity of communicative circumstances by a diversification of linguistic means. Being proficient involves the ability to recruit different morpho-syntactic structures and to use them "flexibly for diverse communicative purposes" (Berman & Ravid, 1999). In 1998 a number of researchers from different countries working on the domains of linguistics, language development and literacy were invited to participate in the project *Developing Literacy in Different Languages and Contexts* under the direction of Berman to explore the development of the adaptability to different communicative purposes from late childhood towards adulthood in different languages. The project's main aim was to map the linguistic resources deployed by educated speaker/writers when talking and writing about a personal narrative as compared with

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those they used in discussing a topic in speech and in writing. The database and most of what we are discussing in this chapter was developed in the framework of this project. The participants were monolingual Spanish-speaking and bilingual Catalan/Spanish-speaking subjects from four age groups: 9 year-olds Gradeschool; 12 year-olds Junior-high school; 17 year-olds Highschool and Adult university students. The findings we are going to present are of Catalan and Spanish, but we think that the implications are not only language-specific.

Two discourse types - personal narratives and expository discussions—were selected, because they are considered as extreme points on a number of dimensions that distinguish genres. Concerning the protagonists, narratives focus on people in particular temporally and spatially defined circumstances whereas expository texts are about ideas and themes. In the dimension of time framing, personal narratives are always past to the time of telling, whereas expository discussions are timeless, centered as they are on analyzing a theme. In the dimension of personal involvement, first person narratives represent the highest point of involvement, whereas expositories should appear as detached and impersonal. In terms of generality of reference and quantification, one of the features defining discourse stance, narratives are more specific, whereas expository texts are more generic and generalized (Berman, Ragnarsdóttir, & Strömqvist, 2002).

The analyses of the spoken and written texts produced by the participants across languages showed clear adaptability of the devices they used to the contrasting communicative functions, from the youngest age group onwards. This was evident at every level of text analyses, from the overall text structure through the means of interclausal linkage to the internal structure of clause and the lexical choices. This finding is consistent with research on text production in young children which reveals early sensitivity to genre differences (Bhatia, 1993; Christie, 1986; Macaulay, 1990; Sandbank, 2002). For example, across languages and age groups, past tense, perfective aspect (where relevant) and *realis* mood dominated in narratives compared with the timeless present and *irrealis* mood in expository texts. Even children used more aspectual verbs like *begin, keep on* in narratives and more modal predicates like *should (n't), can* (French *il faut, pouvoir*) in expository texts, and a higher proportion of copular and existential constructions in expository over narrative texts. In choice of grammatical subjects, speakers showed a preference for deictic and anaphoric personal pronouns in narratives and for impersonal pronouns and noun phrases with lexical heads in expository texts. As for generality of reference, in the narratives subjects tell or write about *mi profesora* 'my teacher', *mi mejor amigo* 'my best friend', whereas in expositories they refer to *los jovenes* 'the young people', *los problemas de la adolescencia* 'the problems in adolescence'. The thematic content of texts also differed by genre, again from the youngest age group: concrete events and incidents are the focus of personal experience narratives, while generalizing statements and expression of ideas make up the bulk of the expository texts. These distinctions, in linguistic forms of expression and in thematic content, reflect differences in what Berman and her associates term overall discourse stance (Berman, Ragnarsdóttir, & Strömqvist, 2002).

In-depth analyses of the same texts showed, however, that the use of differing linguistic means to fit different functions is just the basic facet of proficient use of

language. On this basis, with age and schooling, participants refine the linguistic devices used to fit the demands of genre. Texts become more elaborated and precise, and include syntactically denser structures. At the same time, the linguistic means to fulfil a particular function become more diversified. In this chapter we examine each of these features in turn elaborating on the developmental patterns they followed and showing in what sense they are indicators of increasing rhetorical flexibility. The results we are going to discuss confirm that "There is a long developmental route to follow before children become fully proficient users of a language" (Berman, 1997b).

ELABORATION OF INFORMATION

The first feature we consider is crucial for attaining the main goal of expository text, that is, to create a structure of the text's theme in the reader's mind (Britton, 1995). Given a certain topic the speaker/writer has to produce a series of "moves" in order to communicate the addressee the content, properties and relations that define this topic so as to enable for its reconstruction in the addressee's mind. In a first type of moves (MOVE ON) new referents are introduced in the text, in a second type of move (EXPAND) further details about the referents are provided, and in a third type of move (UNIFY) information is summarized, condensed or subsumed. The second type of moves elaborates on information already introduced in the text. By *elaboration of information* we mean the analysis of a state of affairs, already presented, so as to provide a more fully developed perception of the state of affairs on the part of the addressee. Take for example the two pairs of expressions (1a and b; 2a and b), in each pair the second one (1b and 2b) is more elaborated than the first one. 1b provides a justification as for why it is advisable not to copy, whereas this activity is just forbidden in 1a, and 2b provides a reason why certain things should not be done.

1a. *Pues que los niños no tienen que copiar* [pG13mes][2]
Well that the children do not have copy

1b. *Los niños no tienen que copiar porque está mal y no sirve para aprender* [pJ09mew]
The children do not have to copy because it is wrong and not serves for learning

2a *Jo penso que aixo no sa [s'ha] de fer* [cG02mew]
I think that this should not be done

2b *no s'haurien de fer aquestes coses perquè si no no treus bones notes* [cG20mesc]
these things should not be done because otherwise you don't get good grades

There are different ways by which a certain state of affairs can be elaborated: by a justification or by providing a reason, as in the examples, by providing an illustration, by using an example or a definition of any of the terms included in the statements, etc. (Tolchinsky et al., 1999). In any case, more elaborated information enables a better

[2] In specifying speaker-writer identity in examples, we use the following convention: the 1st lower case letter stands for the language-p = Spanish (distinct from c = Catalan); the 2nd upper case letter stands for grade or age level G = grade school, J = junior high, H = high school, A = adult; the two digits give the subject number – 05 is the 5th subject in that age-group, 17 = the 17th in that age group; the next lower case letter stands for sex – m = masculine, f = feminine; and the last two letters identify text type and modality, as follows: ew = expository written, es = expository spoken, nw = narrative written, ns = narrative spoken.

structuring of the theme by the addressee, and in this sense it is crucial for the function of expository texts.

We predicted that, as a consequence of increasing attuning to the functional demands of genre, with age we should find an increasing elaboration of the information presented in expository texts. The database used for examining this prediction consisted of spoken and written expository texts produced by 80 monolingual Spanish-speaking subjects, who produced their texts in Spanish, and 70 bilingual Catalan/Spanish-speaking subjects, who produced their texts in Catalan. Participants were from the four age groups included in the project: 9 year-olds Grade school, 12 year-olds Junior-high school, 17 year-olds High school, and Adults University students.

As a first step for evaluating elaboration of information we segmented all the texts into rhetorical moves of three types: MOVE-ON, EXPAND and UNIFY, according to whether they introduce new information, whether they expand or unfold already given information, or summarize information. After that, we calculated an *index of elaboration*. This index was obtained from the number of EXPAND moves out of the number of MOVE-ON moves. Because texts differ in length the index was calculated proportional to the number of clauses in the texts. An increase in the index of elaboration means that there is an increase in the proportion of EXPAND moves over MOVE-ON moves.

Table 1 shows the index of elaboration obtained in spoken and written expository texts as a function of age/school level in the two languages, Spanish and Catalan.

Table 1. Index of elaboration by language, school level, and modality

	Spanish		Catalan	
	Spoken	Written	Spoken	Written
Grade school	.30	.34	.40	.26
Junior high school	.43	.43	.29	.37
High school	.52	.50	.40	.44
Adults	.45	.51	.48	.52

In the written expository texts produced in the two languages we see a steady and significant increase ($F(3,132) = 11.140$, $p < .001$) in the index of elaboration with school level. The picture is slightly different in the spoken texts. Although we notice a small decrease in elaboration from High school to adulthood in Spanish and a more marked decrease from Grade school to Junior high school in Catalan, the differences was not significant. That is, across languages with age, and more experience with written language, subjects dedicate more "textual time" to enlarge the details of given information, to explain the reason for an assertion or the use of a certain term. They take more concern in the task of building a topic on the addressee's mind. This general tendency is slightly facilitated by the specific constraints of the written modality, which puts less on line pressure on the text producer: that is why we find a lower index of elaboration in the spoken modality, but the difference between spoken and written language with respect to index of elaboration was not significant.

To sum, there is a developmental change not in the amount of data speaker/writers introduce in the texts but rather in the concern they put in amplifying the same data.

The tendency towards increasing elaboration is neither affected by language or by modality of production.

PRECISION

The second feature relates to the speaker/writer's concern in providing the interlocutor with the necessary stipulations for identifying the discourse referents and gaining an accurate picture of its properties or qualities. We assume that the type of NP speaker/writers' choice expresses this concern.

In Spanish, NPs result from a projection of a nominal category that can be realized either by a lexical category or by a syntactic entity without phonetic realization. NP modifiers (determiners and complements) are in general optional although there might be structural constraints that make their use compulsory (e.g., Spanish resists the use of NP subjects without determiner, Hernanz & Brucart, 1987). Thus, from a morphosyntactic perspective, NPs can be zero, pronominal or lexical. The decision as to which of the alternatives should be used depends on a number of cognitive and discursive demands implying that the speaker/writer recognizes the addressee's need to identify, to activate or to "recover" (Halliday, 1967) the discourse referents. It also implies that the speaker/writer is aware of the importance of providing full information about the referents in the text *per se*. The contrastive use of lexical vs. pronominal and zero NPs is the first focus of our analysis of this feature.

Lexical NPs differ in their hierarchical complexity according to the type of NP modifiers participating in the structure (e.g., only determiners, adjectives, subordinate clauses) (Andrew, 1985; Givon, 1993). Texts that are low in interactivity and personal involvement but high in referential information will include more complex NPs. More complex NPs have a contrastive function and increase the complexity of the informational structure of the text. The developmental and crosslinguistic study, from which the present one is a direct continuation, has shown that the internal architecture of NPs increases in length and complexity with age and schooling in interaction with text genre (Ravid et al., 2002). We assumed that the higher the referential informative purpose, the higher the number and complexity of lexical NPs. Therefore, the second focus of our analysis relates to the internal structure of NPs, in particular the extent to which NP information is presented in syntactically more complex ways.

Satellite to predicate VPs, NPs can play different argument roles such as agent, patient, undergoer or temporal roles and be involved in different grammatical relations such as subject or object. In the present analyses we concentrate in Subject NPs. The choice of clause site of NPs reflects informational status of referents in terms of sentence topic – what the sentence is about – and comment - what is said about the topic. Although in Spanish the sentence topic can be associated to diverse clause sites - preverbal subject, direct or indirect object - subject position, mainly preverbal subject position, typically carries topic information (Zubizarreta, 1999).[3] NPs in subject

[3] Preliminary analyses on our corpus indicate, however, that the assertion about preverbal subjects typically carrying topic information might be true for subjects of transitive verbs rather than for subjects of intransitive verbs. The later may contain both topic or new information.

position express the particulars about which knowledge is being added (Chafe, 1976). Therefore, the use of lexical subject NPs might reflect speaker conviction to be as precise as possible as to what the sentence is about. On a more speculative level, it might also suggest the speaker's concern for better recall of discourse referents since longer subjects are better remembered than short ones (Read & Schreiber, 1982).

The database for examining NP types and structure was constituted by the narrative and expository spoken and written texts produced by 40 monolingual Spanish-speaking subjects from 9 year-olds Grade school, 12 year-olds Junior-high school, 17 year-olds High school and Adults university students, which means a total of 160 texts. Texts were transcribed into clauses and every noun phrase was coded. For the present analysis we consider only subject NPs using part of the methodology developed by Ravid and her associates (Ravid et al., 2002). The goal is to see to what extent choices of NP type and structure is a function of age, genre and modality. If our reasoning regarding the discursive and psychological function of subject NPs is correct, we should find more full lexical subjects in written expository texts than in spoken narratives. It should be so because written expository texts are more detached and concerned with thematic development but less constrained by on line processing, whereas spoken narratives are more subject to on line processing constraints, more personal and concerned with events and characters. We should also expect that syntactic complexity of NPs will increase as a function of age in interaction with modality and genre. NPs including more informative elements (adjectives, prepositional phrases, clause complementation) should appear in written expository texts more often than in any other type of text.

Since texts differ in length, all the calculations are based on the internal distribution of the study categories out of the total number of NPs in each text. First, we calculate the *degree of text lexicality*, that is, the percentage of lexical subjects out of the total number of all types of subjects (composed of zero, subject pronouns and subject lexical nouns with and without any kind of modifier or clause complementation). After performing a series of analyses on this measure we found no significant effect of age but significant effects of *genre* ($F(1,36) = 3.830$, $p < .05$, narratives $M = .22$, expositories $M = .30$), and *modality* ($F(1,36) = 39,18$, $p < .00$, spoken $M = .23$, written $M = .29$), with no interactions.

A second analysis concerns directly the internal structure of NPs. The internal structure of NP in our sample embraces from single proper names, defined or undefined nouns, structures formed by a noun with one or more modifiers (possessives, adjectives) and with prepositional phrases, to more complex structures including more than one noun in appositional stringing (3) or clausal complementation (4).

3. *ruido, trabajo, problemas técnicos, problemas familares y sociales, todo esto hace que no descansemos ni por la noche* [ps01mewa]
   noise, work, technical problems, family and social problems, all that causes that (we) rest neither at night.

4. *el aislamiento o discriminación que también aparece en el video está a la orden del día* [pu09mewb]
   the isolation or discrimination that also appears in the video is in order

For the present analyses we consider complex NPs the lexical NPs that include any modifiers besides articles up to clausal complementation. We consider any of the varieties included in the definition of complex NPs to be more syntactically complex than bare nouns or nouns preceded just by a definite or indefinite article.

We calculated the occurrences of complex NPs in the different age groups, genres and modalities. Because texts differ in length, the occurrences were calculated proportional to number of clauses. A 4 (age/schooling: Grade school; Junior-high school; High school and adults) × 2 (genre: narrative vs. expository) × 2 (modality: spoken vs. written) analysis on this measure yielded main effect of age ($F(3,36) = 13.39$, $p < .00$; Grade school $M = .45$, Junior-high school $M = .93$; High school $M = 2.53$, and adults $M = 3.17$ but no significant effect of genre or modality, although the mean number of occurrences is higher in expository than in narrative texts (narratives $M = 1.54$, expository texts $M = 2.00$), and in the written than in the spoken modality (spoken $M = 1.7$, written $M = 1.8$). These results suggest that the syntactic complexity of NPs develops with age, but is less constrained by genre and modality than expected.

If we take into account this result along with the results concerning the level of *text lexicality* we should conclude that the choice of a lexical NP (of any level of complexity) over null or pronominal subjects already satisfies the requirement of precision of the sentence topic, which is strongly constrained by genre and modality. But, how syntactically complex is the NP is not so much dependent on the functional demands of genre but on a kind of linguistic knowledge that seems to develop with age and schooling. This interpretation should be taken with caution and requires a more detailed consideration of the different syntactic structures involved.

DIVERSIFICATION OF RHETORICAL MEANS

A basic assumption implied in the notion of rhetorical flexibility is that speaker/writers use an increasingly ample range of linguistic means to deploy their ideas and adapt to different communicative ends. That is, they take into account different options that may be appropriate for a particular situation and they put this diversity into play. To test this assumption we explore the domain of agentivity as discussed in developmental studies of discourse analysis (Berman, 1993; Berman & Slobin, 1994: 515–538). We were interested in the differing *degrees of agentivity* in relation to the ideas, states and events, which participants talk or write about in their texts. We focus on this domain for two reasons. Firstly, because it is a diagnosis of genre appropriateness as long as downgrading agency goes together with the detachment of expository texts and against the higher involvement of personal narrative. Secondly, because Romance languages have multiple depersonalization strategies that speaker/writers may employ along the dimensions of word-internal morphology, lexicon, and semantic content. In Spanish there are at least four construction types that function to downgrade agency. On the one hand, Periphrastic passives, with a form of *be* + past participle, either *ser*-passive as in (5a) or *estar*-passive as in (5b) (Keenan, 1985); and, on the other hand, three constructions all marked by the clitic *se* that functions in three different ways: *se*-marked passives (6); *se*-marked impersonal (7), and *se*-marked middle voice

constructions (8). All four constructions have the common function of downgrading agency, although they do so in different ways and by means of different formal devices.

5. Periphrastic passives:
   (a) *Personas que no son aceptadas por algún defecto físico* [pJ17mew]
   People who are not accepted for [=because of] some physical handicap
   (b) *Es un tema que en la sociedad no está muy extendido* [pH07mes]
   It is a topic that in (the) society is not very extended [= widespread]

6. *Se*-marked passive:
   Se pueden solucionar las cosas [pA14mes]
   se can-to solve the things = 'Things can be solved'

7. *Se*-marked impersonals:
   Y se toma por tonta a una persona [pH03mew]
   and *se* taken for fool to a person = and (people) take a person for a fool = a person gets taken for a fool'

8. *Se*-marked middles:
   Con todo, se acumula el estrés [pA01mew]
   With everything, *se* accumulate the stress = stress gets accumulated

These are competing structures (along the lines noted in Jisa et al., 2002), for use of passives in different languages) that speaker/writers may choose when aiming to present a situation from the perspective of the situation in itself or of the entity affected by the situation rather than from the perspective of the specific perpetrators of the situation. Speaker/writer's choice is constrained not only by situational factors (genre, modality of production, and register) but also by the availability of these competing structures in a specific language (Berman, 1979).

We examined the use of these constructions in the spoken and written narrative and expository texts produced by the whole sample of monolingual Spanish-speaking subjects from the four age groups: 9 year-olds Grade school; 12 year-olds Junior-high school; 17 year-olds High school and Adults university students (Rosado et al., 2001; Tolchinsky & Rosado, 2002; Tolchinsky & Rosado, in press). Out of a total of 721 relevant constructions, the preferred one was *se*-impersonal (36%), next come *se*-middle (27%), and the different kinds of passives (*ser*-passive .09%, *estar*-passive .07%, participial 11%), with *se*-passive least of all (10%). If we consider that 93% of the clauses produced by the participants were active clauses (the target constructions are only 7% of the total number of clauses produced by the participants) and among the target constructions the preferred one is the active one (*se*-impersonal), there is no doubt that speaker/writers clearly prefer active construction over any form of passive or middle. Then the preferences are divided between forms that downgrade agency by focusing on the event (*se*-middle) or those forms that downgrade agency by focusing on the patient but enabling recoverability of agents (diverse kinds of passives). The least preferred form is the one that downgrades agency by focusing on the patient but making very difficult the recoverability of the agent (*se*-passive). That is, participants

present the themes they are discussing in relatively nonspecific terms, by typically leaving the agents or causes that may give rise to these states of affairs as generically unspecified or unexpressed. This *generality* (Berman et al., 2002; Longacre, 1996) in orientation was lacking from the personal-experience narratives the same participants produced). All the different types of construction were used from the youngest age on and the frequency of use developed significantly with age for every construction type. Thus, a clear finding of this study is that 'agent downgrading' is a *genre feature*, typical of expository texts and largely lacking in the narratives of the same subjects from very early on.

A similar analysis was carried out with our sample of bilingual Catalan/Spanish-speaking subjects of the same age groups, a total of 67 participants, which means a total number of 268 texts. The comparison with Catalan is particularly relevant because Catalan has the same construction types but their use by Catalan speakers differs (Bartra, 2000) depending on various factors including dialectal variation. All the texts were coded for the same construction types: periphrastic passives, *ser*-marked and *estar*-marked passives; *se*-marked passives; *se*-impersonal and *se*-middles. The comparison yielded two important findings: Catalan speakers differ from Spanish speakers in the construction type they tend to prefer. Out of a total of 666 relevant constructions, the preferred one was *se*-passive (34%), next come the use of participial (24%) and the two types of passives (*ser*-passive (.04%) and *estar*-passive (10%)), then *se*-impersonal (16%), and the least used construction type was *se*-middle (10%). The relative scarce use of *ser* marked passives seems to confirm that Catalan speakers do not favor this constructions type in colloquial Catalan (Bartra, 2000). The space occupied by *se*-impersonals and periphrastic passives in Spanish is occupied in Catalan by *se*-passives (Bartra, Rigau, & Hernanz, 1998). Moreover, Catalan speakers were more reluctant than Spanish speakers to present the phenomena they are describing as self-instigated or "autonomous".

In spite of this difference among Spanish and Catalan speakers, however, we have found similar trends as to the effect of genre and modality. The four construction types appeared almost exclusively in expository texts and more in the written than in the spoken modality.

Most important, the particular feature we are focusing on, *diversification of linguistic means*, was shared by both groups of speakers. It is only at high school and especially into adulthood that the diverse means of expression are truly incorporated into the participants' repertoire. In order to define the active individual repertoire of target constructions we calculated how many different construction types each individual subject used. We then counted how many subjects produced only one type of construction, how many produced two different types, how many three different types and so on.

In Spanish, at Grade-school level, 35% of the children produced only one of the relevant constructions (impersonal, middle, passive or *se*-passive), 55% used two or three different construction types and only one child was able to produce the four different types of constructions. In Junior high-school, most children were able to produce at least two different construction types, while at High school and university level, most participants produced the whole range of construction-types.

Table 2. Individual repertoire
Number of children according to the number of different construction type used in the text

Lang./ Age Group	Spanish n = 80					Catalan n = 67				
	Number of different construction types					Number of different construction types				
	0	1	2	3	4	0	1	2	3	4
Grade school	8	7	3	2	0	4	2	6	6	0
Junior High school	4	5	6	5	0	3	5	5	5	1
High school	0	3	4	5	8	0	0	5	8	7
Adults	0	0	2	6	12	0	0	1	1	8

In Catalan, at Grade-school level, 11% of the children produced only one of the relevant constructions (impersonal, middle, passive or *se*-passive), whereas 33% produced two different construction types, and another 33% three different constructions. In Junior high-school, most children were able to produce at least two different constructions, but from High school on the majority of participants produced at least three different constructions with almost every adult having in his/her individual repertoire all the four types of constructions. Table 2 presents the distribution of children according to the number of different construction types they were able to produce in the texts-their individual repertoire-in Spanish and Catalan by age group.

The number of participants that produced the different construction types increases dramatically with age, both among Spanish and Catalan speakers. This suggests that the crucial developmental change occurs not in the emergence of a certain construction (except perhaps for *ser*-marked passives all the constructions are part of the subject's repertoire even at the youngest age group), but in the widening of the actual repertoire of constructions. The same speaker/writer is able to use them simultaneously in the same texts.

PACKAGING OF INFORMATION

The last feature of proficiency concerns speaker/writers capacity to build their own discourse as connected units. So far we have noted the early use of linguistic devices that distinguish between discourse genres and the diversification of these linguistic means to fulfil a certain function with age and schooling. We have also discussed the increasing elaboration and precision of the information speaker/writers present in their texts. In addition to the above, subjects are increasingly able to produce syntactically denser structures and create hierarchically organized texts. To explore the development of this feature and its interaction with genre and modality, we are attempting different approaches. What we are presenting here are preliminary and partial findings from a corpus of narrative and expository spoken and written texts produced by 40 monolingual Spanish-speaking subjects from four age groups: 9 year-olds Grade school, 12 year-olds Junior-high school, 17 year-olds High school, and Adults university students, which means a total of 160 texts.

We assume that speaker/writers do not produce their texts clause by clause nor 'in one breath'; that is, there must be some sort of intermediate units of discourse organization[4]. Based on this assumption, we looked in the texts for groups of clauses that, mainly for syntactic reasons but sometimes just for thematic or discursive reasons, could be considered as larger units of organization. These 'packages of connectivity' that we have called *L-Units* in the context of the project (Berman, 1997a, 2000; Cahana-Amitay, & Berman, 1999) are roughly equivalent to what would correspond to a *sentence* in well organized written texts, and which would be delimited by a period or another conventional punctuation mark. In expert written texts, syntactic, semantic and discursive criteria usually overlap to define a sentence, but this is not the case for novice or developing speaker/writers. Therefore, rather than resorting to conventional units, we spell out the criteria as to how syntactic, thematic or discursive aspects are taken into account for defining these units (Aparici, Tolchinsky, & Rosado, 2000). All the texts were segmented following these criteria.

We then explored the range of connectivity devices used by subjects to form these packages of connectivity, so that different types of subordination, coordination and juxtaposition were categorized. As with the previously analyzed features, we found significant developmental differences and a significant effect of genre and modality (Aparici et al., 2002). In particular, the use of juxtaposed clauses decreases with age along with a decrease in the use of additive coordination, whereas relative clauses and production of complement clauses increase with age. As for genre, coordination in general and temporal connectives heading adverbial clauses were significantly more frequent in narrative that in expository texts, whereas relative clauses were more frequent in expository than in narrative texts, particularly in subject position. This finding is consistent with the characterization of precision of reference we have made previously in the chapter and with the generally recognized role of lexical subjects in expository texts (Halliday, 1989; Ravid et al., 2002). In Spanish the use of relative clauses is a preferred means for construction of heavy subjects. As for modality, we see again opposite trends in two main connective devices: subordination (including all types of subordinating connectives) was more frequent in the written than in the spoken modality, whereas additive coordination was significantly more frequent in the spoken than in the written modality. Thus, the quantitative description of connectivity already shows that texts become syntactically denser in the sense of containing an increasing amount of subordination.

In order to go a step further in the characterization of syntactic density we examined the internal architecture of the discourse units, in particular their *level of connectivity*. That is, whether and how clauses are coordinated, subordinated or juxtaposed within an L-unit. We defined three levels of connectivity: Level I includes those cases in which clauses were connected only by coordination and juxtaposition (9); level II includes those cases in which there is a main clause and one or more subordinate clauses, the subordinate clauses can be juxtaposed, coordinated or subordinated among them

[4] Different authors have attempted to define such units (e.g., Chafe & Danielewicz, 1987; Halliday, 1994; Hunt & Kellogg, 1970; Scinto, 1986; for a comparative analysis of criteria see Aparici, Tolchinsky, & Rosado, 2000).

(10); and level III includes coordinated and/or juxtaposed clauses that contain in turn subordinate clauses (11).

9. *Un día una niña estaba patinando en el patio de su casa con sus amigas se llamaban Ana, Roberta, Laura, Antonia y yo.*[pG08fnw]
   One day a girl was roller-skating in the patio of her house with her friends they were called Ana, Roberta, Laura, Antonia and I.

10. *Acerca de los temas visualizados en el vídeo, he de añadir que son problemas de ámbito común en las sociedades más o menos urbanizadas*. [pA01mnw]
    Concerning the topics visualized in the video, (I) have to add that (they) are problems of ambience common in the societies more or less urbanized= 'they are everyday problems in more or less urbanized societies"

11. *En mi clase hay muchas que se fijan en los demás pero el profesor no se entera porque los demás alumnos están en su mesa explicando como se hace (*) las cosas* [pG07fnw]
    In my class (there) are many who copy from the others but the teacher (does) not notice because the others are at their tables explaining how (to) make the things

For the present analyses, only opening segments in each text (i.e., the first L-unit) were categorized according to the three levels of connectivity described above. Two of them show clear trends with age. Level I, in which participants produce only coordination and/or juxtaposition, tends to decrease with age; level II, in which participants produce one level of subordination, increases with age; and level III, in which participants combine coordination and/or juxtaposition with subordination within the same discourse unit, presents a mixed pattern, slightly increasing from 9 to 12 years, then decreasing from 12 years to 17 and afterwards increasing again.

In contrast to what we have found for type of connectives, the internal architecture of discourse units was neither affected by genre nor by modality. That is, the complexity of syntactic devices used for clause linkage is a developmental phenomenon, and does not seem to depend on communicative purposes or mode of production.

SUMMARY

We have analyzed four features of texts that we consider diagnostic of level of proficiency in text production: elaboration and precision of information, diversification of linguistic means and packaging of information. We have seen how each of these features develops with age, which in our sample means also level of schooling and, in turn, increasing experience with written language, at least with the schooled written register. We did not find emergence of new linguistic resources in any of the age groups included in our study. None of the explored resources - different kinds of EXPAND moves, lexical NPs, constructions for downgrading agency or syntactic devices for connectivity - were absent from the texts produced even by the youngest participants. It is the frequency and the ways in which they are used that made a full difference in the texts. By adding details to the facts or notions introduced in the text the speaker/writer demonstrates an increasing concern of the need to provide a more complete account of the theme deployed in the texts so as to fulfil the functional demands of expository

texts. By making reference lexically explicit and adding details to subject NP, he/she demonstrates a similar concern, this time for facilitation of full identification of referents. These two features–elaboration and precision–suggest an increasing awareness of the audience needs on the part of the speaker/writers. An important facet of rhetorical flexibility relates to the speaker/writer communicative need to hold the attention of their addressees. There is no doubt that by providing a more elaborate and precise information they are in a better position for fulfilling this aim. By the same means they are reducing the addressee's processing effort and guiding interpretation and thus increasing the relevance of the text content (Wilson, 2000).

Another means to the same end consists in producing a varied and coherent output. These two qualities are obtained by diversifying the linguistic means deployed by speaker/writers and by producing a more connected discourse. We have exemplified the first quality by following the developmental path in the use of different construction types for downgrading agency. The same quality, however, has been manifested in other linguistic domains such as lexical diversity (Strömqvist et al., 2002) and verbal structure and verb types (Ragnarsdóttir et al., 2002). The second quality, that of connected discourse, was exemplified by an increasing use of subordination as well as by an increasing degree of embedding in interclausal linkage.

To conclude, children use genre-appropriate forms of verbal expression both in their expository and narrative texts from the youngest age group we examined. On this basis they recruit an increasingly wider range of resources at the different levels of text construction, from overall organization to internal clause structure, that both manifest an increasing concern for potential audience and supposedly enable them to hold their addressee's attention. We have seen how the developmental availability of linguistic resources involved in each of the analyzed features interacts with the writer/speaker communicative purpose in different circumstances (i.e., the constraints of genre and modality of production) except perhaps for some aspects of syntactic complexity that seem to be less affected by genre and modality. In our view, one of the many outstanding contributions of Ruth Berman to the theory and practice of text production in development is initiating and expanding the multifaceted perspective taken in this study – age, genre and modality – which is essential to understand the development of language.

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