

- Swain, M. (1985). Communicative competence. Some roles of comprehensible input and comprehensible output in its development. In S. M. Gass & C. G. Madden (Eds.), *Input in second language acquisition* (pp. 235–253). Rowley, MA: Newbury House.
- von Stutterheim, C. & Klein, W. (1989). Referential movement in descriptive and narrative discourse. In R. Dietrich & C. F. Grauman (Eds.), *Language processing in social context* (pp. 39–76). Amsterdam: North-Holland.
- Wilkes-Gibbs, D. (1995). Coherence in collaboration: Some examples from conversation. In M. A. Gernsbacher & T. Givón (Eds.), *Coherence in spontaneous text* (pp. 239–267). Amsterdam: Benjamins.
- Williams, J. (1988). Zero anaphora in second language acquisition. *Studies in Second Language Acquisition*, 10, 339–370.
- Zipf, G. K. (1949). *Human behavior and the principle of least effort: An introduction to human ecology*. New York: Hafner.

The development of anaphoric means to refer to space and entities in the acquisition of French by Polish learners

Marzena Watorek

1. Introduction

In this chapter, we present the development of the linguistic means used to construct anaphoric relations in the domains of space and entities in descriptive discourse. In a cross-sectional and cross-linguistic study, we analyse the development of linguistic means in these two referential domains for two groups of learners: intermediate and advanced Polish learners of French, and of two control groups: French and Polish native speakers. This latter analysis allows us better to evaluate the influence that different ways of organising information in French and Polish, in this kind of text in particular, have on the processes involved in constructing discourse in the target language. Our main questions are:

- A. How does the use of locative expressions change across the two groups of learners?
- B. More precisely: what are the spatial relations expressed, do they complexify with increasing proficiency?
- C. How does anaphoric linkage develop across the two groups?

2. Informants and data

Our database consists of static spatial descriptions by 8 intermediate learners who are second year students in the Department of Romance Languages at a Polish university (henceforth “group I”), and 9 advanced learners in their fourth year of studies in this same department (henceforth “group II”).¹ These students are future specialists of French (cf. Bartning’s *apprenant avancé d’instruction élevée* – ‘advanced learners with a high degree of education’; 1997) and were selected on the

basis of a socio-linguistic questionnaire to ensure that their acquisitional histories are comparable.

The communicative task analysed is a spatial description. All learners and native speakers (10 French and 10 Polish native speakers) were asked to describe a poster of a town to an unknown interlocutor who was unfamiliar with the poster.² The interlocutor was then asked to draw a picture based on the subject's description. This type of description (cf. Watorek 1996a, 1998) can be defined as a response to the question-type (or *quaestio*, Klein & von Stutterheim 1991): "where is what (in the picture)?" During the process of constructing discourse, this *quaestio* can be realised in two ways (cf. Klein & von Stutterheim's "referential movement", 1991): the more frequent realisation states the *quaestio* as, "what is there in L?" where L corresponds to the total space of the poster; the less frequent realisation asks, "where is this X?" where X corresponds to the entity already localised a first time. Hence, the utterances of the main structure in these texts can have two topic/focus organisations. In the case of the more frequent realisation of the *quaestio*, the information about space is in the topic, while the entity to localise is the focus of the utterance. In the other, less frequent, realisation of the *quaestio* the entity is in the topic, whereas the localising space is in the focus of the utterance. We will show that the distinction between these two realisations of the global *quaestio* is important for anaphoric linkage in that discourse cohesion is greater when an entity already localised for the first time, and is maintained in the topic of the following utterance for a more precise localisation.

The global *quaestio* "where is what in the picture?" constrains the informational content of the main structure utterances. Thus, every utterance of the main structure express the spatial relation between a reference entity defining the spatial context (relatum), and an entity to be localised (theme) in the global space being described, the poster.³

This spatial relation can be topological or projective. In the topological relations of inclusion, exclusion, neighbouring, etc., the intrinsic features of theme and relatum are essential because the spatial spans are delimited by these entities. For projective deictic relations, it is the orthogonal axis system (lateral/sagittal/horizontal) that allows the spatial localisation, thus the features of theme and relatum are less important since the origo of the system is the speaker. However, if the projective relations are expressed by a system of axes of an oriented relatum-object (intrinsic projective relations – a car has a "left" and a "right", for example) then the features of entities can be important for localisation.

Speakers use the spatial concepts and frames of reference to interrelate spatial information in a coherent text, which reflects different ways of conceptualising the configuration under description. Carroll and von Stutterheim (1997) analyse the patterns of organisation used in the descriptions of German and English native speakers as compared to English learners of German. They find two basic pat-

terns of organisation of spatial information: the *global* frame of reference and the *point-by-point* frame of reference. We illustrate these patterns with examples from our own data.

In the *global* frame, the speakers choose a complex structure, e.g., a system of coordinate axes (cf. example (1a)) or a specific sub-space of the global relatum (cf. example (1b)) projected onto the entity under description (i.e., the poster) to define sections and corresponding regions of space to localise the themes.

- (1) a. *a gauche il y a un bâtiment jaune*
on the left there is a yellow building
b. *au premier plan de l'affiche il y a une rue*
in the foreground of the poster there is a street

In the *point-by-point* frame, the information is expressed in terms of the individual objects that make up the entity under description. The themes are localised in the region associated with single reference objects represented in the picture (cf. example (2)).

- (2) *devant la fontaine il y a un arrêt de bus*
in front of the fountain there is a bus stop

The typical informational content in this kind of discourse corresponds to the static localisation that can be paraphrased as: "in the region of relatum X there is a theme Y" where the type of relatum chosen by the speaker determines one or the other of the two frames of reference. This information is encoded in the utterance by the general phrasal pattern *PP/ADV + V + NP*, common in both French and Polish, the languages considered in our study.⁴ However, some differences between Polish and French selectively influence the structure of the discourse produced by the respective native speakers. We also observe that the learners' production is constrained by differences in the structure of their variety at the intermediate and advanced level of acquisition.

In French, the finite verb (Vfin) in this syntactic pattern corresponds to the existential verb form *il y a*. In Polish where existential forms do not exist, we find locative verbs like *być* 'to be' or *stac* 'to stand', *leżec* 'to lie' etc. This difference has consequences for anaphoric linkage, as we shall see below.

The type of locative expressions available in French and in Polish⁵ also contribute to anaphoric linkage and influences the choice of the frame of reference (*global* or *point-by-point*) as well as the choice of the referential domain for marking discourse cohesion. Thus, the structure and the semantics of the available expressions constrain discourse construction in different ways as already shown by Carroll and von Stutterheim (1997) and Watorek (1996b).

3. The results

We present the results of our study in two steps. First, we report the type of spatial concepts expressed by the learners of the two groups (question [B] of the introduction) and the linguistic means used by each group. We conclude that the complexification of the spatial concepts expressed in the learners' descriptions (cf. Figure 1 in §3.1.1) depends on the linguistic means that are most easily mobilised (cf. Watorek 1996b) in the learner language of each group.

Second, we present the analysis of the locative expressions. We show firstly how learners choose one or the other of the referential domains (entities or space) to mark discourse cohesion. Secondly, the analysis of the structure of the NP-relatum included in the locative expression points to a developmental path for anaphoric linkage. The developmental path identified shows similarities with those found in longitudinal studies of first and second language acquisition. We will return to this in the conclusion.

3.1 Development of spatial concepts and anaphoric linkage

In this section we will first discuss the complexification of spatial concepts expressed in learner and native speaker descriptions (§3.1.1). We will then demonstrate that discourse coherence and anaphoric linkage depend to some extent on the phrasal patterns that speakers choose to encode spatial information (§3.1.2).

3.1.1 Complexification of spatial concepts

Our analysis shows that the type of spatial concepts expressed in the descriptions changes between group I and group II. In fact, we observe that the learners of group II use locative expressions which encode more complex spatial concepts. Figure 1 shows this evolution.

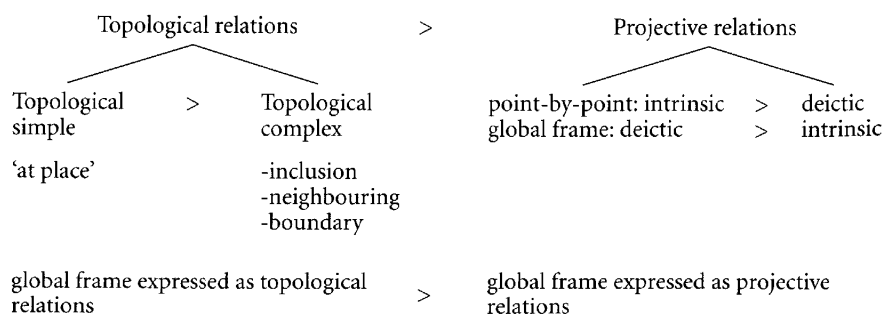


Figure 1. Type of spatial concepts expressed by the two groups of learners

Generally, the intermediate learners of group I use proportionately more topological relations than the advanced learners of group II. We see this in Table 1.

Another fact confirms this tendency. The global frame of reference is conceptualised by the learners of group I with topological relations, whereas the learners of group II use more projective relations (cf. Table 2).

It becomes clear from Table 2 that the native speakers of French and Polish tend to present more projective than topological relations in the global frame. This is not the case in the descriptions of the learners of group I. In other words, we find more expressions like *sur l'affiche* 'in the poster', *au centre de l'affiche* 'in the centre of the poster' in the descriptions of group I, whereas in the descriptions of the natives and the learners of group II we find more expressions like *au premier plan de l'affiche* 'in the foreground of the poster', *devant* 'in the front' for the sagittal axis, *à gauche/à droite de l'affiche* 'on the left/right of the poster' for the lateral axis and *en haut/en bas de l'affiche* 'at the top/bottom of the poster' for the vertical axis.

Table 1. Percentages of locative expressions encoding topological and projective relations

	Topological	Projective
POL > FR (I)	53	9
total 62	= 85.5%	= 14.5%
POL > FR (II)	136	72
total 208	= 65.4%	= 34.6%
FRENCH	258	227
total 485	= 53.2%	= 46.8%
POLISH	374	281
total 655	= 57.1%	= 42.9%

Table 2. Locative expressions encoding topological and projective relations used in the global frame of reference

	Global frame	
	Topological relations	Projective relations
POL > FR (I)	6	3
total 9	= 66.6%	= 33.3%
POL > FR (II)	11	36
total 47	= 23.4%	= 76.6%
FRENCH	14	111
total 125	= 11.2%	= 88.8%
POLISH	18	163
total 181	= 9.9%	= 90.1%

A comparison between these two groups of learners also shows that simple topological relations like 'at place' are expressed proportionately more frequently by the learners of group I than the more complex topological relations of inclusion and neighbouring. The topological relation of boundary is only expressed by group II (see Table 3).

In fact, the relation 'at place' is cognitively easier. It demands only a simple relation between a theme and a relatum without any constraint on the intrinsic features of either object. In the following example, The relatum is expressed, then the theme, and the precise relation between them is left vague.

- (3) *l'arrêt de bus une dame*
the bus stop a lady

In the relation of inclusion, on the contrary, the relatum must be an entity with the features of containment, and the preposition *dans* 'in' reflects this feature.

- (4) *dans la cage il y a un oiseau*
in the cage there is a bird

Table 3. The diversification of the expression of topological relations

	in the place of	inclusion	neighbouring	boundary	other
POL > FR (I)	13	14	8	0	18
total 53	= 24.5%	= 26.4%	= 15.1%	= 0%	= 34%
POL > FR (II)	34	48	24	6	24
total 136	= 25%	= 35.3%	= 17.6%	= 4.4%	= 17.7%

Table 4. Locative expressions encoding intrinsic and deictic projective relations used in the global frame versus the point-by-point frame

	Projective relations			
	Intrinsic		Deictic	
	global frame	point-by-point frame	global frame	point-by-point frame
POL > FR (I)	0	6	3	0
total 9	= 0%	= 66.6%	= 33.3%	= 0%
POL > FR (II)	19	24	17	12
total 72	= 26.4%	= 33.3%	= 23.6%	= 16.6%
POLISH	75	78	88	40
total 281	= 26.7%	= 27.8%	= 31.3%	= 14.2%
FRENCH	56	85	55	31
total 227	= 24.7%	= 37.4%	= 24.2%	= 13.7%

We also observe other tendencies. When the speaker organises spatial information in the point-by-point frame, projective intrinsic relations are expressed before deictic relations. The contrary is observed when the speaker organises spatial information in the global frame (cf. Table 4).

In the point-by-point frame, the intrinsic projective relations are expressed more in group I productions than the deictic ones which are more frequent in the descriptions of group II. This order of expression of the spatial projective relations is connected to the possibility of conflicts between the position of the speaker and the origo of the relatum, in cases where the relatum is oriented.

- (5) *à droite de la voiture bleue il y a un homme en vélo*
to the right of the blue car there is a man on a bike

In example (5), the car and the speaker have their "right" sides, which do not necessarily coincide. In this case, the speaker can present this scene in terms of the deictic projective relations if he bases the localisation on his own perspective. On the contrary, if the localisation is based on the object-relatum position (*car*), the speaker expresses this scene in terms of the intrinsic relations.

Where the relatum has neither lateral nor sagittal orientation, only the deictic interpretation of the projective relations is possible as with the relatum *tree* in example (6).

- (6) *à gauche de l'arbre il y a un homme qui donne à manger aux pigeons*
to the left of the tree there is a man who gives to eat to the pigeons

Hence, when the learners of group II start to express the projective deictic relations, they only choose non-oriented entities for the relatum. Thus, if the learner expresses a projective relation in the lateral or sagittal axis, he selects non-oriented relata, such as *river*, *bridge*, *tree* or *garden*.

Concerning the global frame, the projective relations are expressed first as deictic and then as intrinsic (see Table 4). In contrast to the point-by-point frame, in the global frame the relatum-poster is only oriented in the vertical axis, which corresponds to the speaker's position.⁶

3.1.2 The influence of the learners' linguistic means on the spatial concepts expressed

We find three basic phrasal patterns which characterise the structure of the learner-varieties of both groups:

- (A) PP/ADV + Vexistential + NP
(B) Vexistential + NP
(C) Vexistential + aussi + NP

The choice of phrasal patterns changes with the competence level of the learners and influences the complexity of the spatial relations expressed and the degree of cohesion produced by each group of learners.

The learners of group I use pattern (B) in which the PP/ADV component is more frequently left unexpressed than by the learners in group II. The ellipsis of the PP/ADV is frequently correlated with the presence of the additive scope particle *aussi* 'also' as in pattern (C): *il y a + aussi + SN*. In their descriptions, the advanced learners of group II use the complete phrasal pattern (A) more frequently: *PP/ADV + il y a + NP*. Let us now look at how the different uses of linguistic means by the learners of the two groups influences the organisation of spatial information in the analysed texts.

Pattern (B): *il y a + NP*

The relatum and the spatial span delimited by it is more often left implicit in the discourse produced by the learners of group I than that of group II. We observe that the learners of group I more frequently omit the locative expression (PP/ADV) encoding the relatum and the space delimited by it. Example (7) shows the first utterances of a description of a learner from group I.

(7) MAR, Polish > French (group I)

- 1 *il y a + il y a un marché*
there is + there is a market
- 2 *une petite rivière le pont*
a little river the bridge
- 3 *il y a + il y a des arbres*
there is + there are trees.
- 4 *c'est intéressant que /*
it's interesting that/
- 5 *ah on peut voir des des montagnes ici*
ah we can see mountains here
- 6 *et quoi d'autre ? + il n'y a pas beaucoup de monde*
and what else ? + there aren't many people
- 7 *dans la rue il y a des enfants qui jouent au ballon*
in the street there are children that are playing ball

We can see in this example that the dominant phrasal pattern is *il y a + NP*, where the NP refers to the theme. A locative expression referring to the relatum and the space delimited by it, pattern (A), is made explicit only in utterance 7. In Table 5, we clearly see that the omission of the PP/ADV is proportionately less frequent in group II and in the texts of native speakers of both languages.

Table 5. Main structure utterances with or without locative expression referring to the relatum

	implicit spatial expression	explicite spatial expression
POL > FR (I)	107	67
total 174	= 61,5%	= 38,5%
POL > FR (II)	121	219
total 340	= 35,6%	= 64,4%
POLISH	90	587
total 677	= 13,3%	= 86,7%
FRENCH	193	430
total 623	= 31%	= 69%

Table 6. Percentages of locative expressions referring to the global frame or point-by-point frame

	Global	Point-by-point
POL > FR (I)	9	53
total 62	= 14.5%	= 85.5%
POL > FR (II)	47	161
total 208	= 22.6%	= 77.4%
FRENCH	125	360
total 485	=25.7%	=74.3%
POLISH	181	474
total 655	= 27.6%	= 72.4%

Furthermore, we note that in group I, the explicit mention of the relatum is more frequent when the learners express the spatial relation with the point-by-point frame of reference (example (7)). On the other hand, explicit mention of the global poster-relatum, or its parts, is less frequent in the productions of group I, as seen in Table 6.

The explicit mention of the relatum in the global frame clearly becomes more frequent in group II. This means that the learners of group I consider the global relatum as presupposed with regard to the quaestio. They construct their descriptions based on the spatial relation between the themes and the relata corresponding to individual objects. It goes without saying that for these learners, this theme-relatum relation is within the global space being described.

The phrasal pattern (B) *V existential + NP* is frequent in the French data from native speakers and learners (cf. Table 7). But it becomes particularly productive in the descriptions of group I. This pattern then evolves in the descriptions of group II towards the pattern where PP/ADV is more often explicit (cf. Table 5). In addition,

Table 7. Percentages of the different verb types attested in the descriptions

	locative verbs	existential verbs	other
POL > FR (I)	11	129	34
total 174	= 6,3%	= 74,1%	= 19,6%
POL > FR (II)	29	237	74
total 340	= 8,5%	= 69,7%	= 21,8%
POLISH	362	118	199
total 679	= 53,3%	= 17,3%	= 29,3%
FRENCH	44	358	203
total 605	= 7,3%	= 59,1%	= 33,6%

we observe a diversification of the verb types used. Table 7 depicts the percentage of the different types of verbs found in the data.

Existential verbs are dominant in the descriptions of the two groups of learners and more frequent than in French native speaker productions. However, we observe a decrease of this verb type in the discourse of group II, bringing them closer to the native speakers of French. The existential verb is so productive in this kind of discourse in French L1 and L2 (cf. Watorek 1996a, 1998) because it allows the NP that refers to the theme in focus to be at the end of the utterance ("focus expression last"). Most main structure utterances "answer" the quaestio "what is there in L?": the information regarding the theme is in focus and the spatial span (L) is presupposed.

As for the locative verbs, they are dominant in the descriptions of the native speakers of Polish and rare in the descriptions of the French natives. As we said in 1 above Polish has no true existential verb form like French, but it makes use of the locative form *byc* 'to be' and other locative verbs that carry the semantics of *to be* or *to exist*. These verbs also permit an NP in the post-verbal position, again correlating with an informational structure where the focus information is generally placed in final position. In French this category of verb scarcely exists and the use of the locational verbs *être* 'to be' and *se trouver* 'to find oneself' is restricted by the "identifiability constraint" (cf. Carroll et al. 2000): only a theme already identified in the context can be localised with this form. Utterances such as *au centre de la place est une fontaine* 'in the centre of the square is a fountain' are less natural in French than in Polish (or German). The copula is only used when an already identified theme – therefore referred to by a definite NP – is in pre-verbal position: *la/cette fontaine est sur la place* 'the fountain is in the square'. Thus, the locative is used in French only when the theme is in the topic. In this case the utterance is an answer to the less frequent realisation of the quaestio "where is this X?", where X corresponds to the identified theme. Like the native speakers of French, the learners of both groups employ the locatives only when the utterance answers "where is

this X?". However, we observe an increase in use of the locative "être" from group I to group II. This means that in the descriptions of the advanced learners the second realisation of the quaestio is more frequent. This increase is significant for between-utterance anaphoric linkage, which is stronger. Actually, the presence of utterances which answer, "where is this X?" implies the immediate maintenance of reference and a second localisation of the theme, which was introduced and localised for the first time in the preceding utterance. Look at the following examples.

(8) AGK, Polish > French (group II)

- 1 *je vois une rue*
I see a street
- 2 *qui est en bas du dessin*
that is at the bottom of the picture
- 3 *dans cette rue il y a beaucoup de bâtiments*
in this street there are many buildings

The theme which was introduced and localised in utterance 1 is then maintained by the pronoun *qui* 'that' and localised more precisely. The description in example (8) is more cohesive than that in example (9), taken from group I.

(9) AGA, Polish > French (group I)

- 1 *je vois une rue*
I see a street
- 2 *il y a beaucoup de bâtiments*
there are many buildings

In example (9), the theme in utterance 2 *bâtiments* 'buildings' is localised 'at the place' delimited by the inferred relatum for 2 ('street'). This relatum is also implicitly localised in the global space of the poster in utterance 1.

From this demonstration, we conclude that the learners of both groups have acquired the *identifiability constraint* of the French locative. The use of the pattern *definite NP + est + PP* permits the construction of discourse with a stronger anaphoric linkage, which becomes more important in the descriptions of the advanced learners of group II.

We note that if the relatum is more frequently implicit at first, and if the spatial relations expressed are more frequently simple as in 'at place', the phrasal pattern (B) *V existential + NP* is minimally sufficient. We can also say that since this phrasal pattern is more easily mobilisable in the context of the spatial description the speakers organise the information in the discourse in such a way that the information can be encoded with the help of this minimal pattern (B). Hence, speakers must select an entity which is salient enough to take on the role of relatum for a large number of themes. Thus, the simple spatial topological relation 'at place of a

relatum' is expressed; the relatum can be kept constant and consequently left implicit. The learners more than natives, and the learners of group I more than the learners of group II, tend to do this. This fact reflects group I's more restricted spatial repertoire: the spatial configuration being described is more often conceptualised in topological terms in group I productions than in the productions of group II.

Pattern (C): *V existential + AUSSI + NP*

As noted in the previous paragraphs, the learners of group I carried out the descriptive task in a minimal manner, constructing discourse in which cohesion is relatively weakly marked, as can also be seen in the following example:

(10) ANG, Polish > French (group I)

- 1 *je vois une grande rue*
I see a big street
- 2 *c'est une rue dans une grande ville*
It is a street in a big town
- 3 *je vois beaucoup de gens*
I see many people
- 4 *il y a des gens qui se promènent*
there are people who walk
- 5 *il y a une femme qui vend des magazines*
there is a lady who sells magazines
- 6 *il y a des gens des enfants qui jouent qui s'amuse*
there are people children who play who enjoy themselves
- 7 *il y a aussi des gens qui font du vélo*
there are also people who ride a bike
- 8 *il y a un restaurant*
there is a restaurant
- 9 *il y a aussi deux trois rues*
there are also two three streets
- 10 *il y a aussi une rivière*
there is also a river

In this example the relatively weak anaphoric linkage is strengthened by the additive scope particle *aussi* 'also' (see utterances 7, 9, 10). As was demonstrated by Watorek (1996a, b), Watorek and Perdue (1999) and Watorek and Dimroth (in press), additive scope particles play a significant role as anaphoric means in the process of discourse construction. These particles reinforce the cohesion of the discourse in that they indicate explicitly that some information from the context is maintained. In example (10), the entity *une grande rue* 'a big street' is intro-

Table 8. Frequency of "aussi" in main structure utterances with implicit and explicit relatum

	<i>aussi</i> + implicit relatum	<i>aussi</i> + explicit relatum
POL > FR (I)	17	5
total 22	= 77,3%	= 22,7%
POL > FR (II)	25	11
total 36	= 69,4%	= 30,6%
FRENCH	14	23
total 37	= 38%	= 62%
POLISH	16	21
total 37	=43,2%	=56,8%

duced in utterance 1 and implicitly maintained in the following set of utterances as relatum. *Aussi* 'also' in these utterances indicates explicitly that this information corresponding to the relatum is to be maintained. The weaker the anaphoric reference to the relatum, the more *aussi* is used. This tendency is confirmed in our study as can be seen in Table 8.

Pattern (A): *PP/ADV + V existential + NP*

When the speaker wants to express not only simple topological relations but also complex topological and projective relations, he must use more complex linguistic means to encode them in the discourse. If the space delimited by a relatum is not maintained in its entirety (as in the case of simple topological relations), that is, where it must be subdivided and presented in its various aspects, implicit maintenance of the spatial span is not always possible.

Two types of complexification of spatial concepts emerge when the PP/ADV component corresponds to anaphoric locative expressions, implying operations of cohesion in the referential domains of entities and space.

First, we observe the diversification of the topological relations presented in Table 3 above. The conceptualisation of the spatial configurations being described as topologically simple relations – "at place" – evolves and diversifies. Thus, the learners of group II more frequently express complex topological relations such as 'inclusion' and 'neighbouring', and they start to express the topological relation of 'boundary'.

Second, we note that the spatial configurations being described are more frequently presented as projective relations in the productions of group II (see Table 1 above). These projective relations are intrinsic and deictic independently of the type of the frame of reference used (*global* or *point-by-point*; cf. Table 4 above). This means that the advanced learners use proportionately more complex locative expressions encoding projective relations. The expression of these concepts seems

to be more complex because the relation is made between the speaker's position and the position of the oriented relatum (cf. §3.1.1 above).

3.2 Locative expressions

In this task, the locative expression (PP/ADV) is the most important constituent of pattern (A) for the anaphoric linkage. Locative expressions – prepositions, adverbs and complex prepositional phrases – encode the spatial relations between the relatum and the theme, while constructing discourse cohesion. In analysing these linguistic means, we consider two points:

- I. the choice of the referential domain of entities *versus* space used to mark cohesion (cf. §3.2.1);
- II. the structure of the NP that refers to the relatum and the development of anaphoric linkage (cf. §3.2.2).

3.2.1 Entities or space in discourse cohesion

According to Carroll et al. (2000) speakers of different languages show preferences for one of the referential domains, that of space or entities, in the process of constructing static spatial descriptions. These preferences depend on the structure of the locative expressions, their semantics, and their use in the discourse context.

These authors discuss differences between German and English speakers in terms of the distinction between *place* and *space* concepts which reflect the overall perspective taken in information organisation. We also consider these concepts as significant for the analysis of our informants. A *place* is defined as an area delimited by an object and its outer boundaries. In example (11), utterance 2, the themes are at the *place* delimited by the object “square”. In this case the spatial span referred to in the locative expression is delimited by the object that is the relatum. This spatial span comes with the physical properties of this object.

- (11) 1 *au centre il y a un square*
in the centre there is a square
2 *dans ce square il y a une fontaine et un marchand de fleurs*
in this square there are a fountain and a seller of flowers

On the contrary, the concept of *place* does not apply to the area delimited by “devant” and “derrière” in example (12).

- (12) 1 *c'est une image d'une ville*
this is a picture of a town
2 *devant il y a une rue principale*
in the front there is a main street

- 3 *derrière il y a des montagnes*
behind there are mountains

In utterances 2 and 3, it is not an object which defines the area referred to by “devant” (in the front) and “derrière” (behind) but the sagittal axis. Here we are dealing with the *space* and not the *place* concept.

If the speakers' organisation of spatial information is based on a *place*, the domain of entities (i.e., the relatum-object) is crucial for discourse cohesion. On the contrary, when the texts produced are based on the concept of *space*, the referential domain of space is essential for discourse cohesion.

A comparison between Polish and French productions shows interesting differences in the choice of referential domains for anaphoric linkage, the former choosing space while the latter prefer entities. We will illustrate these differences, basing our demonstration on projective relations along the sagittal axis.

These relations can be encoded in both languages in spatial expressions of two types: (i) object-neutral and (ii) object-specific expressions. The picture can be divided into sections that can reflect an object-based perspective. The concepts foreground/background are object-based because they are related to inherent features of the picture. French expressions like *au premier plan* ‘at the foreground’ / *en arrière plan* ‘at the background’ cannot be used to locate an entity in front of an entity other than the picture/poster itself (p.ex. **au premier plan de la fontaine* ‘at the foreground of the fountain’). These are object-specific expressions that refer to the area delimited by an object and its boundaries. Their use gives more importance to the concept of *place*. The concepts foreground/background stand in contrast to the more widely applicable concepts of front/back which can apply to a range of spaces. In French, object-neutral expressions like *devant* ‘in the front’ / *derrière* ‘behind’ can be used to locate a theme in front of any relatum (any object on a sagittal axis). In this way, their use accords more importance to the concept of *space*.

An analysis of the descriptions in Polish and French by native speakers shows that the Polish speakers employ the object-neutral expressions more frequently than the French speakers do. This is linked to differences in the repertoire of these expressions in the two languages which reveal the following general tendency: the concept of *space* and the referential domain of space play a more important role in the discourse of the Polish speakers, and the concept of *place* and the domain of entities are more important in the discourse of the French speakers.

Tables 9 and 10 show the repertoire and the frequency of use of the two types of expressions in the texts of native speakers. We separately present these expressions for the *global* and the *point-by-point* frame of reference because this distinction is relevant for our analysis.

Table 9. Repertoire of native speakers' locative expressions involving the sagittal axis in the global frame of reference

	object-specific		object-neutral	
	transitive	intransitive	transitive	intransitive
POLISH	na pierwszym planie rysunku (<i>in the foreground of the image</i>) w głąb rysunku (<i>deep into the image</i>)	na pierwszym planie (<i>in the foreground</i>) na dalszym planie (<i>in the middle distance</i>) w głąb/w głębi ⁷ (<i>deep inside</i>) w tle (<i>in the background</i>)	w dali/w oddali (<i>in the distance</i>) dalej (<i>farther away</i>) bliżej (<i>closer</i>) w tyle (<i>behind</i>) z tyłu (<i>from behind</i>) z przodu (<i>from in front</i>) na wprost (<i>across from</i>) en face (<i>across from</i>)	
Total 86	3 (= 3.5%)	26 (= 30.2%)	0 (= 0%)	57 (= 66.3%)
FRENCH	au premier plan du dessin (<i>in the foreground of the image</i>) au fond du dessin (<i>in the background of the image</i>)	au premier plan (<i>in the foreground</i>) en arrière-plan (<i>in the background</i>) au fond (<i>in the background</i>)	plus loin (<i>further away</i>) devant (<i>in front of</i>) derrière (<i>behind</i>) en face (<i>across from</i>)	
Total 38	4 (= 10.5%)	22 (= 57.9%)	0 (= 0%)	12 (= 31.6%)

In the Polish native speakers' productions the most frequent object-neutral expressions in the global frame (Table 9) are *z przodu/z tyłu* 'in front of/at the back'. In general, these expressions can be employed in an intransitive or a transitive manner. But in this context the Polish speakers use these expressions only in their intransitive form, that is, like adverbs. Thus, they encode the spatial span without reference to the relatum-object. The adverbs are not linked to any specific object or the area of space delimited by its outer boundaries.

- (13) *z tyłu widać pasmo gór*
at the back we see a range of mountains

The theme is localised in the space defined by the sagittal axis. It is not possible to identify the relatum-object. Certainly, the poster does not correspond to the relatum-object because *z tyłu afisza* 'at the back of the poster' means out of the pictorial representation under description.

In the point-by-point frame of reference (Table 10) where the spatial link is established between singular objects, Polish native speakers use transitive object-

Table 10. Repertoire of native speakers' locative expressions involving the sagittal axis in the point-by-point frame of reference

	object-specific		object-neutral	
	transitive	intransitive	transitive	intransitive
FRENCH	devant (<i>in front of</i>) 20 derrière (<i>behind sth</i>) 5 en face de (<i>across from</i>) 5	devant (<i>in the front</i>) 10 derrière (<i>behind</i>) 4 en face (<i>across</i>) 2	Devant (<i>in front of</i>) 10 Derrière (<i>behind sth</i>) 2 en face de (<i>across from</i>) 1	derrière (<i>behind</i>) 3 3 (= 4.8%)
Total 62	30 (= 48%)	16 (= 25.8%)	13 (= 21%)	3 (= 4.8%)
POLISH	za (<i>behind</i>) 15	z tyłu (<i>at the back</i>) 2	za (<i>behind</i>) 16	w tyle (<i>in the back</i>) 1
total 71	przed (<i>in front of</i>) 31		przed (<i>in front of</i>) 7 z tyłu (<i>at back of</i>) 1	
Total 71	37 (= 52.1%)	2 (= 2.8%)	27 (= 38%)	1 (= 1.4%)

neutral expressions, i.e. prepositions like *przed/za* 'in front of sth./behind sth.' with the obligatory explicit mention of the relatum. Even if it is possible to produce an utterance like *z przodu domu jest ulica* 'in the front of the house is a street' where the explicit relatum is optional, native speakers of Polish describe this kind of scene with the preposition *przed domem jest ulica* 'in front of the house is a street'. The obligatory explicit mention of the relatum-object linked to the use of prepositions involves reference maintenance in the domain of entities by the NP referring to the relatum-object. Thus, the concept of *place* is more important because the spatial span is delimited by this relatum-object and its outer boundaries.

At the global level of reference (Table 9), native speakers of French more frequently employ object-specific expressions, such as *au premier plan/au fond* 'in the foreground/in the background', which encode the spatial span based on the intrinsic features of the relatum "poster". Here, too, the concept of *place* is more important even though these expressions are often used intransitively since the implicit relatum "poster" is clearly maintained constant.

- (14) *au premier plan (0 = de l'affiche) il y a une rue principale*
in the foreground (0 = of the poster) there is a main street

The relatum "poster" is not explicit but the "foreground" corresponds to the area of space linked to this specific relatum delimited by its outer boundaries. Native speakers of French rarely use object-neutral expressions like *devant/derrière* 'in the front/behind' in the global frame. Their use is more linked to the point-by-

point frame (cf. Table 10), where they are mostly used transitively with an explicit relatum. Here, the domain of entities is more important for anaphoric linkage.

The comparison between the native speaker productions shows that in the global frame of reference, when the speaker refers to the global spatial span to localize the themes, the French speakers base their descriptions more on the place-oriented perspective where the referential domain of entities is essential. On the contrary, the Polish speakers base their discourse more on the space-oriented perspective. In the *point-by-point* frame, the speakers of the two languages prefer the place-oriented perspective and they accord more importance to the referential domain of entities in discourse cohesion.

Let us now look at the learners' data. Tables 11 and 12 show the repertoire of the locative expressions encoding sagittal spatial relations in the global and point-by-point frames of reference for both groups of learners.

Table 11. Repertoire of learners' locative expressions involving the sagittal axis in the global frame of reference

	object-specific		object-neutral	
	transitive	intransitive	transitive	intransitive
POL > FR (I)				assez loin (<i>quite far</i>) plus loin (<i>farther away</i>)
Total 2	0 (= 0%)	0 (= 0%)	0 (= 0%)	2 (= 100%)
POL > FR (II)		sur le premier plan (<i>in front</i>) au premier plan (<i>in the foreground</i>) au fond (<i>in the background</i>)		plus loin (<i>farther away</i>)
Total 16	0 (= 0%)	8 (= 50%)	0 (= 0%)	8 (= 50%)

Table 12. Repertoire of learners' locative expressions involving the sagittal axis in the point-by-point frame of reference

	object-specific		object-neutral	
	transitive	intransitive	transitive	intransitive
POL > FR (I)	devant (<i>in front of</i>) 2			
Total 2	2 (= 100%)	0 (= 0%)	0 (= 0%)	0 (= 0%)
POL > FR (II)	devant (<i>in front of</i>) 9	devant (<i>in the front</i>) 1	devant (<i>in front of</i>) 2	
Total 12	9 (= 75%)	1 (= 8.3%)	2 (= 16.7%)	0 (= 0%)

As for the learners in group I, we note a very limited number of spatial expressions encoding the spatial sagittal relations. In the global frame of reference two occurrences of object-neutral expressions used in their intransitive form *assez/plus loin* 'quite far/farther' refer to the global space without the intrinsic features of the relatum "poster". This space is defined by the sagittal axis in terms of proximity in relation to the position of the speaker. In the point-by-point frame, two occurrences of the object-neutral expressions *devant* 'in front of' are used in their transitive form and encode only the intrinsic projective relations where the relatum defines the spatial area.

As mentioned above, the global frame of reference in the descriptions of the learners in group I is rather implicit (cf. Table 6) and their discourse is based on the point-by-point frame of reference. Projective relations are rarely expressed (cf. Table 1); the spatial configurations being described are conceptualised as topological relations, and their discourse is not very cohesive.

We find in group I more than in group II a phenomenon of simplification of the information being transmitted in conjunction with the linguistic means that are most easily mobilised. These means, as we have seen, correspond to the simple syntactic pattern (B) *V existential + NP* where the locative expression – PP/ADV – is absent. The poor cohesion of the discourse can be reinforced by non-specific means such as the additive particle *aussi* 'also' (cf. Table 8). These constructions are similar to those produced by intermediate Italian learners of French (Watorek 1996a), where the same syntactic pattern and the same interaction between this pattern and the informational structure of discourse were found. Hence, we note that these processes of simplification are shared by intermediate learners with two different source languages, Polish and Italian, acquiring the same target language, French.

In the data of group II, object-specific expressions also occur in the global frame. However, though the same percentages of object-neutral and object-specific expressions are attested, we find a difference in the repertoire of the two types of expressions. In fact, the object-specific expressions are more diversified and their repertoire is similar to that of the native speakers (cf. Table 9). Despite an increase in frequency, the repertoire of object-neutral expressions is always the same: *plus loin* 'farther away'. The other French object neutral expressions like *devant/derrière* 'in front of/behind' are never attested in the global frame. These expressions are only used transitively in the point-by-point frame. Expressions like *devant/derrière* seem to be considered by these learners as equivalent to the Polish prepositions *za/przed* used by Polish native speakers in the point-by-point frame. These learners do not perceive this equivalence between the French object-neutral expressions *devant/derrière* used by French native speakers in both the global and point-by-point frames, and the Polish object-neutral expressions *z przodu/z tyłu* used by the Polish native speakers only in the global frame. The *devant/derrière* (prepositions or

adverbs) in French have a larger semantic content that is distributed in Polish between the two pairs of expressions *za/przed* (prepositions only) and *z tyłu/z przodu* (prepositions or adverbs). Since *za/przed* are prepositions only, they are perceived as lexically equivalent to *devant/derrière*, which can either be prepositions or adverbs; *devant/derrière* are used by these learners only as prepositions. Thus, transfer of lexical equivalence goes hand in hand with transfer of the structural features of the expression.

3.2.2 Anaphoric linkage and the structure of the NP – *relatum*

In both groups of learners' productions, the domain of entities is dominant for reference maintenance. In expressions like *devant* where the NP referring to the *relatum* can be explicit or implicit, these learners prefer to make the *relatum* explicit. Thus, the NP in the spatial expression can be used for anaphoric linkage.

An analysis of referential movement in learner and native speaker data shows the different ways in which the information is developed from one utterance to another. The following patterns can be distinguished:

- a. Information is maintained immediately from the focus of one utterance to the topic of the next. The theme introduced in the first utterance is maintained as the *relatum* in the second.

- (15) 1 *au milieu il y a* [_{theme, focus} *une fontaine*]
in the middle there is [_{theme, focus} a fountain]
2 [_{relatum, topic} *à côté de la fontaine*] *il y a un arrêt de bus*
[_{relatum, topic} next to the fountain] there is a bus stop

- b. Information is maintained from the topic of one utterance to the topic of the following utterance. The *relatum* maintained in one utterance is maintained as *relatum* in the second one, as between utterances 2 and 3 in example (16):

- (16) 1 *au centre il y a une place*
in the middle there is a square
2 [_{relatum, topic} *où*] *on voit une fontaine*
[_{relatum, topic} where] we see a fountain
3 [_{relatum, topic} *dans la place*] *il y a un tabac*
[_{relatum, topic} in the square] there is a tobacco shop

- c. Information is maintained immediately from the focus of one utterance to the topic of the other. The theme introduced in the first utterance is maintained in the following one as the theme as well. This is the case when the second

utterance is the answer to the less frequent realisation of the *quaestio*, "Where is the X?" (cf. Section 2).

- (17) 1 *plus loin il y a* [_{theme, focus} *un kiosque*]
farther away there is [_{theme, focus} a newspaper stand]
2 [_{theme, topic} *qui*] *est au centre de la place*
[_{theme, topic} which] is in the center of the square

- d. Information is re-introduced in an utterance at a distance. These are occurrences of types (a) or (b) without immediate maintenance.

- (18) 1 *au milieu il y a* [_{focus} *une place*]
in the middle there is [_{focus} a square]
2 *où on voit une fontaine*
where we see a fountain
3 *à droite de la fontaine il y a un arrêt de bus avec des personnes qui attendent*
to the right of the fountain there is a bus stop with people who are waiting
4 [_{topic} *dans cette place*] *il y a un kiosque à journaux et un marchand des fleurs*
[_{topic} in this square] there is a newspaper stand and a flower seller

Our analysis of the French native data shows that the maintenance of the reference to entities is achieved by different NPs. The more distant an entity is in the discourse, the more complex the NP structure will be. We can indicate a continuum from the less presupposed entities to the more presupposed ones (cf. Figure 2 below). For re-introduction of an entity, NPs like *Ce + N* are used (cf. example (16)). Zero anaphore and the relative pronoun *qui* are used in utterances that answer the *quaestio*, "Where is the X?", and involve total presupposition (cf. example (17)). Actually, we have seen that these kinds of utterances augment the textual cohesion (cf. also example (8) and (9) above).

A comparison between native speakers of Polish and French shows differences in the use of these different types of NP. One of the major differences between

French:

ce + N > *le+N* > personal pronoun (*lui*) > relative pronoun (*qui*) > 0-anaphore

Polish:

ten + N > *N* > personal pronoun (*on*) > relative pronoun (*który*) > 0-anaphore

Figure 2.⁸

Table 13. Native speakers' use of the demonstrative NP (*ce/ten + N*) for immediate maintenance

Speakers	<i>ce + N / ten + N</i> immediate maintenance	<i>ce + N</i> other uses <i>ten + N</i>
FRENCH total 54	10 (= 18.5%)	44 (81.5%)
POLISH total 178	71 (= 39.8%)	107 (= 60.2%)

Table 14. Percentages of the different NPs used for the maintenance of reference to the entity-relatum

Speakers	<i>ce + N / ten + N</i>	<i>le + N</i>	N	others
POL > FR (I) total 36	11 = 30.5%	19 = 52.8%	—	6 = 16.7%
POL > FR (II) total 124	40 = 32.3%	72 = 58%	—	12 = 9.8%
FRENCH 271	54 = 20%	187 = 69%	—	30 = 11%
POLISH 464	178 = 38.4%	—	236 = 50.9%	50 = 10.7%

Polish and French lies in the specific grammatical means that mark the maintenance of reference in the domain of entities. French, but not Polish, has the definite articles *le/la/les*. Polish speakers optionally use the demonstrative articles *ten/ta/to/ci*. Thus, we find interesting differences in the use of the demonstratives *ce/cette/ces* in French and *ten/ta/to/ci* in Polish. The NP "*ce + N*" in French is essentially (81,5 %) reserved for the re-introduction of the referent (cf. ex. (18)). Only 18,5% of these NPs are used in the immediate maintenance of reference, which is usually marked by the definite article. On the contrary, in the Polish productions, 39,8% of these NPs (*ten + N*) are used with immediate maintenance (cf. Table 13).

Returning to the learners' data, Table 14 shows the use of the different NPs by the learners of both groups and, for comparison, by the native speakers.

The use of the definite article for the expression of the maintenance of reference to entities increases from group I to group II. There is some evolution towards the target language (French). But the use of the demonstrative article equally increases in the productions of the learners in group II. Here, no evolution towards the target language can be attested. The tendency to resort to the cohesive organisation of the mother tongue is clearer, since demonstratives are also used more frequently in Polish native speaker production.

Table 15. The use of the NP "*ce + N*" for immediate maintenance of reference to the entity-relatum

Speakers	<i>ce + N</i> immediate maintenance	<i>ce + N</i> other uses
POL > FR (I) total 11	2 (= 18.2%)	9 (= 81.8%)
POL > FR (II) total 40	11 (= 27.5%)	29 (= 72.5%)

When we look at the context in which demonstratives are used in the productions of both groups of learners, we note that their use is linked more clearly to immediate maintenance in group II than in group I (see Table 15). This developmental tendency differs from that found in the use of demonstratives in the French native speaker productions. In fact, the native speakers of French rarely used demonstratives for immediate maintenance of reference (see Table 13).

A quantitative analysis leads one to believe that the learners of group I (intermediate) are closer to native French speakers than the learners of group II (advanced). However, a more detailed analysis of the contexts in which these forms are used reveals a development in anaphoric linkage that is independent of the phenomena identified in the two languages included in this study, Polish as the first language and French as the target language.

The number of occurrences of demonstratives used by the learners of group I for immediate maintenance is extremely low (2 occurrences) because the anaphoric linkage in their descriptions is weak. The other uses of these forms do not correspond to the use of the native speakers of French, i.e. they do not correspond to the anaphoric use for the re-introduction of referents, but rather have a deictic value. These learners tend to use demonstratives to refer to entities that have not yet been introduced in the text but that are a part of the larger context. Of the 9 occurrences (other uses) 4 are used in this way as is illustrated in ex (19).

(19) ANG, Polish > French (group I)

- 1 *je vois une grande rue*
I see a big street
- 2 *c'est une rue dans une ville*
This is a street in a town
(...)
- 3 *il y a aussi un pont*
There is also a bridge
- 4 *qui va d'un côté d'un bâtiment à une autre*
which goes from one side of a building to another

- 5 (...) *il y a aussi un monument*
 (...) there is also a monument
- 6 *c'est au centre de cette place*
 it is in the centre of this square

In this part of the description, the entity *square* had not yet been introduced in the text. The learners of group I tend towards a non-anaphoric usage of demonstratives. Thus, their descriptions are based more on the extralinguistic context.

In the descriptions of group II, the use of demonstratives increases. In general, they are used with a true anaphoric value. The use of demonstratives for immediate maintenance is greater than in the French native speakers' productions and reflects the tendency of Polish native speakers. The native language of these learners has no article category. In their target language, French, the learners not only use definite articles to maintain reference; they also overgeneralize another form with anaphoric value from their native language, that is, the demonstrative adjective *ten* 'this'. At first blush, we may interpret this as transfer from the L1. However, it is also possible to explain this phenomenon as a tendency to "over-mark" reference maintenance. This tendency is found in other studies of advanced learners. For example, Chini (1998) found that advanced German learners of Italian use "heavier" coreferential means like full NPs more than Italian native speakers. See also Hendriks (2003) who finds similar tendencies in L2 French and Gullberg (this volume).

We observe that at first the learners of group I tend to presuppose referents excessively. Therefore the relatum is frequently omitted. The non-anaphoric use of demonstratives shows that these learners rely heavily on the extralinguistic context and little on their own discourse. Later, the learners of group II do not presuppose referents as much as they need to, and hence, we note an over-use of demonstratives for immediate maintenance. We find the same tendencies in studies on the development of cohesion in child discourse. Hickmann (1987) shows that children up to 7 years also presuppose the referent too much or do not presuppose it enough. These aspects of the child repertoire indicate that the referential system is mastered relatively late. The advanced learners of both groups, as adult speakers, can calculate mutual knowledge in referring, an ability developed during first language acquisition. However, the fact that these learners do not perfectly master the linguistic system of the target language influences their use of the referential system.

4. Conclusions

We have shown how learners at different levels of L2 acquisition construct a coherent and cohesive discourse, starting from a discourse where the anaphoric linkage

STATIC MODE OF EXPRESSION

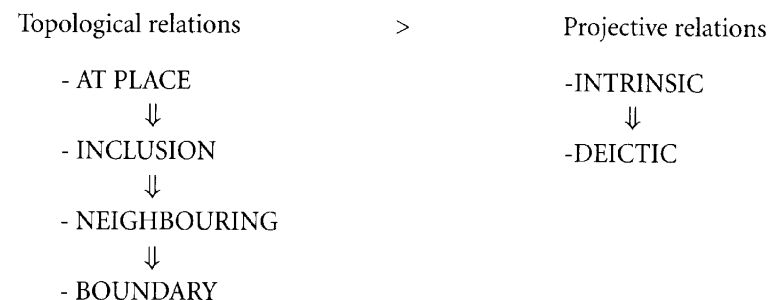


Figure 3. Spatial reference, acquisitional sequences, and complexification of spatial concepts expressed in spatial static descriptions by advanced learners

is relatively poor and progressing to a discourse where anaphoric linkage becomes more and more explicit.

This kind of study points to an order for the expression of spatial concepts in discourse produced by intermediate and advanced learners. We have tried to show that this order is constrained by the evolution of the learners' linguistic repertoire.

Furthermore, we observe a parallel between the order in which the expression of the spatial concepts evolves in our study and the acquisitional sequences attested in the longitudinal study of second language acquisition by adult beginners in the ESF project (cf. Perdue 1993). Table 3 summarizes these parallel phenomena.

Similar acquisitional sequences are also attested in studies on first language acquisition by children (cf. Johnston & Slobin 1979; Slobin 1993). We observe a similar development in child production where children first acquire the expression of the topological relations of inclusion and neighbouring, and then the expression of projective relations for entities that do not have an intrinsic orientation. The question is to know what motivates these shared paths. We can imagine that different factors and different reasons are at the origin of this convergence. For young children it is cognitive immaturity; they do not master projective relations because these relations are cognitively more complex. Adults learning an L2 have already acquired all sorts of spatial relations during first language acquisition and they master the cognitive complexity of these relations. The same acquisitional paths in the adults' second language acquisition can be explained by the relation between the conceptually complex expressions and their use in learner – native speaker interactions. A topological expression relevant to the use of a theme and a relatum is in principle pragmatically less complex to use than an expression that encodes the projective relations where the speaker must make calculations based on his *origo*.

In the same way, the expression of projective intrinsic relations is less complex than the expression of projective deictic relations where the relatum is itself oriented.

Notes

1. Our data were collected at the Catholic University of Lublin in Poland with the help of Urszula Paprocka.
2. The poster used is part of the series "Hier fällt ein Haus, dort steht ein Kran und ewig droht der Baggerzahn, oder die Veränderung der Stadt" by Jörg Müller 1976, which was also used for data collection by Carroll and von Stutterheim (1997).
3. We use the terminology proposed by Klein (1985). The theme/relatum distinction corresponds to the figure/ground (cf. Talmy 1983) and to the cible/site (cf. Vandeloise 1986) distinctions.
4. The V – verb corresponds to the finite verb form.
5. The locative expressions include simple prepositions and complex prepositions (PP), adverbs (ADV) as well as lexical verbs and existential forms (*il y a* for French).
6. Entities like the poster or the picture are oriented on the sagittal axis. However, in the context of describing a poster, this axis is not pertinent because the elements behind the poster are not part of the spatial configuration being described. What corresponds to 'in front' coincides with 'in front of the speaker'.
7. The expressions "w głąb" and "w głębi" are not exactly synonymous. "W głąb" is used more with the idea of movement as in "idąc w głąb (walking deep inside)" and "w głębi" is used more to express static location as in "on znajduje się w głębi (he is deep inside)".
8. These configurations seem to correspond to the universal of quantity proposed by Givón (1983).

References

- Bartning, I. (1997). L'apprenant dit avancé et son acquisition d'une langue étrangère. Tour d'horizon et esquisse d'une caractérisation de la variété avancée. *AILE*, 9, 9–50.
- Carroll, M. & Stutterheim, Ch. von (1997). Relations entre grammaticalisation et conceptualisation et implications sur l'acquisition d'une langue étrangère. *AILE*, 9, 83–116.
- Carroll, M., Murcia, J., Watorek, M., & Bendiscioli, S. (2000). The relevance of Information Organization to Second Language Acquisition Studies: The descriptive Discourse of Advanced Adult Learners of German. *Studies in Second Language Acquisition*, 22, 441–466.

- Chini, M. (1999). Riferimento personale e strutturazione di testi narrativi in italofono e in apprendenti tedescofonici di italiano. In N. Dittmar & A. Giacalone Ramat (Eds.), *Grammatica e discorso. Studi sull'acquisizione dell'italiano e del tedesco* (pp. 213–243). Tübingen: Stauffenburg.
- Givón, T. (1983). Topic continuity in discourse: An introduction. In T. Givón (Ed.), *Topic continuity in discourse: A quantitative cross-language study* (pp. 1–41). Amsterdam: Benjamins.
- Hendriks, H. (2003). Using nouns for reference maintenance: A seeming contradiction in L2 discourse. In A. Giacalone Ramat (Ed.), *Typology in Second Language Acquisition* (pp. 292–326). Berlin, New York: Mouton de Gruyter.
- Hickmann, M. (1987). Ontogénèse de la cohésion dans le discours. In G. Piérait-Le Bonniec (Ed.), *Connaître et dire* (pp. 239–262). Bruxelles: Ed. Pierre Mardaga.
- Johnston, J. R. & Slobin, D. (1979). The development of locative expressions in English, Italian, Serbo-croatian and Turkish. *Journal of Child Language*, 6, 529–545.
- Klein, W. (1985). Reference to space. A frame of analysis and some examples. Unpublished Manuscript, Nijmegen, Max-Planck-Institute for Psycholinguistics.
- Klein, W. & Stutterheim, Ch. von (1991). Text structure and referential movement. *Sprache und Pragmatik*, 22, 1–32.
- Perdue, C. (1993). *Adult language acquisition: crosslinguistic perspectives*. Cambridge: Cambridge University Press.
- Slobin, D. (1993). Adult language acquisition: a view from child language study. In C. Perdue (Ed.), *Adult language acquisition, Vol II. Results*. Cambridge Univ. Press.
- Talmy, L. (1983). How language structures space. In H. Pick & L. Acredolo (Eds.), *Spatial orientations: theory, research, application* (pp. 227–287). New York: Plenum Press.
- Vandeloise, C. (1986). *L'Espace en français*. Paris: Ed. du Seuil.
- Watorek, M. (1996a). Conceptualisation et représentation linguistique de l'espace en italien et en français, langue maternelle et langue étrangère. Thèse en Linguistique, Université de Paris 8.
- Watorek, M. (1996b). Le traitement prototypique: définition et implications. *Toegepaste Taalwetenschap in Artikelen*, 55, 187–200.
- Watorek, M. (1998). L'expression de la localisation spatiale dans les productions des locuteurs natifs italo-phones et francophones, et d'apprenants italo-phones du français. *Cahiers d'Acquisition et de pathologie du langage*, 16(17), 17–50.
- Watorek, M. & Perdue, C. (1999). Additive particles and focus: observations from learner and native speaker production. *Linguistics*, 37(2), 297–323.
- Watorek, M. & Dimroth, Ch. (in press). Scope particles and Discourse. In H. Hendriks (Ed.), *The Structure of Learner Varieties*. Mouton de Gruyter.