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The construction of discourse and its development in first and second language

Abstract

This article presents cross-linguistic research which investigates the construction of discourse and its development in French and Arabic first language (L1) and in French second language (L2). It aims to study and to compare the complexity of the acquisition and the development of means necessary to establish the cohesion of discourse in L1 and in L2.

We compare here the capacity to organize a complex body of information which is discourse within different levels of mastery in L1 and in L2. More precisely, we relate the use of discourse markers to the development of language acquisition in the productions of two types of learners:

1. French and Arabic speaking Jordanian children of 4, 7, 10 years in L1,

2. Arabic speaking adult Jordanian learners of French L2 who represent three acquisitional levels (three *interlanguages*, see Selinker, 1972, or three *learner varietie*s): beginner, postbasique and advanced.

In this research, we also analyse and compare the production in L1 of adults native French and Jordanian Arabic speakers. This comparison aims to define the typological differences which have an impact on the construction of discourse in French and Arabic.

All the informants have produced a spatial discourse by describing a picture representing a place with streets, cars, people and surrounding buildings. The data were collected by a procedure which ensures the absence of mutual knowledge.

A large amount of research has been devoted to the expression of the spatial reference in L1 and in L2, but few studies have investigated the comparison of L1 and L2 in this domain. In this study, we take into consideration the results of the comparative studies of Hendriks (1998), Hendriks and Hickmann (1998), Hickmann and Hendriks (1999) and Watorek (2002).

1. Aims of the research

This study focuses on the expression of spatial concepts and their organization in the discourse of two types of learners: children in L1 and adults in L2. This discourse is the result of a *complex verbal task* (Levelt, 1989). The complex verbal task (description in this research) refers to a communicative context which demands the speaker to use complex means of linearization and organization of information.

To produce a discourse, a speaker needs two types of knowledge:

1. The micro-structure: morpho-syntactic and syntactico-semantic involved in the utterance-level.

2. The macro-structure or discourse-level: linking up utterances by pragmatic principles which are almost universals ; the linguistic realization of these principles implies specific means in each language.

The speaker in this way mobilizes two abilities: (1) grammatical knowledge and (2) mastery of referential expressions which are interpretable and meaningful in the context. These expressions can be (1) deictic which interrelate to an extralinguistic referent or (2) anaphoric which interrelate to a referent already introduced in the discourse.

Thus, in the construction of discourse, the speaker must produce grammatically well-formed utterances and has to regulate the flow of information across them. The organisation of the information within utterances indicates the capacity to introduce, to maintain and to switch referents. These operations ensure the construction of discourse. The devices which

realize them allow informants to mark the contrast between known/unknown information. When new information is presented, it involves special linguistic material. Once this operation is realized, the information changes its status and implies other means to ensure its maintenance.

In our analysis and comparison, we focus on:

1. the interaction between the phrasal and the discourse factors,

2. the interaction between universal cognitive and linguistic specific factors,

3. in L2 productions, the interaction between L1 and L2: the way in which spatial concepts are mapped into linguistic form and used to structure space in French and in Arabic (phenomena of transfer).

2. Frame of analysis

2.1 Spatial localisation

Spatial localisation involves at least two entities. In a localisation like *there is a woman in front of the shop*, the place of *woman* is determined by the *shop*. The first entity is called *theme* (Th) and the second *Relatum* (Rel). In some localisations, the Rel can localise multiple Th (for example *there is a woman and a boy in front of the shop*); conversely, multiple Rel can serve to describe the emplacement of one Th. This can be the case in static or dynamic localisation (for example *the woman is in front of the shop and beside the tree* or *the car leaves the station in the direction of downtown*). Furthermore, some locative expressions such as *between* imply two Rel.

In any spatial localisation, the essential notion is the *region* (see Klein, 1986). In *there is a woman in front of the shop*, the entity *woman* is localised in the region specified by the locative expression *in front of* and which belongs to the entity *shop*. This region is established by an extension of the sagittal axis of *shop* into the exterior space.

Klein (1986) proposes that perceptual space is infinite, is composed of sub-spaces, and has two structures: topological and dimensional projective. Thus, two types of spatial relations can be distinguished:

1. topological: where each space is seen as bounded and neighbourhood**,

2. dimensional projective: which is ordered into three dimensions: vertical (up/down), lateral (left/right) and sagittal (front/back).

The lateral and sagittal dimensions depend on the position and the orientation of the speaker. They are established with respect to the *origo* (see Bühler, 1934) which represents the prominent place. The origo can be (1) the speaker or the addressee or (2) the Rel itself.

Spatial description is governed by the *perspective* (see Levelt, 1999) chosen by the speaker. The perspective can be one of the following systems:

1. deictic: when the orientation of the speaker is projected on the Rel (for example: *the bike is on the left of the car* when the *bike* is localised with respect to the left of the speaker which is projected on the *car*);

2. intrinsic: when the orientation of the Rel determines the localisation of the Th. When the localisation is established between a Rel like *tree* or *ball*, which do not have an intrinsic orientation, the spatial relation is inevitably deictic;

3. absolute: when the localisation of a Th is established with respect to the directions: north/south, east/west.

2.2 Discourse analysis

In order to analyse the productions of our informants, we adopt the model of Klein and von Stutterheim (1991). This model proposes that a discourse is an organized structure which answers a specific question, named the *quaestio*. This question, which can be implicit or explicit, imposes constraints on the way that the information is organized and mapped into referential domains: space, time, entities (persons/things), events and modality.

The constraints of the *quaestio* in a specific complex task guide the way in which the speaker selects and linearizes the information. The information to be transmitted is first mapped into a conceptual format before being linguistically encoded. Levelt (1989) postulates that a linguistic production can be seen as an interaction between the conceptualization of a message, its linguistic realization, and its formulation.

The information is divided according to the *quaestio* in two structures: (1) the foreground which contains utterances that answer directly the question and (2) the background where the utterances are not relevant for this question.

In the picture description, the main body of information is arranged around two referential domains: space and entities (persons/things). The *quaestio* of this complex task is "where is what in L?" (see Carroll and von Stutterheim, 1993); L is the total space of the picture that informants describe. Each descriptive utterance answers to "what is in L1?", "what is in L2?", .. "what is in Ln?", L1, L2, …, Ln are the sub-spaces of L. To realize the description, the speaker/informant divides the whole space L in L1, L2, … Ln. The description of all these sub-spaces constitutes the description of L.

The *quaestio* helps to analyse the *referential movement*, which is the development of information in one domain within utterances. The referential operations can be divided in four main types:

1. introduction: a new referent is presented for the first time,

2. maintenance: a presented referent is maintained in the following utterance(s),

3. reintroductio: an already introduced referent is represented in an utterance which is not successive to the one where this referent was mentioned,

4. rupture and change: a new referent is presented.

Each of these operations involves appropriate linguistic devices which ensure interaction between the utterance level and the discourse level. These devices permit (re)presenting information with respect to its status: new versus given. Languages provide specific means to realise these operations. The two languages concerned here, French and Arabic, mark the distinction of the status of information by articles and pronouns. The indefinite article marks new information, the definite article and the pronouns mark given information. The articles which ensure the distinction between given/new information at the discourse level are multifunctional, they mark the gender and the number at utterance level.

In addition to specific means such as articles and pronouns which serve in the cohesion of discourse, languages provide non-specific means, connectors such as *and* or particles such as *too*.

The organization and the linearization of the spatial information imply different *frames*, or strategies which reflect ways of conceptualizing the description of the picture. Carroll and von Stutterheim (1993) have grouped these strategies in three basic types:

1. *Global frame*: here the complex configuration under description is divided to defined sections. The concepts used to realise this division are the coordinate axes, especially lateral and sagittal, or inclusion. The speaker can establish L1, L2, … Ln of the picture by the expressions encoding these concepts. Thus, global frames can be *on the left/right of the picture*, *in the front/in the back*, or *in the middle*. Note that it is impossible to divide the picture by using other concepts like *above/under the picture* or *beside the picture*. These expressions can not operate in global frame.

2. *Point-to-point*: in this frame, the localisations are expressed by regions of space which are associated with entities: *beside the shop*, *in front of the building*, etc.

3. *Linear frame*: this frame is based on the concept of a tour in the space under description. The speaker plays the role of fictive observer who moves in this space. This strategy implies verbs of movement: *when I go left there is a building*.

These frames build together the total description. The speaker can begin a descriptive sequence with the global or the linear frame. These strategies organize a relation between a sub-space which belongs to the picture under description and an entity Th; then he uses the point-to-point frame to establish a spatial relation between one entity Th and the sub-space belonging to another entity Rel .

<u>On the left (of the picture)</u> there is <u>a shop</u>   Global frame
<u>In this shop</u> there is <u>a woman</u>   Point-to-point

2.3 Previous studies in L1 and L2

The acquisition of language was and still is the centre of research in different disciplines. Since Chomsky, theories in psycholinguistics accept that the acquisition of language is related to innate predispositions. Recent research is concerned with three main questions (see Kail, 2000):

1. The exact nature of this predisposition: For Chomsky, what is innate is the universal grammar which constitutes the base of the acquisition and the development of language. The child, equipped with this grammatical knowledge, discovers and acquires the rules of his language. For Piaget, the innate device does not contain pre-existing knowledge but operates as a cognitive functional base.

2. The mechanisms involved in the process: This point divides the developmentalists in two camps: those who defend that the acquisition of language is *domain specific* (Chomsky) and those for whom this acquisition is on the contrary *domain general —*

determined by the same cognitive principles which govern all types of acquisition (Piaget).

3. The role of the input in the conceptual and linguistic development of the child. By this central question, the research revives the old debate of linguistic relativity. This debate is mainly presented by two theories: Whorf postulates that conceptual construction is realized within the language; Boas, on the contrary, and also Piaget, attribute to this construction a cognitive origin.

The cross-linguistic developmental research which deals with the expression of space of Slobin and de Bowerman represent these two opposite positions. Slobin (1973, 1985) argues that children from different languages elaborate and develop the same concepts in the same order. The influence of the language remains minor. Bowerman (1985; Bowerman and Choi, 1994; Choi and Bowerman, 1991) defends that the input plays, from the beginning of acquisition, the central role in the conceptual construction of space.

Lately, Slobin (2001) and Bowerman (Bowerman and Choi, 2001) adopt a more interactionist position. They admit that the construction of concepts involves the interplay of both linguistic and non linguistic knowledge. Slobin insists that the child begins his acquisitionnal task equipped with *operating principles* which can be universal but also typological. Bowerman attributes to non linguistic knowledge an important influence on the conceptual construction:

> Non linguistic perceptual and conceptual predispositions for space do not, then, shape children's semantic categories directly, but only in interaction with the semantic structure of the language being acquired" (Bowerman and Choi, 2001: 505)

As for the construction of discourse in L1, Berman and Slobin (1994) analyse narratives produced by children speakers of different languages. The results of this study show that the capacity to produce discourse increases progressively with age. The children before 8 or 10

years old do not master the constraints that impose the organization of a complex quantity of information and the implications of this organization.

Karmiloff and Karmiloff-Smith (2003) investigate the cohesion of narrative discourse produced by English and French children of 4-5, 6-7, and 8-9 years old. The authors show that only children about 8-9 begin to use developed referential means which establish the cohesion of the discourse.

The study of Ehrich (1982), which investigates the description of places produced by children in Dutch L1, and the study of Weissenborn (1986) about the description of itinerary produced by children in German L1 point out that the competence to construct discourse begins around 10 years old. Before this age, children produce deictic spatial expressions, and can not present the information in an organised unity.

Studies which compare the acquisition of L1 and L2 confirm this observation. Hendriks (1998), Hendriks and Hickmann (1998), Hickmann and Hendriks (1999) and Watorek (2002) state that in different languages, children before 7 or 8 years have difficulty constructing discourse. They do not mark correctly the information according to their referential status (given versus new), and do not use referential means which rely utterances.

As for second language acquisition, the pioneer longitudinal cross-linguistic studies of the ESF[1] project represent the major evolution in the domain. These studies confirm, according to the assumption of Corder (1967), that the process passes through several stages in the direction of the target language. Thus, the adult learner in L2 elaborates a transitional language called *learner variety*. The transition between one variety and the next one is systematic. The internal organization of each learner variety is systematic as well.

The ESF research has analysed different types of discourse (narratives and spatial descriptions) produced in L2 (English, French, German, Dutch, Swedish) by adults of several

first languages (Punjabi, Italian, Turkish, Moroccan Arabic, Spanish and Finnish). The analysis of discursive productions in L2 has led to several conclusions:

1. The language of the learner passes through three main varieties: prebasique, basic variety and postbasique (see Klein and Perdue, 1997). The researches insist that the progression between one stage and the next is gradual.

2. The internal organization of each learner variety is governed by determining factors which are semantic (the referent that has the highest degree of control is placed first) and pragmatic (the information of focus comes before the information of topic). The interplay of these factors leads to a specific utterance structure. The weight of these factors changes within stages.

3. The progression within the varieties can be explained by communicational, individual and interlinguistic factors.

The approach "learner variety" adopted in the project ESF constitutes a rupture with the "analysis of errors" approach. Some researches devoted to L2 acquisition have investigated the productions in L2 by the means of errors. They considered this phenomena to be a criterion for dividing the utterances of L2 learners into grammatical and non grammatical. The discussions about the origin of the errors has introduced the notion of transfer. This domain was marked by two opposite positions:

1. The contrastive hypothesis (see Lado, 1957) assumes that the interference between L1 and L2 is the main origin of errors in L2. This interference produces two possibilities: (a) *positive* transfer attributed to similitude in the structures of L1 and L2; this similitude is assumed to make easier the acquisition of L2 (b) *negative* transfer relied to the divergences between the two languages, these divergences represent an important difficulty to acquire L2.

2. The hypothesis of the identity (see Burt and Dulay, 1980) has postulated that the L1 and L2 acquisition are similar and governed by the same principles, and that the first language could not have an impact on L2 acquisition.

The new approach of learner variety shows the instability of the linguistic system of the L2 learner; it considers the errors as manifestations of a dynamic acquisitionnal process. The learner formulates hypothesis about the function of L2; he then tests his hypothesis while communicating. The errors help him modify and correct his productions. This new approach considers also the error as possible manifestation of the influence of L1. The passage from error analysis to learner variety has changed the way in which the L2 acquisition is treated; the attention is from now on paid to learner productions rather than to learner errors.

The influence of the first language on the organization of the learner variety in L2 is recognized as a cognitive perceptual base which represents preliminary knowledge. This base can be helpful in the beginning of the process, but becomes more complicated at advanced levels; it can be the origin of functional transfer which persists and represents a complex task for the learner.

Following the studies of ESF, several studies investigate the construction of discourse by advanced and very advanced learners in L2 (see among others Carroll and von Stutterheim, 1997; Carroll and al. 2000; Lambert and al. 2003). The results of the analysis point out particular characteristics of this acquisitionnal stage. The advanced learners who have acquired complex morpho-syntactic means in L2 still organize a complex flow of information according to principles of L1.

2.4 Cross-linguistic differences

The way languages structure space has created an important field of investigation in cognitive linguistics. The researches of Talmy (1983, 1987) focus on the relation between grammar and cognition. This approach sheds light on concepts which are grammatically

specified within different languages, and shows that grammaticalized concepts represent a criterion which determines the selection of information in different conceptual domains.

Jackendoff (1999) confirms that the cross-linguistic differences appear in (1) the semantic distinctions in a lexical domain, (2) the fact that some semantic and cognitive categories are grammaticalized and others are not, (3) the particular syntactic constructions used to encode special notions.

The studies which investigate the expression of spatial reference in L2 (Carroll and von Stutterheim, 1997; Carroll and al. 2000; Lambert and al, 2003 mentioned above), and our present study too, show that grammatical specificities of a language affect also the way information is organized in the discourse.

For Becker (1997), the expression of space differs between languages in several aspects: (1) some concepts are systematically encoded in one language but minimized or absent in an other, (2) one concept can be encoded by one form in a language and by several forms in an other, (3) the class of words (prepositions, adverbs, verbs) that encode the spatial concept diverge between languages.

These divergences will lead to important differences in the way spatial concepts are encoded and organized in the discourse. Thus, the spatial information will be encoded by different categories and distributed differently within the constituents of an utterance.

French and Arabic

The analysis of the spatial descriptions produced by French and Arabic adults in L1 permits delimiting the influence of some typological features on the structure of spatial discourse in French and Arabic. The comparison shows that these two languages select different information and organize them in different ways. These differences concern mainly: (1) word order (2) referential features and (3) locative expressions.

2.4.1.1 Word order: operation of the introduction of referent

The schema of the utterance in oral French is SV(O). Arabic, by contrast, provides SV(O) and VS(O). The schema SV, which exist in the two languages, represent a special constraint in Arabic: a new referent can not be introduced in the head of the utterance. It is impossible to produce a descriptive utterance like

(1) *<u>set</u>   uddam   almahal
    <u>a lady</u>   in front of   the shop

but only

(2) <u>alset</u>   uddam   almahal
    <u>the lady</u>   in front of the shop

in (2) the referent *woman* is already introduced in the discourse and is maintained or reintroduced again. In French, the two schemas are possible

(3) <u>une dame</u> est devant   le magasin
    a   woman is in front of   the shop

(4) <u>la dame</u>   est   devant le magasin
    the woman is   in front of the shop

This difference means that in Arabic, the information of Rel should precede the information of Th. To present a new referent Th before the information which encodes its localisation, this referent can appear after the existential like in (5); it can also be introduced after a connecter like in (6) when the construction is not existential

(5) fi   set   uddam   almahal
    there is   lady in front of   the shop

(6) wa   set   uddam   almahal
    and   lady   in front of   the shop

Besides, in Arabic there is no indefinite article, but only definite one, which is, like in English, invariant to gender and number. In French, by contrast, the definite article depends on the number and the gender of the referent that it defines. Another difference in the utterance structure concerns the copula. In Arabic, it is obligatorily left out in the affirmative and present constructions.

As for the construction of complex utterance, in Arabic the use of the relative pronoun is determined by the referent. If the referent is defined, the pronoun appears in the construction; if it is not defined, the relative pronoun is obligatory omitted. In French, as in English, the relative pronoun is used in both cases.

2.4.1.2 Referential features: operation of the maintenance of referent

The differences between French and Arabic appear also in the pronoun system. In comparison to French, this system is minimal in Arabic. The personal pronouns are independent, but the others are attached and operate by suffixation. If these pronouns are suffixed to a noun, they mark the possessive function; when suffixed to verbs, it is the accusative function which is served; and when suffixed to prepositions, they mark the dative function.

Furthermore, some pronouns in French do not have equivalents in Arabic. The pronouns such as *en* or *y* do not exist in Arabic. The first replaces an inanimate complement in the construction *de + NP*, the second replaces the complement of *à + NP*. These pronouns ensure maintenance of the expression of movement in space.

(7) Il   va   <u>à la maison</u> = il <u>y</u> va
   He   goes   to the house

(8) Il   revient   <u>de la maison</u> = il <u>en</u> revient
   He   returns   from the house

This type of referential maintenance is not possible in Arabic. Besides, the equivalent of the

relative pronoun *où* (where) does not exist in dialectal Arabic (only standard Arabic provides

haithu equivalent to *where* in its relative function). The pronoun *où* creates the maintenance

between two utterances

(9) Il y a un arrêt de bus
   There is a bus station
   <u>où</u>   il y a des gens
   where   there is   people

   In Arabic, to relate such two utterances, the speaker is obliged to mark the referential

maintenance by the means of an explicit pronominal element

(10)   fi   maokef bas
     There is stop   bus
     fiha   nas
     in <u>it</u>   people

2.4.1.3 Locative expressions: levels of difference

   The locative expressions differ in quantity and in referential features. The quantitative

difference concern mainly the expressions which encode the sagittal axis and the relation of

neighbourhood. In French, the sagittal dimension is encoded by the expressions *au*

premier/deuxième plan. These expressions do not have equivalents in Arabic. They permit, in

fact, dividing the space to describe (the picture) in two sagittal levels; they can be used only

to refer to space and never to entities. French speakers localize entities with respect to these

sagittal spaces or to lateral dimension (relation between space and entity), and use other

expressions to relate entities together (relation entity/entity). Arabic speakers can use only the

lateral division to create the relation space/entity. As for the concept of

neighbourhood/proximity, it is encoded by more expressions in comparison to French.

In addition to these quantitative differences, the repertoire of locative expressions in both languages shows an important referential divergence. The majority of locative expressions in French can be used transitively (as prepositions) or intransitively (as adverbs). In Arabic, a grand number is transitive. These differences oblige the speaker in Arabic to make explicit the Rel; in French, the Rel can be explicit or left implicit. Consequently, the creation of anaphoric chains differ dramatically.

Besides, the relation between transitive and intransitive constructions is not the same in these two languages. In French, lateral concept, for example, is encoded by

à gauche/à droite (intransitive expressions)
on left / on right

à gauche/à droite <u>de</u> (transitive expressions)
on left / on right of

In Arabic, the same concept is expressed by

ala <u>al</u>shmal/ala <u>al</u>yamin (intransitive expressions)
ala shmal/ala yamin (transitive expressions)

Thus, intransitive and transitive expressions are composed in Arabic of the preposition and a noun phrase (NP). This NP is defined in intransitive expression and not defined in transitive expression. In French, NP is no definite in both cases (except in expressions as *sur la gauche/droite(de)*). The difference concerns *de* following the expression which functions transitively and ensures the connexion with an other NP representing the reference object. This rule is the same with the expressions encoding the sagittal concept and inclusion as well.

Fi amam (transitive = in front of) versus fi <u>al</u>amam (intransitive)
Fi wasat (transitive = in the middle of) versus fi <u>al</u>wasat (intransitive)

It is also possible to use a PP with a definite NP in a transitive function. The expression in this case is followed by *min* which can be equivalent to *of* in English and to *de* in French. Thus, for example, *fi alamam+ min* is obligatory followed by a definite NP which represent the reference object.

The interaction between the rules of the construction of some PP and the connexion process creates other differences. In French

      devant   une dame
      in front a   lady

presents two possibilities. Actually, it can be one syntactic/informational constituent (the information relative to Rel ; in this case, it is followed by a NP which encodes the Th). It can also be two syntactic/informational components (*devant* is the expression of Rel and *une dame* is the Th).

In Arabic, this construction can only be one component. In order to be considered as two, speakers must introduce the existential *fi* (thers is) between the first and the second elements

      uddam fi   set
      in front there is lady

They can also change the order of these constituents

      fi   set   uddam
      there is lady in front

3. Data base

3.1 Informants

Each group of informants is composed of ten speakers. In French and Arabic L1, the native adults are between 28 and 40 years old, all of whom have four years of higher education. The children in French and Arabic are monolinguals; they represent three ages: 4, 7 and 10 years old.

In French L2, the Arabic learners study French foreign language at the university Yarmouk in Jordan. They constitute three groups:

1. beginners who have finished the first year,

2. postbasiques who are in their third year of studies,

3. advanced who have finished their fourth and final year.

3.2 Data collection and task

In order to study spatial reference in L1 and L2, it was necessary to choose a task which guarantees the production of locative expressions and can be adapted to both adults and children.

To elicit spatial discourse, we proposed to each of our informants a picture which represents complex spatial configurations. This picture, which was used in the studies of Carroll and von Stutterheim, 1997 and Watorek, 2002, is composed of a place with people, streets, cars and buildings around.

Adults were requested to describe the picture to someone who will listen to the tape and draw it. Children were asked to describe it to a person who was in the room but far enough away not to see it and who drew it, and showed it to another child at the end of the description. The oral descriptions of both adults and children were recorded.

In both situations, the informant could not rely on a shared visual context. Consequently, we avoid the production of deictic spatial expressions such as *here* and *there*. The procedure of collecting data counts as one of the most important conditions in the studies of the expression of spatial reference. Given that the interpretation of spatial relations depends on the contextual information, a situation of mutual/non mutual knowledge affects considerably the production of the speaker (see Hickmann, 2000).

4. Results of the analysis

4.1 The construction of discourse in French and Arabic first language

Discourse at 4 years old

The majority of descriptions produced by children of 4 years old in French and Arabic share the following features:

1. at utterance level: a simple mention of the entities Th without the information of the Rel. More precisely, children explicit "what" they see on the picture, but do not mention "where" ;

2. at discourse level: utterances are not linked between them.

The next examples illustrate this tendency[2]

(11) FFL 4:   une maison
          a   house
(12) FFL 4:   il y a   des arbres
          there is   trees

(13) AFL 4:   fi   biout
          there is   houses
(14) AFL 4:   fi   shajar
          there is   trees

The organisation of the spatial information according to this strategy implies the referential operations of introduction and change rather than the operation of maintenance.

In other localisations, children present an unknown referent by means which serve to mark the given information

(15) FFL 4:   il y a   un vélo à côté de l'arbre
          there is   a bike   beside the tree

(16) AFL 4:   fi   baskelate janb alshajara
          there is   bike   side   the tree

In these two examples, the referent *tree* is presented for the first time in the discourse.

In some utterances, children of this age explicit spatial relations between Th and Rel.

(17) FFL 4:   sur la route il y a   une marchande
          on the road there is   a   shopkeeper

(18) FFL 4:   une dame qui   est assise sur le banc
          a   woman who is   sitting   on the bank

The number and the type of spatial concepts attested in the production are presented in the following table

Table 1 The locative expressions in the discourse in French and Arabic at 4 years

Children	Projective relations			Topologic relations		
	Lateral axis	Sagittal axis	Vertical axis	Inclusion	Exclusion	Proximity
French		1	5	4		
Arabic	3	2	11	8		1

We notice that children of both languages express sagittal, vertical and inclusion concepts.

Arabic children also encode lateral and proximity concepts. They express more relations in

comparison with French children.

Another important difference noticed between both discourses concerns the use of

anaphoric pronouns by Arabic children of this age.

(19) AFL 4: fi baskalate aleh set
      there is bike on <u>it</u> lady

(20) AFL 4: fi   mahal jowah bent
      there is shop in it girl

(21) AFL 4: wa fi nas aadeen
      and there is people sitting

      wa fokhom arma
      and above them notice

 (22) AFL 4: wa janbo amara
      and side it building

We think that the production of anaphoric chains in Arabic can be explained by the morpho-

syntactic specificities of this language. As we mentioned above (see 2.4.1), this language is

characterized by several features which orient the cohesion of discourse to be rather explicit.

The locative expressions in majority transitive, the function of pronouns by suffixation and

the quantitative differences (some pronouns which ensure the implicit maintenance in French

do not exist in Arabic) can be the origin of the emergence of a discursive capacity at 4 years

old. The observation is exposed here as a hypothesis that should be verified and profoundly

analysed.

This following table illustrates the different types of referential maintenance in the

utterances in French and Arabic:

Table 2 Referential maintenance in French and Arabic discourse at 4 years

Children	Implicit maintenance	Explicit maintenance
French	2	3
Arabic		7

The implicit maintenance attested twice in the discourse of French children is explained by the intransitive use of *devant* (in front of) and the use of *dessus* (intransitive expression which encodes the positive pole of the vertical axis). The explicit maintenance is realized by the transitive expressions such as *dans* (in) and *sur* (on). The explicit referential maintenance in Arabic discourse is explained by the transitive expressions. This maintenance is realized, as show the examples above, by anaphoric pronouns.

Furthermore, the children of both languages also produce complex utterances

 (23) FFL 4:   une dame <u>qui   fait du vélo</u>
                a   woman who makes bike (who is on bike)

(24) AFL 4:   fi   timthal hamel   saif
                there is statue   carrying   sword

Notice first of all that complex utterances in Arabic do not contain the relative pronoun equivalent to *who*. As we mentioned above (see 2.1.4.1), the use of this pronoun is governed by the informational status of the referent which precede it. In Arabic, *illi* (who) is used only after a definite referent. In the case of non definite referent, this pronoun is omitted. Thus, this type of complex utterances is not presented as principal subordinate and relative subordinate separated by the relative pronoun, but as one complex informational/syntactic structure.

In French and Arabic complex utterances, the grand majority of relative subordinate does not contain locative information, but rather details about some aspects of the Th. This information belongs to the background of the text.

In few utterances in French, the locative information is presented in the relative subordinate

(25) FFL 4:   des messieurs <u>qui jouent au foot   devant</u>
          gentlemen   who play football   in front

In their discourse, children use a lot of non specific devices. The utterances in French and in

Arabic contain a grand number of connectors such as *et* or *wa* (and) and spatial-temporal

means such as *après* or *baadain* (after) and also additive particles such as *aussi* or *kaman*

(also, too). These devices ensure the addition of the entities Th, and sometimes, especially

connectors, establish a relation between two utterances.

Discourse at 7 years old

A major development is attested at the discourse of 7 years old in both French and

Arabic. First of all, the children produce full descriptive utterances by relying a Th to a Rel.

They mark also the relations between utterances. This way to organise spatial information

creates some descriptive sequences composed of several descriptive utterances. This

tendency is presented in the following two sequences in French and in Arabic ; each sequence

is produced by the same speaker

(26) FFL 7:   il y a   une voiture
          there is a   car
          un monsieur   à côté sur le trottoir   avec un journal
          a   gentleman   beside on the pavement with a newspaper

          à côté un pigeon
          beside a pigeon
          derrière le monsieur   un arbre
          behind the gentleman a tree

(27) AFL 7:   fi   sayyara
          there is   car
          waraha bas akhdar
          behind it bus green
          wa   fi   set   ala alkoursi
          and there is   lady on   the chair
          wa fi shajara janbha ajouz
          and there is tree beside it old   **(old person)**

The expression of spatial relations in the descriptive utterances leads to the use of a great number of locative expressions. The number of these items increases considerably in comparison with this attested in the discourse of 4 years old (see table 1)

Table 3 The locative expressions in the discourse of French and Arabic children of 7 years

Children	Projective relations			Topologic relations		
	Lateral axis	Sagittal axis	Vertical axis	Inclusion	Exclusion	Proximity
French	26	32	67	20	9	50
Arabic	36	17	24	13		29

Notice that French speakers use more locative expressions that Arabic. They also express the concept of inclusion, neglected in the productions of Arabic speakers.

Besides, creating continuous sequences involves principally the operation of referential maintenance. Children, particularly Arabic, use anaphoric means since in their language the majority of locative expressions are transitive. In French, on the contrary, the cohesion between utterances can be built implicitly when the speaker uses intransitively the locatives expressions. The following table illustrates the increasing of the referential maintenance in comparison with younger children of both languages (see table 2) and also the differences in the type of maintenance by the two groups of speaker at 7 years old

Table 4 Referential maintenance in French and Arabic discourse at 7 years

Children	Implicit maintenance	Explicit maintenance
French	15	77
Arabic		38

The linguistic realization of the explicit maintenance implies different types of means in the discourse of children of both languages. These means are presented in the following table

Table 5 The anaphoric means in the discourse in French and Arabic at 7 years

Children	Definite NP	Pronominal	Demonstrative	Numeral
French	73			3
Arabic	28	12	1	

The excessive use of NP is justified by the conceptual strategies adopted by these children.

Their descriptions manifest actually some traits which can be seen as discursive "fragility".

Some descriptive sequences are short and reduced to two utterances. Afterwards, the speaker

passes to other spatial configurations.

(28) FFL 7:   à gauche   il y a   un café
               on the left there is a coffee shop
               il y a   un vélo devant
               there is   a   bike in front of
               à droite   il y a   une rue
               on the right there is a   street

This method of informational organization is based systematically on the global frame.

Speakers in both languages return regularly to the main sub-spaces of the picture. They also

use the same Rel in non successive utterances which implies the referential operation of

reintroduction.

(29) FFL 7 utterance n° 1:   il y a   un vélo sur le trottoir
                             there is a bike on the pavement
              n° 11:   il y a   un marchand de fleur sur   le trottoir
                       there is   a   seller   of flowers on the pavement

(30) AFL 7 utterance n° 6:   timthal   janb alshajara
                             there is   status side the tree
              n° 9:   fi   baskelate   janb alshajara
                      there is   bike   side   the tree

The operation of reintroduction involves definite NP rather than pronouns.

Besides, in successive descriptive utterances where referents are produced then

maintained, the use of pronominal means in Arabic is justified by the transitive locative

expressions. In French, the intransitive expressions are based on implicit maintenance and

consequently do not imply pronominal means.

At this age, speakers produced complex utterances. Whereas the relative subordinate at 4

years old contains details about the Th; at 7 years, the relative subordinate can ensure two

informational functions: (1) presenting the localisation of the Th as in example 31 and (2)

reintroducing locative information as in 32

(31) FFL 7:   et un vieux monsieur <u>qui   s'approche de   la   dame</u>
              and an old   gentleman who comes close to   the lady

(32) FFL 7:   derrière l'homme <u>qui est à gauche</u>   il y a   un arbre
              behind   the man   who is on the left there is a   tree

The discourse at 10 years old

The descriptions at 10 years old mark an important evolution. The speakers of French and

Arabic produce more developed discourse. The number of explicit spatial relations increase;

the operation of referential maintenance becomes the major operation which organize the

distribution of the information between utterances.

(33) FFL 10: sur la feuille à gauche il y a   un grand immeuble
              on   the picture on the left there is a big   building
              en bas   de cet immeuble il y a une rue avec des arbres
              at the bottom of this building there is a street with   streets
              et   un lampadaire un tabac
              and   a   street lamp a tabac
              il y a   une fontaine   aussi
              there is a   fountain   too
              et derrière la fontaine il y a un autre immeuble
              and behind the fountain   there is an other building
              et   à côté de cet immeuble il y a   une rue
              and   beside   this building   there is a   street

(34) AFL 10: fi   binayat   alye ala yasar alsoura
              there is buildings high on left   the picture
              wa   binhom   otel
              and between them hotel
              wa   fi   ala yamin alsoura   mabna
              and there is on right   the picture building
              wa fi   baadain   addamo   shajar ktir
              and there is then   in front of it   tree   a lot
              wa fi   binhom   timthal
              and there is between them statue

These two sequences illustrate the use of global and the point-to-point frames. The speakers

begin with the division of the space under describing in sub-spaces according to the global

frame. Afterwards, they establish the relations between entities.

In comparison with the descriptions produced by the children of 7 years, the types of encoded

concepts change ; the number of locative expressions increases in general, but some concepts

are less presented at this age. The table 6 presented bellow illustrates also the differences in expressed concepts in French and Arabic

Table 6 The locative expressions in the discourse of French and Arabic children of 10 years

Children	Projective relations			Topologic relations		
	Lateral axis	Sagittal axis	Vertical axis	Inclusion	Exclusion	Proximity
French	57	76	58	33	6	36
Arabic	59	30	58	53	5	53

As for relying descriptive utterances in sequences, the types of maintenance continue to diverge depending on the specificities of both languages. The implicit maintenance is attested more frequently in French. Arabic speakers use only in few utterances this kind of referential operation. As illustrated in the following table, in both groups, the explicit maintenance is the major operation.

Table 7 Referential maintenance in French and Arabic discourse at 10 years

Children	Implicit maintenance	Explicit maintenance
French	22	123
Arabic	9	125

In comparison with the discourse produced at 7 years old, here the number of referential maintenance increases considerably.

The building of descriptive sequences by using the global and the point-to-point frames is reflected by the anaphoric means in the discourses of this age. The most significant difference between the two groups concerns the type of these devises which mark the referential operations.

Table 8 The anaphoric means in the discourse in French and Arabic at 10 years old

Children	Definite NP	Pronominal	Demonstrative	Numeral
French	101	11	16	6
Arabic	56	64	12	3

In this last table we see again the impact of the referential nature of locative expressions on the manner in which the cohesion of discourse is built. Arabic speakers have to use the

pronominal elements since the repertoire of locative expressions is in majority transitive.

French speakers, on the contrary, can use locative expressions intransitively and consequently

produce fewer pronominal elements.

4.2 The discourse in French second language

    The discourse produced by the learners of all stages is characterized by cohesive

organization of information. The learners of the first level of proficiency (basic variety) build

anaphoric chains using the means available in their repertoire of French L2. These means are

mainly articles and rarely pronouns.

    The learners of this level produce prepositional phrases (PP) according to rules in French

(35) FSL basic variety: il y a   trois   voitures   <u>dans la rue</u>
                          there is three   cars   in   the street

They also produce a lot of *idiosyncrasic* PP (see Corder, 1967)

(36) FSL basic variety: et   il y a   deux   voitures
                          and there is   two   cars
                          il y a   aussi   une   femme   <u>côté   la voiture</u>
                          there is also   a   woman   side the car

(37) FSL basic variety: vélo <u>côté arbre</u>
                          bike side tree

The constructions *côté la voiture*, *côté arbre* point out the influence of L1 in two aspects.

First of all, in Arabic, some spatial concepts can be encoded by NP. This is precisely the case

for topologic concepts of proximity, inclusion and exclusion. Thus, *janb* (side), *wasat*

(middle) and *dakhel/kharej* (interior/exterior) express the information of the Rel. They

function as PP. Besides, the phenomena of connection which is realized by *of* in English and

de in French implies a simple juxtaposition in Arabic. This type of transfer appears again in

the following descriptive utterance

(38) FSL basic variety: il y a   des vélos <u>milieu le place</u>
                        there is   bikes middle the place

In some utterances, the learners of this stage mention only the two referents: Th and Rel and leave implicit the spatial relation between them. This strategy has the schema: NP + NP or Exist + NP + NP

(39) FSL basic variety: la   rue   beaucoup voitures
                        the street   lot   cars

(40) FSL basic variety: il y a   le   place cinq arbres
                         there is   the place five trees

In other spatial localisations, the learners use the articles to mark only the discursive function; the semantic function is neglected

(41) FSL basic variety: il y a   <u>femme</u>
                        there is   woman
                        côté   <u>la femme</u> <u>vélo</u>
                        side   the woman   bike

In these two utterances, the priority is for marking the status of the already given information and for realizing the referential maintenance operation. The new information is presented without the indefinite article. This tendency can be explained by the importance that learners give to the creation of continuous descriptive sequences. It could be explained also by the absence of the indefinite article in Arabic L1.

The discourse produced at postbasique and advanced levels mark an important progression which appears mainly in the construction of utterance. The cohesion of discourse attested at all levels relies on more developed devices at advanced levels. The difference in the form of the cohesion within the three levels is rather qualitative

The schema NP + NP, attested at the less advanced stage, where the spatial relation is left implicit between the two referents Th and Rel, disappears. The description of the emplacement of Th involves specific means. The postbasique learners use the locative expressions in French

(42) FSL postbasique: à côté de la fontaine il y a une colonne
                      beside   the fountain there is a colonne

(43) FSL postbasique: à droite   de   la photo il y a un immeuble
                                     at the right of the picture there is a building

and continue to produce, but less frequently, idiosycrasic PP

(44) FSL postbasique: à côté   ces   enfants   il y a un café
                                     beside these children   there is a coffee shop

(45) FSL postbasique: à la gauche des immeubles il y a des rues
                                     at the left   of   buildings there is   streets

In advanced stage, the number of correct locative expressions increases. However, the

idiosyncrasic PP persist in few utterances

(46) FSL advanced: <u>à côté l'arbre</u>   il y a un homme qui lit   le journal
                                  beside the tree there is a man   who reads the newspaper
(47) FSL advanced: <u>à la derrière de cette dame</u> il y a un homme qui vend
                                  at the behind of this lady   there is a man   who sells

These constructions, produced at the two levels, point out the influence of Arabic precisely in

the two points. The information relative to Rel in (46) shows a transfer in the process of

connexion. In (47) we notice that the construction of the PP follows the rules of the transitive

construction of in Arabic. The PP composed of definite NP is followed by *de* to ensure the

connexion with a definite NP.

    The progression within the three levels of proficiency in French L2 is actually clear in

several aspects. The discourses at advanced level are longer and more detailed in comparison

with discourse of the beginners. They also contain a most complex body such as the

information which belongs to the background.

    Thus, advanced learners produce more descriptive utterances, which means that they use

more locative expressions. The table below shows the evolution of this point within the three

levels

Table 9 The locative expressions in the discourse of Arabic learners of French LE

Level	Projective relations			Topologic relations		
	Lateral axis	Sagittal axis	Vertical axis	inclusion	Exclusion	Proximity
BV	13	8	5	12		4

| Postbasique | 22 | 18 | 13 | 22 | 1 | 11 |
| Advanced | 33 | 32 | 18 | 35 | 4 | 18 |

Notice that all the encoded concepts increase between the beginners and the postbasiques, and between the postbasiques and the advanced.

As for the discourse level, the cohesion ensured in the discourse of three stages is not created by the same types of maintenance neither by the same anaphoric means. The discourse of basic variety depends only on the explicit maintenance while French allows the implicit procedure. More precisely, all the locative expressions are used transitively while in French they can function intransitively too. The following table illustrates the types of referential maintenance at the three levels

Table 10 Referential maintenance in French L2

Level	Implicit maintenance	Explicit maintenance
BV		25
Postbasique	2	58
Advanced	10	81

Besides, the discourse produced at these three levels differs also in the means employed to ensure referential maintenance. Learners of basic variety use principally definite articles and some numerals. At the postbasique and advanced levels, the learners use different devices (see next table 11)

Table 11 The anaphoric means in the discourse in French and Arabic at 10 years old

Level	Definite NP	Pronominal	Demonstrative	Numeral
BV	25			3
Postbasique	46		12	9
Advanced	58	10	25	7

Another important criterion of the progression concerns the complexification of the descriptive utterances and the variation of its syntactic schema. As for the syntactic/informational complexification, postbasique and advanced learners produce complex utterances where the relative subordinate contains locative information, whereas

beginners produce mainly simple utterances. In comparison between postbasique and advanced learners, the number of such utterances is more important at the production of the advanced.

The variation in the utterance schema represent also a criterion of progression. Advanced learners produce syntactic structures which are impossible in Arabic and particular to French. They, thus, adopt in a few utterances the organizing principles which belong to French. These syntactic structures are: indefinite NP + PP (see examples 48,49 and 50) and PP + NP (see examples 51 and 52). The constraints which concern these constructions are explained in section 2.4.1.3

(48) FSL advanced: une rue   au fond   de cette image
                     a   street   in the background of this image

(49) FSL advanced: et   cinq arbre autour
                     and five trees around

(50) FLS advanced: une station de bus à côté de la fontaine
                     a   station of bus beside   the fountain

(51) FSL advanced: dans le carré   des voitures et   un bus
                     in   the square   cars   and a bus

(52) FSL advanced: devant   cette voiture un vélo
                     in front of this   car   a bike

5. The construction of discourse in L1 and in L2: comparison

Our analysis shows that the discourse organization present differences in the characteristics of each level of acquisition in L1 and L2, and also in the developmental sequences in the two processes.

Arabic beginner learners of French L2 produce discourse in which spatial relations are expressed and descriptive utterances are linked. In spite of their repertoire, they build a discursive unity by the means available. Employing this simplified or *prototypic treatment* (see von Stutterheim, 1996) of the information organization, they ensure the cohesion of the discourse. Thus, they lean on the pragmatic knowledge necessary in this task. In order to

mark the contrast of given/new information, they use the articles particularly. This strategy does not affect the cohesion of discourse but rather the construction of the utterance. In some utterances actually, they do not use articles to mark number and gender, but always use these items in their discursive function.

Children of 4 years, excepted in some utterances in Arabic, produce descriptive utterances without linking them together. They use, for example, the articles in their semantic function (to mark number and gender) and not in their pragmatic function (distinguishing the status of information as already introduced and known versus never introduced and thus unknown).

The discursive functions begin to appear at 7 years old. Children in French and Arabic produce more developed discourse and mark the operation of referential maintenance by anaphoric devices. This acquisitional level shows that in both languages, children adopt the same conceptual strategies. They take in consideration the complexity of the descriptive task. They explicit the spatial relations and rely them together. The differences that we attest between the discourse in French and Arabic is reflected in the linguistic realisation of the same conceptual strategies. The conceptual structure is encoded in linguistic structure with respect to different means available in French and Arabic and to different constraints imposed by these two languages.

In spite of this progression, some features of discursive fragility persist. They refer to the way children of this age distribute information between global frame and point-to-point frame. This obviously affects the form of the cohesion of their discourse.

At 10 years old, children produce more coherent and cohesive discourse. They manage both frames: global and point-to-point. They create more descriptive sequences and more developed discourse. The specificities of French and Arabic become the factors which govern the construction of discourse. Theses results confirm those of comparative studies that we adopted as reference.

As for L2 acquisition, the developmental sequences show that the utterance structure marks an important evolution and that the cohesion of discourse lies on more elaborated means. At advanced levels, learners produce more developed descriptive utterances; they also use pronouns to ensure the anaphoric relations between these utterances.

In comparison with the discourse of the postbasique learners, advanced learners produce some organisational schemas which are particular to French. We notice also that in the three concerned levels, learners produce idiosyncratic means in their productions. This production points out clearly the influence of Arabic L1. These idiosyncrasic means become less frequent at advanced stage. This type of transfer is explained by the important differences between the two languages. This influence appears also in the referential nature of locative expressions of both languages. The beginners use these expressions only transitively and avoid expressions which do not have 'equivalents' in Arabic. Advanced learners use intransitively the expressions that are transitive in Arabic.

Conclusion

The results of this study can be summarized in two points:

1. The relation between typological features and the discourse structure in French and Arabic.

2. The developmental sequences in LI and L2.

This study shows how the cross linguistic variations between French and Arabic affect both the utterance and the discourse level. These differences lead speakers of both languages to encode different concepts and to organize spatial discourse differently.

As for the developmental sequences in L1 and in L2, they can be defined in two different ways. Whereas the development in L1 is mainly discursive, in L2 it concerns mostly the utterance level. As the two, utterance level and discourse level, interact, the development of one of them affect inevitably the other.

We propose to explain the development in L1 by the *representational redescription* (see Karmiloff-Smith, 1992) of linguistic means. This process concerns the mastery of the plurifunctionality of items which serve both functions: semantic and pragmatic. We propose also to explain this development between 4 and 10 years by a constraint that we call 'cognitive functional' which reduces with age. Within the three concerned ages, children progressively master the complexity of communicative tasks and the complexity of items that ensure discursive cohesion.

The development in L2 can be defined by a *conceptual re-elaboration* (see Giaccobe, 1992) or by the task of "*thinking for speaking*" (see Slobin, 1996) which demand to "forget" the way space is structured in Arabic L1 and to learn how it is structured in French.

This development can be also explained by a constraint that we call 'conceptual functional' which governs the productions of learners, specially advanced, and represents the influence of L1. The task of advanced learners becomes more complex. It involves the perception of subtle functional divergences between L1 and L2.

As for the construction of discourse at 4 years old, our analysis points out significant differences between the productions in French and Arabic. These differences can be again explained by the specificities of the two languages. French children produce non-linked utterances; if they link them in few cases, the referential maintenance is rather implicit since they use intransitively the locatives expressions which function in French in both ways.

On the contrary, the linked utterances in Arabic are, on the one hand, numerous and, on the other hand, based on anaphoric chains built by more systematic use of suffixed pronouns (since in Arabic the most locative expressions are transitive and the used anaphoric pronouns function by suffixation).

Thus, the discourse construction at this acquisitionnal stage is not so "impermeable" to specificities of the language to be acquired. We agree, as it was shown in the developmental

studies in L1 and the comparative studies L1/L2, that the constraint that we called "cognitive functional" plays an important role in the production of discourse at 4 years old, but the discourse produced by Arabic children shows that the specificities of the language constitute a determining factor too.

This point was not the central aim of the present research. Nevertheless, it is mentioned in the analysis and here in the conclusion as an hypothesis which will be carefully investigated in subsequent research.

Notes

[1] Project of the European Science Foundation which studied the acquisition of second langue by immigrant learners (cf. Perdue, 1993).
[2] The presentation of examples is preceded by FFL/AFL (French first language/Arabic first language). The number witch follows refers to the age of the subject. In order to maker easier the comprehension of utterances in Arabic, which are written from right to left, they are presented by Latin characters from left to right. Each utterance in French and in Arabic is translated in English. The productions in French second language are presented by FSL.

References

Becker, A. (1997). *Theoritical framework. The acquisition of spatial relations in a second language*. Amsterdam: John Benjamin Publishing Company.

Berman, R. and Slobin, D.I. (Ed.) (1994). *Different Ways of Relating Events in Narrative: A crosslinguistic Development Study*. Erlbaum, Hillsdale NJ.

Bowerman, M. (1985). What shapes children's grammar ? In D.I. Slobin (Ed.). *The crosslinguistic study of language acquisition*. Volume 2 *Theoritical issues*. Hillsdale, NJ: Lawrence Erlbaum.

Bowerman, M. and Choi, S. (1994). " Linguistic and nonlinguistic determinants of spatial semantic development'. Paper presented at the Boston University Conference on Language Development, January.

Bowerman, M. and Choi, S. (2001). Shaping meanings of language: universal and language-specific in the acquisition of spatial semantic categories. In M. Bowerman and S. Levinson (Eds.) *Language acquisition and conceptual development*. Cambridge: Cambridge University Press.

Bühler, K. (1934). *Sprachtheory: Die Darstellungsfunktion der sprache*. Jena: Gustav Fischer.

Burt, M. and dulay, H. (1980). On acquisition order. In Felix Sascha.

Carroll, M., Murica-Serra, J., Watorek, M. and Bendiscioli, A. (2000). The relevance of information organisation to second language acquisition studies: the descriptive discourse of advanced adults learners of German. *Studies in Second Language acquisition* 22/3.

Carroll, M. and von Stutterheim, Ch. (1993). The representation of spatial configurations in English and German and the grammatical structure of locative and anaphoric expressions. *Linguistics* 31/6

Corder, S.P. (1967). Ths significance of learners' errors. *International Review of Applied Linguistics* 5.

Choi, S. and Bowerman, M. (1991). Learning to express motion events in English and Korean: the influence of language-specific lexicalization patterns. *Cognition* 41.

Ehrich, V. (1982). Discourse organisation and sentence form in child language: how children describe rooms. *Papers and Reports on Child Language development* 21.

Giaccobe, J. (1992). *Acquisition d'une langue étrangère: cognition et interaction. Etudes sur développement du langage chez l'adulte*. Paris: CNRC Editions.

Hendriks, H. (1998). Reference to person and space in narrative discourse: a comparison of adult second language and child first language acquisition. *Studi italiana di linguistica theorica e applicata*, numéro special.

Hendrils, H. et Hickmann, M. (1998). Référence spatiale et cohésion du discours: acquisition de la langue par l'enfant et par l'adulte. In M. Pujol, L. Nussbaum, et M. Liobera (éds). *Acquisicion de lenguas extranjeras: perspectivas actuales en Europa*. Madrid: Edelsa (collection CIE. Metodologia).

Hickmann, M. et Hendriks, H. (1999). Cohesion and anaphora in childrens' narratives: a comparison of English, French, German and Chinese. *Journal of Child Language* 26.

Hickmann, M. (2000). Le développement de l'organisation discursive. In M. Kail et M. Fayol (Dir.). *L'acquisition du langage. Le langage en développement au-delà de trios ans*. Paris: Presses Universitaires de France.

Jackendoff, R. (1999). The Architecture of the Linguistic-spatial Interface. In P. Bloom, M.A. Peterson, L. Nadel, and M.F. Garrett (éds). *Language and space*. Cambridge: The MIT Press.

Kail, M. (2000). Perspectives sur l'acquisition du langage. In M. Kail et M. Fayol (Dir.). *L'acquisition du langage. Le langage en émergencede la naissance à trois ans*. Paris: Presses Universitaires de France.

Karmiloff-Smith, A. (1992). *Beyond Modularity*. Cambridge, MA: MIT Press.
Karmiloff, K. et Karmiloff-Smith, A (2003). Comment les enfants entrent dans le langage. Paris: Retz.

Klein, W. (1986). Reference to space. A frame of analysis and some examples. Papier de travail pour le projet ESF.

Klein, W. et Perdue, C. (1997). The basic variety (or: couldn't natural languages be much simpler ?). *Second Language Research* 13.

Klein, W. et von Stutterheim, C. (1991). Text structure and referential movement. *Sprache und pragmatic* 22.

Lado, R. (1957). Linguistics across cultures: applied linguistics for language teachers. Ann Arbor: University of Michigan Press.

Lambert, M., Carroll, M. and von Stutterheim, Ch. (2003). La subordination dans les récits d'apprenants avancés francophones et germanophones de l'anglais. *Acquisition et Interaction en Langue Etrangère* 19.

Levelt, W.J.M. (1989). *Speaking: from intention to articulation*. Cambridge, Mass.: MIT Press.

Levelt, W.J.M. (1999). Perspective Taking and ellipsis in Spatial Descriptions. In P. Bloom, M.A. Peterson, L. Nadel, and M.F. Garrett (éds). *Language and space*. Cambridge: The MIT Press.

Perdue, C. (Ed.) (1993). *Adult Language Acquisition: crosslinguistic perspective.* Volume 1 *Field Methods*, Cambridge: Cambridge University Press.

Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics* 10.

Slobin, D.I. (1973). Cognitive prerequisites for the development of grammar. In Ferguson C.A. and D.I. Slobin (Eds.). *Studies of Child language Development*. New York, Holt, Rinehart and Winston.

Slobin, D.I. (1985). Crosslinguistic Evidence for the language-Making Capacity. In Slobin, D.I. (Ed.). *The crosslinguistic study of language acquisition.* Volume 2. Hillsdale, N.J: Lawrence Erlbaum.

Slobin, D.I. (1996). From "thought and language" to "thinking for speaking" . In J. Gumperz and S. Levinson (Eds.). *Rethinking linguistic relativity*.

Slobin, D.I. (2001). Form-fonction relations: how children find out what they are? In M. Bowerman and S. Levinson (Eds.) *Language acquisition and conceptual development*. Cambridge: Cambridge University Press.

Stuuterheim, von. Ch. (1996). " Function and Expression of temporal Concepts in German, English, and Algerian Arabic Texts". Communication presenté au Colloque international *Récit et Temporalité en langue première et en langue étrangère: Structuration du discours et Structuration de la langue,* juin, Université de Paris X.

Watork, M. (2002). Construction du discours par des apprenants des langues, enfants et adultes. Rapport final du projet APN, CNRS.

Weissenborn, J. (1986). Learning how to become interlocutor: the verbal negotiation of common frames of reference and actions in dyads of 7-14 year-old. In J. Cook-Gumperz, W. Corsaro and J. Streek (Eds.). Children's world and children's language. Berlin: Mouton de Gruyter.

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