Crosslinguistic influence in bilingual language acquisition: Italian and French as recipient languages*

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In this paper we want to compare the results from monolingual children with object omissions in bilingual children who have acquired two languages simultaneously. Our longitudinal studies of bilingual Dutch–French, German–French, and German–Italian children show that the bilingual children behave like monolingual children regarding the type of object omissions in the Romance languages. They differ from monolingual children with respect to the extent to which object drop is used. At the same time, the children differentiate the two systems they are using. We want to claim that the difference between monolingual and bilingual children concerning object omissions in the Romance languages is due to crosslinguistic influence in bilingual children: the Germanic language influences the Romance language. Crosslinguistic influence occurs once a syntactic construction in language A allows for more than one grammatical analysis from the perspective of child grammar and language B contains positive evidence for one of these possible analyses. The bilingual child is not able to map the universal strategies onto language-specific rules as quickly as the monolinguals, since s/he is confronted with a much wider range of language-specific syntactic possibilities. One of the possibilities seems to be compatible with a universal strategy. We would like to argue for the existence of crosslinguistic influence, induced by the mapping of universal principles onto language-specific principles – in particular, pragmatic onto syntactic principles. This influence will be defined as mapping induced influence*. We will account for the object omissions by postulating an empty discourse-connected PRO in pre-S position (Müller, Crysmann, and Kaiser, 1996; Hulk, 1997). Like monolingual children, bilingual children use this possibility until they show evidence of the C-system (the full clause) in its target form.*

Introduction

Since the seminal works by Genesee (1989) and Meisel (1989), many empirical studies have criticized the dominant view of bilingual language acquisition at that time. That is, that children who are exposed to two languages from birth necessarily pass through a stage during which only one grammatical system is available. The languages are not separated at the level of syntax (cf. Taeschner, 1983, for example). Included in this new critical tradition are: Meisel (1986, 1990a, 1994b), Schlyter (1990a, 1994), Lanza (1992), Müller (1993, 1998), De Houwer (1995), Genesee, Nicoladis, and Paradis (1995), Köppe and Meisel (1995), Tracy (1995), Gawlitzek-Maiwald and Tracy (1996), Hulk and van der Linden (1996), Hulk (1997) and Köppe (1997). All show that bilingual children are able to separate the two languages from early on. One argument in favor of the separate language hypothesis is that monolingual children use the same type of (target-deviant) constructions during language development as bilinguals. Research on bilingual children drew attention to these target-deviant constructions in monolingual children, since the latter show them much less frequently than bilingual children. This is the starting point of the present research. We would like to argue that the two languages are separated in bilingual children from early on, accounting for the observation that monolinguals show evidence of the same type of (target-deviant) constructions, but that they are in contact and may have some influence on each other (Hulk and van der Linden, 1996; Hulk, 1997, 1998a,b, 1999; Döpke, 1998; Müller, 1998). This would account for the observation that bilinguals seem to use the same type of (target-deviant) constructions to a higher degree and for a longer period than monolinguals. The problem is to determine which parts of grammar

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are sensitive to crosslinguistic influence and why this should be so.

We will argue that crosslinguistic influence occurs in exactly those areas which are also problematic – to a lesser extent – for monolingual children. Recently, Platzack (1999) has suggested that the C-domain (the full clause) may be viewed as vulnerable, causing problems in different types of language acquisition. This hypothesis predicts correctly that monolingual and bilingual first language learners have difficulty with C-related constructions: V2 (verb second), complementizer insertion, and topicalization, among other phenomena (cf. Meisel, 1992). This vulnerability is attributed to the fact that the C-domain represents an interface level connecting syntax with other cognitive systems. Furthermore, the C-domain connects different levels of grammatical representation: pragmatic and syntactic information are exchanged at the C-level, as in the case of topicalization. We would like to show that it is the C-domain that defines the domain for crosslinguistic influence in bilinguals, due to its interface nature.[1] In addition to the C-domain marking the locus of crosslinguistic influence, we will show the importance of the particular properties of the syntactic construction likely to exhibit crosslinguistic influence. In particular, we will propose that if (the adult) language A allows for more than one grammatical analysis from the child's perspective[2] and language B contains a lot of positive evidence for one of those possible analyses, crosslinguistic influence is probable. Crosslinguistic influence creates confusion and delay in the acquisition process of the bilingual child. The bilingual child uses a grammatical analysis compatible with language A and strongly favored by language B, to a high degree and for a long period in language A. If our hypothesis is correct, namely that the C-domain (as an interface level) delimits crosslinguistic influence and that there must be a certain overlap of the two grammatical systems, then crosslinguistic influence is predictable and unidirectional. We will discuss data by bilingual French–Dutch, French–German, and Italian–German children showing influence of the Germanic language on the Romance language, the focus of the present study. We will compare the bilingual children's development of the respective Romance language to that of monolingual children learning one of the Romance or one of the Germanic languages involved in the present study. The data show not a qualitative but a quantitative difference between the two types of language acquisition.

The grammatical domain we study is the phenomenon of object drop. In the acquisition processes involving this domain, not only do syntactic principles play a role, but pragmatic principles as well. If our hypothesis is correct that grammatical phenomena involving interface levels (C-domain) are susceptible to crosslinguistic influence, we expect this influence to emerge in the domain of object drop. Furthermore, for syntactic and other principles, universal strategies and language-specific rules interact in the domain of object drop. For example, in the early stages of language acquisition, we find universal pragmatic strategies, such as discourse licensing. At a later stage, these must be ''translated'' or mapped onto language specific syntactic rules. It is at this transition, that we would predict problems to arise, if, from the child's perspective, one language has a syntactic construction allowing for more than one grammatical analysis – one of which is compatible with universal strategies or, as Roeper (1999) refers to it, a Minimal Default Grammar.[3] Bilingual children confronted with input from two partially overlapping languages may tend to persist longer at a universal (pragmatic) stage. In other words, this type of crosslinguistic influence has the effect that the bilingual child is not able to map universal strategies onto language-specific rules as quickly as the monolinguals. S/he is confronted with a much wider range of language-specific syntactic possibilities and one of these seems to be compatible with a universal strategy. We would like to argue then for the existence of crosslinguistic influence induced by the mapping of universal principles onto language-specific principles, in particular pragmatic principles onto syntactic principles. We will define such influence as *mapping induced influence*. In order to strengthen our claim that the properties of the grammatical phenomenon involved determine crosslinguistic influence, we show that language dominance cannot explain the relevant observations. It is not the weaker language which is the target of crosslinguistic influence. During one particular period, crosslinguistic influence is observed for both languages in the bilingual child, depending upon the grammatical phenomenon involved.

[1] We do not want to exclude other functional domains which represent interface levels where crosslinguistic influence may occur.

[2] In the same spirit although in a different framework, Döpke (1997, 1998) suggests that the bilingually raised children she studied are acquiring their languages incrementally on the basis of cue strength and cue cost. Partially overlapping structures in the input from German and English create structural saliencies for the child before they are functionally accessible. Functional identification eventually leads to structural identification.

[3] UG defines a set of default representations which all speakers possess. This set is called a Minimal Default Grammar.

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The organization of the paper is as follows: the second section introduces the main earlier research results concerning object drop in monolingual children. It further introduces the adult systems of two Germanic languages, Dutch and German, and two Romance languages, Italian and French. In the third section, the results from the bilingual children are presented, focussing on the Romance languages. The fourth includes the analysis of object drop constructions from bilingual children and discusses the issue of language dominance as an explanatory concept. Section 5 contains a summary of the main findings.

Object omissions in monolinguals

Previous research on the acquisition of French/Italian by monolingual children has shown that children omit objects very infrequently (Guasti, 1993/94; Jakubowicz, Müller, Riemer, and Rigaut, 1997; Tiedemann, 1999). In contrast, monolingual Dutch/German children omit objects frequently (Kraemer, 1995; Jakubowicz et al., 1997; Wijnen and Verrips, 1998). If we compare the results from child language with their respective adult systems, it is evident that monolingual children converge with the adult system early in development.

Adult Dutch/German

Adult Dutch and German are V2 topic drop languages, i.e. the constituent in the first position (topicalized) of finite root clauses may be dropped (see the example in (1)).[4] The dropped constituent, for example the object, requires a discourse referent. Since Dutch and German are V2 languages, dropping of the first constituent results in a construction where the finite verb occupies first position, as in (1). In contrast to topic drop languages like Chinese, multiple argument drop is disallowed in Dutch and German.

(1) **Q**: *ga je mee naar de Titanic*?/*Kommst Du mit zur Titanic*?
"Will you come along to the Titanic?"
Ans: *0 heb ik al gezien / 0 hab*
have I already seen
ich schon gesehen
"I've already seen it."

Child Dutch/German

Longitudinal studies which take into account the phenomenon of object drop during early language development do not exist for early German.[5] Jakubowicz et al. (1997) investigated object omissions in monolingual German children (age 2;3–3;1) in an elicited production task[6] accompanied by 30 minutes of recording of spontaneous speech per child. In the present study, we only consider spontaneous interactions since the bilingual data represent recordings of spontaneous speech and the elicited production task affected the children's behavior. Table 1 indicates the age of recording in years;months,days, the MLU value,[7] and the standard deviation for each child.[8]

Table 1. *Monolingual German children (Jakubowicz et al., 1997)*

Name	Age	MLU	Base	SD
Group 1				
Kim	2;5,23	1.38	39	0.59
Baroudi	2;3,29	2.05	207	0.94
Clarissa	2;6,7	2.45	146	2.04
Valérie	2;5,7	2.57	7	0.79
Leonard	2;9,12	2.73	49	1.59
Marian	3;1,1	2.86	57	1.77
Caroline	2;5,0	3.19	80	1.71
Group 2				
Marlen S.	2;10,23	3.33	43	1.64
Bela	2;8,3	3.83	144	2.39
Christoph	2;3,9	4	4	1.63
Melina	2;6,25	4.4	151	5.65
Maximilian	2;9,12	4.7	162	7.15

Children were separated into two groups: in group 1 children, structures related to the adult C-system were missing, including subordinate clauses introduced by a lexical complementizer and V2 constructions where the first constituent is an object (*den*

[4] Topic drop is a property of colloquial Dutch and German.

[5] Hamann (1994) analyzes topic drop in two monolingual German children. However, the children are already three during the first recording session. Hamann also explicitly says that her subjects have acquired V2 and use subordinate clauses introduced by complementizers. The children show high percentages of target-like object drop constructions (about 30–40% from 3;1 to 3;7) and low percentages of target-deviant object omissions (about 2–3% from 3;1 to 3;7), suggesting that they have already acquired German topic drop. They may thus be compared to the group 2 children in Jakubowicz et al.'s (1997) study.

[6] Children were told a story accompanied by pictures. Subjects were asked to answer the questions of the interviewer. The German data were collected by one of the authors of the present study, Natascha Müller, the French data by Celia Jakubowicz.

[7] MLU values were counted on a word basis.

[8] In Jakubowicz et al. (1997), the spontaneous interactions and the elicited production data were discussed together. In the present study, we will present only the spontaneous data. This is the reason why the present tables differ from those in Jakubowicz et al. (1997).

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Table 2. *Absolute figures of subordinate clauses in monolingual German children (Jakubowicz et al. 1997)*

	Comp −realized	Comp +realized
Group 1	5	2
Group 2	1	37

Table 3. *Finite verb placement in monolingual German children (absolute numbers) (Jakubowicz et al. 1997)*

	SVX	XSV(Y)	XVS, X≠Obj.	XVS, X=Obj.	SXV	VSX
Group 1	103	6	43	10	5	21
Group 2	334	1	252	97	7	149

Table 4. *Object omissions in monolingual German children*

	−Obj. in %	target-deviant in %
Group 1	45.9	24.3
Group 2	37.8	1.8

Tiger habe ich "The tiger I have (it)"), i.e. not the subject (*ich habe den Tiger* "I have the tiger") or a so-called "light adverbial" (*da habe ich den Tiger* "There I have the tiger") (cf. Tables 2 and 3).[9] In group 2 children, these structures are being used productively.[10]

Both groups of children often omitted objects (40–50%) (cf. Table 4). Object omissions gave rise to target-deviant constructions in both groups. In group 1, target-deviant constructions appeared at a much higher rate than in group 2. Target-deviant object drop decreases as a function of age. Two types of target-deviant constructions occur: the finite verb is not clause-initial (as in (2a)) or more than one argument is being dropped (as in (2b)).

Table 5. *Target-like and target-deviant (=non V1) object omissions in Hein's speech (2;4–3;1) (Kraemer 1995)*

Age	−OBJ in %
2;4	45
;25	29
2;6	34
2;7	33
2;8	22
2;9	32
2;10	36
2;11	21
3;0	29
3;1	22

(2) a. B:[11] *Da reißt roudi ab*
there tears Baroudi off
"Baroudi tears it off there." (Baroudi)

b. A: *Was machst du, wenn dein Papa dich nicht sehen soll?*
"What do you do when your daddy shouldn't see you?"'
V: *Auch mach*
also make
"I make it too." (Valerie)

Kraemer (1995) and Wijnen and Verrips (1998) find about 20–30% object omissions in the seven monolingual Dutch children investigated in a longitudinal study (ages 1;8–3;1). As in German, null objects do not always occur sentence-initially and they cooccur with empty subjects. Some examples of target-deviant object drop are given in (3); cf. Table 5.[12]

(3) a. *Joost heeft getrokken*
Joost has pulled
"Joost has pulled it." (Gijs:1;10)

b. *Mag niet doe*
may not do
"You may not do it." (Gijs:2;7,19)

[9] Group 1 children frequently use V2 in constructions with a "light adverbial" in first position (*da*, *jetzt*, *so*, *hier* (there, now, like-this, here) (Müller and Penner, 1996)).

[10] In addition, Jakubowicz et al. (1997) use MLU values as a criterion for separation into different groups of children. This was mainly due to the observation that length of the VP has been proposed to explain the subject omissions in French. Since the present study looks at object omissions and the length of the VP does not seem to be relevant for the analysis of object omissions, we did not rely on quantitative, but on qualitative properties of child language in order to separate the children into groups. The German children were recorded a second time, about six months after the first recording. We will not present the results here. Suffice it to say that group 1 children in the second recording behaved similarly to group 2 children in the first recording, i.e. they used lexical complementizers and V2 in a near-adult-like fashion, and they evidenced fewer target-deviant object omissions as compared to the first recording.

[11] Baroudi takes a car and puts his hand onto it.

[12] Unfortunately, no MLU values are available except for Hein, where the age span from 2;4,11 to 3;1,24 corresponds to an MLU on a word basis of 1.67 to 3.32. Furthermore, Kraemer (1995) and Wijnen and Verrips (1998) do not give examples for multiple argument drop and they do not distinguish between licit and illicit object drop in the quantitative analysis. We want to thank Erica Thrift for providing example (3b).

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Target-deviant object drop is reported to decrease as a function of age. At the age of 1;10, the rate of object omissions may be as high as 75%.

Adult French/Italian

Adult French and Italian are not topic-drop languages. A small class of verbs, including *savoir/sapere* "know" in (4), are exceptional.[13]

(4) Q: Tu sais pourquoi il n'est pas venu?/Sai perché non è venuto?
"Do you know why he did not come?"
Ans: *Sais pas* / *Non so*
know not / Not know
"I don't know."

French and Italian do not license object drop in general. However, they allow the canonical object position to be empty once an object clitic is present, as in the examples *Jean le voit/Giulio lo vede* (John 3sg.masc. clitic sees) "John sees him/it", which have the representation in (5).[14]

(5) Jean le_i voit ec_i / Giulio lo_i vede ec_i

Child French/Italian

Jakubowicz et al. (1997) tested 12 monolingual French children in the study mentioned above with respect to object omissions. For each child, Table 6 indicates the age of recording, the MLU value,[15] and the standard deviation. For the purpose of the present study, we consider only spontaneous interactions since the elicited production task had an effect on object omissions in the French children.[16] Again, two groups were distinguished. The first group did not produce constructions related to the adult C-system (cf. Table 7), whereas the second group showed productive usage of the relevant constructions.

Monolingual French children omitted objects infrequently. Both groups (group 2 to a much lesser extent than group 1) exhibited target-deviant object omissions (cf. Table 8).[17] They produced constructions where the object is not lexically realized, as an NP or clitic, as in (6a), and constructions where the subject has been dropped simultaneously, as in (6b).

(6) a. *Il met dans le bain*
he puts in the bathroom
"He puts it into the bathroom." (Lou)
b. *Habille*
dresses
"He puts his clothes on." (Rap)

As for French, results from longitudinal studies are available for the relevant age span. During the period when constructions related to the C-system are rare (from 2;1–2;3), the monolingual child Philippe (MacWhinney and Snow, 1985; Mac-

Table 6. *Monolingual French children (Jakubowicz et al. 1997)*

Name	Age	MLU	Basis	SD
Group 1				
Valentin	2;5,0	2.92	201	1.87
Raphael	2;5,17	2.93	95	1.54
Gaetan	2;3,20	2.97	87	1.53
Jérémie	2;7,3	3.05	125	1.66
Claire	2;0,13	3.15	195	1.84
Group 2				
Louise	2;5,23	3.22	113	1.68
Sylvio	2;5,0	3.47	189	1.87
Leo	2;3,22	3.78	137	1.88
Flora	2;4,23	3.80	155	1.81
Pierre	2;4,15	4.06	105	2.39
Hélène	2;5,29	4.82	142	2.62
Elisa	2;7,0	4.95	351	2.92

Table 7. *Absolute figures of subordinate clauses in monolingual French children (Jakubowicz et al. 1997)*

	Comp −realized	Comp +realized
Group 1	5	0
Group 2	2	28

Table 8. *Target-deviant object omissions in monolingual French children (Jakubowicz et al. 1997)*

	−Obj. in %
Group 1	11.8
Group 2	4.2

[13] On the basis of work by Fónagy (1985) and Lambrecht and Lemoine (1996), Jakubowicz and Rigaut (2000) and Tuller (2000) discuss the possibility that adult French licenses object drop under specific lexical and discourse conditions. We may conclude that French is not a generalized topic drop language, as German and Dutch are, but licenses null objects only under very specific conditions which involve the type of lexical verb and the type of complement.

[14] We will not discuss the exact grammatical status of Romance clitics here since it is not important for our argument; cf. Müller et al. (1996) for morphological and syntactic approaches to object clitics.

[15] MLU values have been counted on a word basis.

[16] The number of (target-deviant) omissions was five times as high as in the spontaneous interaction data.

[17] Unfortunately, target-like object omissions were not considered.

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Table 9. *Target-deviant object omissions in Victor's and Chloé's speech (van der Velde 1998)*

Child	Age	MLU	−OBJ in %
Victor	1;11,10	3.16	14.3
	2;0,14	2.95	8.3
	2;1	3.18	19.4
	2;3	3.18	4.2
	2;4,4	3.72	10.8
	2;4,25	3.66	8.4
	2;5,29	3.93	17
Chloé	1;11,19	3.0	9.7
	2;0,10	2.73	15.8
	2;1,8	3.15	3.2
	2;2,4	3.57	12.7
	2;3,4	3.57	4.3
	2;4,1	3.79	5.6
	2;5,14	3.90	2.7

Whinney, 1995) exhibits 11% of target-deviant object omissions (Hulk, 1997). Van der Velde (1998) studies two monolingual French children, Victor and Chloé, and shows that object omissions are infrequent (cf. Table 9).[18] Victor first uses finite subordinate clauses introduced by a lexical element at age 2;1 (at age 2;3, more than once per recording), Chloé at age 2;2,4 (at age 2;5,14, more than once per recording).

With respect to monolingual Italian children, Tiedemann (1999) has conducted the elicited production task mentioned above. The recording situation in a kindergarten did not allow a clear separation of a session containing only spontaneous interactions and a test session, as in the German and French corpora. Since the elicited production task had an effect on the children's behavior in German and French (cf. Table 13), the Italian data have to be interpreted cautiously. For the present study, we will consider only spontaneous interactions, i.e. utterances which are not responses to the test pictures. Table 10 gives the age, the MLU value,[19] and the standard deviation for 13 of the children tested. Again, it is possible to divide the children into two groups: group 1 children did not produce subordinate clauses introduced by a complementizer. Group 2 children show evidence of lexically introduced subordinate clauses; cf. Table 11.

Both groups exhibit target-deviant object omissions, group 1 about 23% (cf. Table 12[20] and the examples in (7)). The relatively high number of omissions in Italian may be due to the fact that there was no separate session in the experimental procedure containing only spontaneous interactions.

Table 10. *Monolingual Italian children (Tiedemann 1999)*

Name	Age	MLU	Basis	SD
Group 1				
Mattia	3;0,6	2.47	141	1.25
Désirée	2;5,15	2.86	87	1.38
Matteo	2;9,26	3.05	58	1.33
Marco	2;4,2	3.09	246	1.54
Margherita I	2;9,17	3.08	78	1.17
Diego	2;9,17	3.36	216	1.49
Group 2				
Chiara	2;7,0	3.4	81	1.5
Iacopo	2;7,12	3.6	186	1.94
Sara	2;7,2	3.66	230	1.93
Carlotta	2;9,20	4.23	119	2.08
Ludovica	2;7,20	4.31	54	2.51
Margherita II	2;7,12	6.25	320	4.68
Giulia	2;6,27	5.02	135	2.68

Table 11. *Absolute figures of subordinate clauses in monolingual Italian children*

	Comp −realized	Comp +realized
Group 1	4	2
Group 2	0	164

Table 12. *Target-deviant object omissions in monolingual Italian children*

	−Obj. in %
Group 1	22.8
Group 2	3.2

(7) a. *Dopo fa*
afterwards makes
"Afterwards he makes it." (Mattia)

b. *Taglia*
cuts
"She cuts it." (Diego)

c. *Anche lui ha*
also him has
"He also has it." (Marco)

The elicited production task had an effect on the behavior of the French and German monolingual children as well (cf. Table 13): omissions were also more frequent in elicited production, mostly visible in

[18] Van der Velde (1998) does not mention examples with multiple argument drop.

[19] MLU values have been counted on a word basis.

[20] The number of all (licit and illicit) object omissions in spontaneous interactions amounts to 25.3% in group 1 and 3.9% in group 2.

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Table 13. *Target-deviant object omissions in monolingual French, Italian and German children, elicited production*

Group	−Obj. in %
1. French	50
2. French	14.1
1. German	42
2. German	11.9
1. Italian	45
2. Italian	13

Table 14. *Target-deviant object omissions in Martina's, Diana's and Guglielmo's speech, Guasti 1993/94*

Child	Age	MLU	−OBJ in %
Martina	1;8	below 2	27
	1;9	below 2	0
	1;10	below 2	38
	1;11	2.1	39
	2;1	2.1	21
	2;3	2.6	13
	2;4	2.6	11
	2;5	2.6	3
	2;7	2.6	4
Diana	1;10	2.6	7
	1;11	2.6	33
	2;0	2.6	14
	2;1	4.1	15
	2;5	4.1	3
	2;6	above 5	3
Guglielmo	2;2	2.7	20
	2;3	2.3	12
	2;4	2.6	5
	2;5	2.6	0
	2;7	above 2.6	6

the first French group, and in group 2 children of both languages. Table 13 also shows that the test had a negative effect on the number of omissions in the Italian children.

Guasti (1993/94) analyzes three monolingual Italian children from the CHILDES database. Unfortunately, no MLU values are given for the children. Matching the ages mentioned in Guasti (1993/94) with the MLU values[21] given in Cipriani, Chilosi, Bottari, and Pfanner (1993)[22] gives the results in table 14 for object omissions in Italian.

The children studied by Guasti (1993/94) are much younger (with respect to MLU) than the Italian children studied by Tiedemann (1999) and the monolingual French children reported here. They are comparable (with respect to MLU) to the monolingual German children of Jakubowicz et al.'s (1997) study. Table 14 gives the impression that object omissions decrease dramatically with an MLU of about 2.6. Before then, Italian children display object omissions at an average of 20%. We may hypothesize that the higher number of object omissions in the Italian children studied by Tiedemann (1999) is an artifact of the test situation. Interestingly, the number of object omissions decreases below 10% in Guasti's (1993/94) children with an MLU above 2.6.

Guasti (1993/94) does not mention the use of complementizers in subordinate clauses in the children studied. Kupisch (1997) analyzed Martina's subordinate clauses and concludes that lexically introduced embedded clauses are first evidenced at 2;3. Examples are: *no perché non c'è nulla* (2;3) "no because there is nothing", *no qui qui no pecché poi chiude* (2;3) "no here no because then closes", *e ora io efono a babbo che potti i pane* (2;4) "now I call Daddy in order that he brings the bread along", *tenta, sennò ti brucia*! (2;5) "Watch out, if not you will burn yourself". In other words, we may conclude that there is evidence for the lexical instantiation of the C-system from the age of 2;3/2;4 onwards in Martina. This age corresponds to a decrease of target-deviant object omissions.

The Italian data raise two questions: the first is whether the Italian children are similar to the German children who, as shown above, display about 24.3% target-deviant object omissions. The second question concerns the relation between Italian and French. To answer the first question, an individual analysis of the German children is required. Table 15, compared with the individual MLU values in table 1, shows that in German the number of target-deviant object omissions does not decrease when an MLU of 2.6 is reached. Furthermore, German children omit objects twice as often as Italian children with the same MLU values.

Let us turn to the second question, namely the difference or similarity of Italian and French children. All French children we found in the literature have an MLU above 2.6. In other words, it is quite possible that object omissions also amount to more than 11% at an MLU below 2.6 in French. The study of object omissions in younger French children is a matter of future research.

Object drop in monolinguals: a grammatical analysis

Before we discuss a grammatical analysis underlying early child object drop, we would like to summarize

[21] MLU values have been counted on a word basis.

[22] The MLU values are represented in figure format; therefore we cannot always give the exact value.

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Table 15. *Objects in spontaneous interaction: German*

Child	Age	Lexical/ Pronominal NP	Omissions +target	Omissions −target
Kim	2;5,23	2	0	4 (66.7%)
Baroudi	2;3,29	9	6 (31.6%)	4 (21.1%)
Clarissa	2;6,7	11	12 (48%)	2 (8%)
Valérie	2;5,7	15	5 (17.3%)	9 (31%)
Leonard	2;9,12	15	4 (16.7%)	5 (20.8%)
Marian	3;1,1	14	2 (9.1%)	6 (27.3%)
Caroline	2;5,0	14	3 (13.1%)	6 (26.1%)
Total		80	32 (21.6%)	36 (24.3%)
Marlen S.	2;10,23	67	38 (35.2%)	3 (2.8%)
Bela	2;8,3	53	38 (41.8%)	0
Christoph	2;3,9	12	0	3 (20%)
Melina	2;6,25	62	46 (42.6%)	0
Maximilian	2;9,12	50	19 (27.2%)	1 (1.4%)
Total		244	141 (36%)	7 (1.8%)

the monolingual data. German, Dutch, French, and Italian children pass through a stage during which target-deviant object drop constructions are used. The languages differ with respect to the extent to which children make use of target-deviant object drop. Children from a Germanic background omit objects twice as frequently as children from a Romance background with a comparable MLU. The longitudinal Italian data suggest that children from a Romance background with an MLU below 2.6 omit objects to a degree comparable to that of children from a Germanic background with an MLU between 2.6 and 3. Put differently, Romance children with an MLU of about 2.6 have learned that their language is not a generalized topic drop language: they use object drop at about 11% or less. German and Dutch children need more time to "get rid of" target-deviant object drop constructions as compared to the French and Italian children (both if one compares MLU values and ages). Target-deviant object drop decreases with age in children from all four language backgrounds, in particular with the lexical instantiation of the C-system: children with a lexically instantiated C-system omit objects to a much lesser extent in a target-deviant way than younger children who do not yet show lexical reflexes of the adult C-system.

How can we account for early child object drop and for the interaction between usage of target-deviant object drop and lack of constructions related to the C-system? We would like to follow Müller, Crysmann, and Kaiser (1996) and assume that a structure like (8b) or (9b) underlies the children's object drop constructions, in which PRO is adjoined to IP (for a detailed discussion of an analysis in terms of an IP-adjoined PRO cf. Müller et al., 1996).

(8) a. *Ivar répare*
"Ivar repares it."
b. $[_{IP}\ PRO_j\ [_{IP}$ Ivar répare $t_j]$ (object-drop)

(9) a. *Verse*
"I pour it in."
b. $[_{IP}\ PRO_j\ [_{IP}\ PRO_i\ [_{IP}\ t_i$ Verse $t_j]$ (multiple argument drop)

Moreover, we suggest that in the early stages of acquisition all children use a pragmatic strategy to license the empty element (PRO) via discourse (cf. Schaeffer, 1997 and Hoekstra and Hyams, 1998 for discourse-related mechanisms in other domains of early child grammar). Discourse licensing is part of the set of default representations which all speakers possess and, as such, is part of Minimal Default Grammar. The child's task, during acquisition, is to find out what role discourse licensing plays in the specific target language.

In the Germanic and the Romance languages, the child sees evidence for object drop. In French and Italian, the constructions with an empty canonical object position as in (10) and the constructions in (4) may constitute evidence for the structure in (8b) and (9b).[23] In all construction types, the canonical object position is phonetically empty, as in (8b) and (9b). In addition, the construction with a fronted topicalized object in (10b) may support the analysis of an IP-adjoined empty topic.

(10) a. *Il le voit [ec] / Lo vede [ec]*
he it sees
"He sees it."
b. *(Parce que) ça je sais [ec] / (Perché) questo so [ec]*
(because) it I know
"(Because) I know it."

Note that researchers have made the observation that object clitics (in contrast to subject clitics in French) are acquired late in French and Italian and that they develop only gradually in some children (Clark, 1985; Friedemann, 1992; Guasti, 1993/94; Hamann, Rizzi, and Frauenfelder, 1994; Jakubowicz, Müller, Kang, Riemer, and Rigaut, 1996; Müller et al., 1996). This observation fits into the general picture of early child object drop. The Germanic languages present the child with ample evidence for

[23] Whereas the Romance child gets confusing evidence for the realization of objects, this is not the case for subjects, independently of the analysis of subject clitics, since subject clitics are canonical realizations of the subject position.

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the validity of this discourse strategy also in the adult grammar. The structure in (8b) allows for multiple adjunction to IP (as in (9b)) and can account for multiple argument drop in child grammar. It becomes illicit once CP is fully integrated into child grammar since the PRO in IP-adjoined position would be governed by the higher C-head (Müller et al., 1996), the latter situation contradicting universal constraints (PRO being allowed in ungoverned contexts only). More generally, once CP is fully activated, the adjoined element is no longer accessible to an external discourse licenser (cf. Rizzi, 1992 for null subjects in early child language). To summarize, we would like to follow Müller et al. (1996) by assuming that the object omissions exhibited in early child speech are of the Chinese type (cf. Huang, 1984).

We have suggested above that licensing of dropped constituents via discourse is a universal (pragmatic) strategy during early stages of language acquisition. Although children from all four language backgrounds have evidence for the validity of this strategy in the adult grammar, the monolingual French and Italian children seem to converge earlier on the target system when contrasted with children from a Germanic background. We have observed that when French and Italian children use target-deviant constructions at 11% or less, German and Dutch children continue to use a high number of object omissions; omissions which correspond or do not correspond (the finite verb is not clause-initial or more than one argument is being dropped) to the target. Although, as we have argued, a French or Italian child receives input which may lead to the assumption that the universal discourse strategy is valid, there is also evidence that an empty object position is licensed by a (preverbal) object clitic. Although evidence for more than one analysis exists, one analysis based on Minimal Default Grammar and one based on a language-specific grammar, the monolingual French/Italian data are clearly different from the Germanic data. Object omissions are less frequent in monolingual French/Italian children during comparable MLU stages and ages. Monolingual French/Italian children converge quickly with the adult grammar. If our suggestions are plausible, the 11% of object omissions in French/Italian monolinguals do not reflect mere performance errors, but the (now) residual importance of an earlier stage of language acquisition which conformed to a greater extent with Minimal Default Grammar.[24] The Italian data clearly show that monolingual children use object omissions at a higher rate during earlier stages. This observation is predicted once we assume that these omissions reflect Minimal Default Grammar (as Chinese as an adult language would for the grammatical phenomenon in question). What evidence could be used in favor of the view that 11% of object omissions are not due to performance? Tiedemann (1999) has observed that object omissions in Italian monolingual children observe certain restrictions. In Martina, one of the children studied by Guasti (1993/94) for object omissions, of the 43 omitted objects (during the whole period of investigation), 12 omissions concern the ditransitive verb *mettere* "put" and 9 the ditransitive *dare* "give". Also, the monolingual Italian children of the elicited production task omitted objects more frequently with ditransitive than with transitive verbs. Jakubowicz (p.c.) made a similar observation for her monolingual French children (cf. also van der Velde, 1998 for lexical restrictions on object omissions in French children). Note that the children also realize the two objects with ditransitives. It is plausible that the 11% of object omissions are not performance errors.

What about the Dutch/German children? For the German children, we know that they stay longer in the stage during which they have access to Minimal Default Grammar. They also use target-deviant object drop twice as frequently as children from a Romance background with a comparable MLU/age. This difference can be explained by the Germanic adult system: Dutch and German are topic drop languages. The monolingual child is presented with ample evidence for the validity of (universal) discourse licensing in the adult grammar. With respect to German, we made the distinction between target-like and target-deviant object omissions. The question is whether the target-like omissions are describable in terms of the adult German topic drop system or whether they must be treated on a par with the target-deviant constructions (i.e. they reflect Minimal Default Grammar). Under the latter interpretation, the fact that half of all object omissions in German correspond to the target is a mere coincidence. The decision in favor of one of the interpretations is not straightforward. On the one hand, it would be favorable to analyze children's target-like omissions in terms of adult German as involving topic drop. This would prevent us from disadvantaging the child during a stage where both target-like and target-deviant constructions occur. On the other hand, empirical evidence against an adult topic drop analysis comes from lexical topicalization of objects and topic drop of subjects. The first observation is that children acquiring a V2 language pass through a

[24] We cannot discuss the question here of whether there is a stage in language acquisition which fully conforms with Minimal Default Grammar or whether Minimal Default Grammar always competes with language-specific grammars.

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stage characterized by the absence or only formulaic usage of OVS constructions (cf. Müller and Penner, 1996). This stage corresponds to the stage reported here during which object omissions are very frequent. If target-like object omissions (resulting in V1 constructions) are to be analyzed in terms of adult topic drop, the absence/formulaic usage of OVS would be surprising since one would have to ask why children do not use lexical object NPs in preverbal position. The next observation concerns the frequency with which group 1 children omit subjects.[25] Table 16 shows that group 2 children use fewer target-deviant object omissions but the absolute frequency of omissions remains rather constant as compared with group 1. With respect to subject omissions, it is the absolute frequency of omissions which changes dramatically, with group 1 children producing a high number of subject omissions (about 40%). If we assume that group 2 children's behavior mirrors (near-) adult German grammar, we must conclude that in adult German topic drop is rare with subjects.[26] The empirical observations from topic drop of subjects also lead to the conclusion that argument omissions in early German child grammar do not reflect adult German topic drop. We would like to suggest that, although German group 1 children clearly know that their language is different from French/Italian, they have not yet acquired knowledge that their language is a V2 topic drop language. Put differently, German children make a choice in favor of topic drop early in development, however, they still have to switch from "free" topic drop of the Chinese type to German V2 topic drop.

A further observation is that the monolingual children studied in the literature continue to use target-deviant object omissions for some time, despite evidence for a lexically instantiated C-system. Müller and Penner (1996) show that monolingual German and French children pass through a transitional stage in the acquisition of the target C-system during which the children gradually make productive use of the different types of subordinate clauses (adjunct vs. complement clauses for example) and the different types of lexical complementizers (heads vs. non-heads for example). Put differently, for both grammatical phenomena researchers have not observed an abrupt change, but instead a gradual development.

Table 16. *Subject and object omissions in spontaneous interaction: German*

	Target-deviant		Total	
	subject	object	subject	object
Group 1	4.4%	24.3%	39.5%	45.9%
Group 2	1.2%	1.8%	8.6%	37.8%

The above discussion leads us to the theory of monolingual language acquisition recently advocated by Roeper (1999). He has defended the view that "monolingual" speakers are also "bilingual" in the sense that monolingual children "work with" different grammatical systems at particular points in language development (Fritzenschaft, Gawlitzek-Maiwald, Tracy and Winkler, 1990; Koster, 1993; Ferdinand, 1997). All researchers working on child data know the phenomenon, namely that children evidence a form of "bilingualism" when they appear to be between stages of language development. A "stage B child" may still use constructions characteristic of the previous stage A to a large extent. Consequently, crosslinguistic influence could be defined in terms of the influence of one (previous) grammar (stage A grammar) on a more advanced grammar (stage B grammar). This view of first language acquisition opens interesting perspectives for a parallel treatment of "monolingual" and bilingual first language development. We want to suggest that the monolingual children described in the literature show evidence of the activation of more than one grammar at one developmental stage. Thus, the children may use a lexically instantiated CP structure, not allowing adjunction of PRO to IP, and the structure in (8b) and (9b) at the same developmental stage.

Object omissions in bilinguals

In what follows, we will present the results of three bilingual children, the German–French bilingual boy Ivar (Iv), the Dutch–French bilingual girl Anouk (An) and the German–Italian bilingual girl Carlotta (Ca). Since the three bilingual children investigated are similar with respect to object omissions, we will not present and discuss the data separately. We will confine ourselves to the presentation of the French and Italian data in all three children; space limita-

[25] Another observation is that target-deviant omissions hardly ever concern subjects in group 1 children. The near absence of target-deviant subject omissions can be explained if one considers the observation that SVX is by far the most frequent word-order pattern used by these children, and omission of the subject results in a V1 construction which, at the surface level, corresponds to adult German, but does not necessarily have to be analyzed in terms of finite verb-movement to COMP (cf. Fritzenschaft et al., 1990; Müller and Penner, 1996). Consequently, the subject does not necessarily have the status of a topic and therefore is different from the fronted object.

[26] Erica Thrift (p.c.) also finds that in adult Dutch subjects cannot be easily topic-dropped, except in diary contexts, where it is possible in other languages as well.

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tions do not allow us to present the analysis of the Germanic language in the children.[27] Suffice it to say that the children behave similarly with respect to object omissions in German and Dutch as monolingual children: they frequently use object drop constructions and they exhibit the same types of erroneous object drop constructions. Furthermore, the decrease of target-deviant object omissions is also related to the increase of target-like constructions related to the C-system.

The first longitudinal study we have considered is discussed in Müller et al. (1996). The authors analyze a German–French bilingual boy – Ivar – from the DUFDE study (Deutsch Und Französisch – Doppelter Erstspracherwerb "German and French – Simultaneous First Language Acquisition"), conducted by J.-M. Meisel (Meisel, 1990b, 1994a). The second child is Anouk, a Dutch–French bilingual girl studied by Hulk (1997, 1999) and Hulk and van der Linden (1996). The third child is the German–Italian bilingual girl Carlotta from the research project Frühkindliche Zweisprachigkeit: Italianisch/Deutsch und Französisch/Deutsch im Vergleich ("Bilingualism in Early Childhood: comparing Italian/German and French/German"), conducted by N. Müller. All children have been raised bilingually from birth, following the principle "une personne–une langue" of Ronjat (1913). Furthermore, it is the mother who speaks the Romance language with the child and the father the Germanic language. The corpora were collected by making audio recordings in Anouk's case and video recordings in Ivar's and Carlotta's cases. In Anouk's case, the recordings were made every three weeks, starting at age 2;3,13, until the age of 3;10,7. Ivar was been recorded from 1;5,24 until 5;10,8. Carlotta is still being recorded: the recordings started when she was 1;8,28; she is in her sixth year. For Anouk and Carlotta, the MLU is word-based,[28] while for Ivar, the MLU is morpheme-based (Schlyter, 1990b). Thus, Ivar cannot be compared with either the monolingual or with the other bilingual children solely based on MLU values.

All children pass through two major developmental phases: the first phase is characterized by a high number of target-deviant object omissions and the absence or infrequent usage of object clitics and constructions related to the C-system in the adult language. The second developmental phase sees the decrease of target-deviant object omissions and the increase of object clitics and C-related constructions. In Ivar, the first developmental phase lasts until the age of approximately 2;11/3;0; in Anouk until approximately 3;1 (MLU 3.3); and in Carlotta until approximately 2;4 (MLU 2.6). Due to space limitations, we are not able to show that all three children separate the languages during the period under investigation; this has been shown elsewhere (Meisel, 1990a, 1994b; Schlyter, 1990a; Müller, 1993, 1994, 1996; Hulk and van der Linden, 1996; Hulk, 1997, 1999; Köppe, 1997).

Table 17. *The emergence of object clitics in Ivar (tokens) (Müller et al. 1996)**

Age	MLU	me	te	le, la, les	lui, leur	nous,vous	se
2;4	1.29	0	0	0	0	0	0
2;5	2.93	0	0	0	0	0	0
2;6	3.58	0	0	0	0	0	0
2;7	3.51	0	0	0	0	0	0
2;8	3.96	0	0	0	0	0	0
2;9	4.55	0	0	0	0	0	13
2;10	4.90	0	0	0	0	0	0
2;11	4.90	0	0	0	0	0	2
3;0	6.79	1	2	1	0	0	3
3;1	5.47	0	4	4	0	1	2
3;2	6.01	1	2	8	0	0	5
3;3	6.64	0	0	12	0	0	0
3;4	6.81	0	1	16	0	0	2
3;5	5.37	0	0	7	0	0	1

* The 13 tokens at 2;9 refer to 1 type, namely *ils se battent* "they each other beat" which is probably rote-learned. The 2 tokens at 2;11 refer to *ils se battent* and *elle se lève* "she herself gets up". For an attempt to explain the early use of reflexives clitics cf. Crysmann and Müller, 2000.

The first developmental phase

During the first developmental phase, all children use object clitics infrequently (cf. Meisel, 1986; Kaiser, 1994 for Ivar's data). Tables 17, 18, and 19 contain the absolute number of the different French and Italian object clitics.

Furthermore, object omissions are frequent in all children, as shown in Tables 20, 21, and 22. In this respect, the bilingual children differ considerably from the monolingual French and Italian children and resemble monolingual German and Dutch

[27] Since our approach for the monolingual children would make it necessary to analyze the Germanic C-system of the bilingual children, i.e. the presentation of the development of V2 and the emergence of wh-questions and complementizers, we had to limit the presentation to the Romance languages. The CP development of the children has been presented at the 23rd and the 24th Boston University Conference on Language Development and at GALA 1999; cf. Müller and Hulk, 2000.

[28] Since this seems to be the standard way of measuring MLU for the majority of corpora, we decided to count words instead of morphemes for Anouk's and Carlotta's utterances. Anouk and Carlotta are thus comparable with the monolingual children presented in the previous sections.

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Table 18. *The emergence of object clitics in Anouk (tokens)*

Period	MLU	absolute number of clitics
2;3,13–2;7,5	2	2
2;7,28–3;1,4	2.9	3
3;3,17–3;4,28	4.3	15
3;6,25–3;10,7	5	46

Table 19. *The emergence of object clitics in Carlotta (tokens)**

Age	MLU	Mi	ti	lo, la, le, li	gli, le	ci, vi	si
1;10,30	1.13	0	0	0	0	0	0
2;2,4	2.17	0	0	0	0	0	0
2;2,19	2.24	0	0	2	0	0	0
2;3,2	2.63	0	0	5	0	0	0
2;3,17	2.53	0	0	0	0	0	1
2;4,7	2.56	0	0	0	0	0	3
2;4,21	2.62	3	0	2	0	0	1
2;6,9	2.6	0	0	6	0	0	0
2;6,23	2.84	1	0	5	0	0	5
2;7,13	2.43	0	1	9	0	0	0
2;9,11	2.43	0	0	7	0	0	0
2;9,25	3.26	1	0	19	0	0	1
2;10,16	3.92	1	0	13	0	0	0
2;10,30	3.73	2	1	7	0	0	1
2;11,13	4.04	0	0	2	0	0	0
2;11,27	4.38	0	0	6	0	0	0

* The first non-reflexive clitics at 2;2,19 are used in the constructions *eccolo* "there it" and *eccoli* "there them". At 2;3,2, Carlotta uses the (probably) rote learned construction: *ce l'ha NP* "there is NP" three times. During the same recording, she uses the object clitic *la* in the constructions *pottala via io* (=portala via io) "takes-it away I" where the feminine form refers to a masculine noun and in *qua la siede qua* "there it sits/puts there" with the meaning "I put it there" where *la* also refers to a masculine noun (papà); these are the first productive uses of object clitics.

Table 20. *Object omissions (tokens) in obligatory contexts in Ivar's French (Müller et al. 1996)*

Age	MLU	−OBJ	−OBJ (in %)
2;4	1.33	1	100
2;5	2.93	17	46
2;6	3.58	7	47
2;7	3.51	7	47
2;8	3.96	4	50
2;9	4.55	6	35
2;10	4.90	4	25
2;11	4.90	5	25
3;0	6.79	0	0
3;1	5.47	2	8
3;2	6.01	4	9
3;3	6.64	0	0
3;4	6.81	0	0
3;5	5.37	0	0

Table 21. *Object omissions (tokens) in obligatory contexts in Anouk's French*

Age	MLU	−OBJ	−OBJ in %
2;4,17	2	4	40
2;4,18	2.13	2	100
2;4,23	2.97	4	40
2;5,20	2.5	4	33
2;6,11	2.5	5	55
2;7,5	1.21	3	33
2;7,28	2.21	11	31
2;8,22	2.35	15	47
2;9,17	3	1	100
2;11,13	3.65	6	32
2;11,27	3.47	4	13
3;1,4	3.31	9	23
3;3,17	4.69	13	13
3;3,21	4.05	9	18
3;3,25	3.72	5	18
3;3,27	4.32	5	18
3;3,28	3.54	1	25
3;4,28	5.16	24	20
3;6,25	4.91	22	23
3;7,9	4.13	3	7.5
3;7,29	5.63	9	12
3;8,18	4.44	3	29
3;9,1	5.63	7	18
3;10,7	5.53	10	25

Table 22. *Object omissions (tokens) in obligatory contexts in Carlotta's Italian*

Age	MLU	−Obj.	−Obj. (in %)
1;10,30	1.13	4	100
2;2,4	2.17	1	13
2;2,19	2.24	4	40
2;3,2	2.63	3	21
2;3,17	2.53	4	44
2;4,7	2.56	4	40
2;4,21	2.62	0	0
2;6,9	2.6	1	9
2;6,23	2.84	2	11
2;7,13	2.43	4	24
2;9,11	2.43	3	13
2;9,25*	3.26	5	13
2;10,16	3.92	2	5
2;10,30	3.73	3	10
2;11,13	4.04	3	10
2;11,27	4.38	2	6

* During the recording, we conducted the elicited production task presented in Jakubowicz et al., 1996.

children, if one compares MLU values and ages. Ivar omits obligatory objects with a mean percentage of 39.5%, Anouk with a mean percentage of 32.5%, and Carlotta with a mean percentage of 36.4%.

Some examples for object omissions are listed in (11).

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(11) a. *Ivar répare*
Ivar repairs
"Ivar fixes it." (Iv:2;4,9)
b. *A pas trouvé*
has not found
"Ivar did not find it." (Iv:2;5,7)
c. *Mami connaît pas*
Mummy knows not
"Mummy doesn't know it." (An:2;6,11)
d. *J'ai déjà raconté*
I have already told
"I have already told it." (An:3;1,4)
e. *Prendiamo*
we-take
"We take it." (Ca:2;2,19)
f. *Schiaccia io*
tramples-down I
"I trample it down." (Ca:2;3,17)

The next important observation is that object omissions are not restricted to a small class of verb types, but instead occur with a great variety of transitive verbs in all children.

The children are able to use two arguments per clause, as shown in (12).

(12) a. *On met une robe*
one puts on a dress (Iv:2;5,7)
b. *Je veux sirop*
I want syrup (An:2;11,13)
c. *Baby beve la bottiglia*
baby drinks the bottle (Ca:2;2,4)

Furthermore, the children both use and drop the obligatory object with the same verb (cf. in (13)).

(13) a. *Non maman prend*
no Mummy takes (Iv:2;5,7)
a′. *Il prend-eh prend ça ti, ti*
he takes it, the teddy (Iv:2;5,7)
b. *Cherche*
look for (An:2;7,28)
b′. *Je cherche petit nounours*
I look for small bear (An:2;7,28)
c. *Prendiamo*
we-take (Ca:2;2,19)
c′. *Prendiamo arancione*
we-take orange (Ca:2;4,7)

These observations indicate that a performance-oriented explanation of the data in the sense that length of the VP, for example, determines object drop in child grammar is not plausible.

Interestingly, the empty object represents the discourse topic in (14) (where A=Adult).

(14) a. A: *Tu as enlevé la musique? (=l'horloge)*
You have taken off the music (=clock)
"Did you take off the clock?"
Iv: *Oui / remets ici*
yes put back here
"Je la remets ici." (Iv: 2;6,6)
b. A: *Tu veux pas de yaourt ou de yaourt à la banane?*
"You don't want to have a yoghurt or a banana yoghurt?"
An: *Veux pas*
want not
"I don't want it." (An:2;11,27)
c. A: *Dov'è che manca la punta? Vediamo. Qua*
where is that misses the point? Look there
"Where is it where the point is missing? Let's have a look. There it is."
Ca: *No, io fa / No io*
no I makes / no I
"No I make it." (Ca:2;4,7)

All children exhibit multiple argument drop, as in (15). Note that the absence of subject pronouns which do not carry contrastive stress is predicted in Italian since adult Italian is a pro-drop language. Therefore, no Italian example is given in (15).

(15) a. *Répare*
repair
"I/Ivar repair(s) it." (Iv:2;4,9)
b. *Allume*
switch on
"I switch it on." (An:2;7,5)

The children's speech exhibits productive use of lexically instantiated topicalization into a pre-S position (cf. (16)).

(16) a. *Ça on met*
this one puts (Iv:2;5,7)
b. *Un aut livre de Babar je connais*
an other book of Babar I know (An:2;11,13)
c. *La scatolaio taglio* (=toglio)
the box I take-away (Ca:2;4,21)

During the first developmental phase, Ivar's speech is characterized by the absence of root wh-question formation, target-like complementizers, relative pronouns, and embedded wh-questions (cf. table 23).

In Anouk and Carlotta,[29] constructions related to the C-system are infrequent during the first developmental phase as well (cf. Tables 24 and 25). Complementizers such as *que/che* "that" and *si/se* "if/whether" are completely absent in Anouk's French and Carlotta's Italian during the first phase.

[29] Some wh-words other than *dove* are already attested in root clauses before 2;4,21. Only from age 2;3,2 onwards, are verbs other than *essere* (namely the form *è* "is") and *stare* "be located" (namely *sta* "is located") used in wh-questions, like *andare* "go" and *fare* "make" at 2;3,2.

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Table 23. *The emergence of wh-questions and complementizers in Ivar's French (Müller et al. 1996)*

Age	Où		other wh-words		complementizers
	Matrix	Subordinate	Matrix	Subordinate	
2;4	1	0	0	0	0
2;5	1	0	0	0	0
2;6	0	0	0	0	0
2;7	1	0	0	0	0
2;8	1	0	0	0	0
2;9	0	0	0	0	0
2;10	3	0	0	0	0
2;11	0	0	1	0	3
3;0	0	0	0	1	4
3;1	7	0	7	4	13
3;2	8	1	5	3	11
3;3	1	0	4	2	5
3;4	3	0	7	9	18
3;5	3	1	3	3	9

Table 24. *The emergence of wh-questions and complementizers in Anouk's French*

Age	Où		other wh-words		complementizers
	Matrix	Subordinate	Matrix	Subordinate	
2;4,17	0	0	0	0	0
2;4,18	0	0	0	0	0
2;4,23	0	0	0	0	0
2;5,20	0	0	0	0	0
2;6,11	0	0	0	0	0
2;7,5	0	0	0	0	0
2;7,28	5	0	0	0	0
2;8,22	1	0	3	0	0
2;9,17	0	0	2	0	0
2;11,13	1	0	4	1	0
2;11,27	2	0	3	9	0
3;1,4	2	3	9	2	1
3;3,17	0	0	5	2	8
3;3,21	1	0	4	4	1
3;3,25	0	0	7	1	5
3;3,27	0	0	7	0	3
3;3,28	1	0	2	0	2
3;4,28	0	0	7	5	15
3;6,25	0	0	13	8	8
3;7,9	0	0	4	3	9
3;7,29	0	0	9	10	12
3;8,18	0	0	6	0	6
3;9,1	1	0	2	10	7
3;10,7	0	0	2	7	20

Table 25. *The emergence of wh-questions and complementizers in Carlotta's Italian*

Age	Dove		other wh-Words		complementizers
	Matrix	Subordinate	Matrix	Subordinate	
1;10,30	1	0	0	0	0
2;2,4	4	0	4	3*	0
2;2,19	2	0	1	0	0
2;3,2	2	0	2	0	0
2;3,17	13	0	1	0	0
2;4,7	0	0	3	0	0
2;4,21	2	0	5	1	0
2;6,9	9	1	2	7	0
2;6,23	3	0	2	7	0
2;7,13	0	0	0	0	0
2;9,11	0	0	2	5	0
2;9,25	1	0	1	5	0
2;10,16	0	0	1	7	2
2;10,30	1	0	0	2	2
2;11,13	0	0	3	7	6
2;11,27	0	0	0	4	5

* The three tokens are the rote-learned relative clause *Luca che piangeva* "Luca who cried".

The second developmental phase

During the second developmental phase, the C-system is lexically integrated into child grammar. The lexical instantiation of the C-system in its target form is demonstrated by the presence of target-like wh-question formation with a variety of wh-words, productive use of relative markers, use of complementizers and wh-words which introduce embedded clauses. It is evident from tables 24 and 25 that the integration of the C-system is gradual in Anouk and Carlotta, i.e. it takes about eight months. For example, Anouk's first wh-words are *où* "where" at 2;7,28, *co* (=comment) "how" and [kesk] (=qu'est-ce que) "what" at 2;8,22, *quoi* "what" at 2;11,13, *qui* "who" at 2;11,27, *pourquoi* "why" at 3;1,4. The first embedded questions appear at 3;1,4, the first relative clauses at 3;3,17, and the first complementizers (*que* "that") as late as 3;3,17. In contrast, Ivar is a "faster" learner (cf. table 23).

Object clitics start to be used productively as well in this phase (cf. Tables 17, 18, and 19). Target-deviant object omissions decrease dramatically at the age of 3 in Ivar, as shown in table 20. In Anouk and Carlotta, object drop constructions are used less than during the first developmental stage, but they continue to be used once the CP in its adult form starts to be integrated. In other words, we have evidence for a rather long transitional stage in these children. Note, however, that the gradual decrease of target-deviant object omissions is parallel to the gradual increase of C-related constructions (cf. Tables 24 and 25) and object clitics in both children. In other words, those children who exhibit a rather long transitional phase for the disappearance of object

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drop also show a gradual development in other grammatical domains, the usage of object clitics and constructions related to the C-system.

To summarize: the three bilinguals studied here evidence object drop in the Romance languages in a similar way as monolinguals (they use the same types of erroneous constructions) but to a much higher degree. Target-deviant object omissions decrease once the C-system is lexically integrated into child grammar, but they continue for a rather long period in two of the bilingual children. Such a long transitional stage has not been reported for monolingual children.[30] Thus, there is a sharp quantitative, but not a qualitative difference between bilingual and monolingual language development.

Object drop in bilinguals: a grammatical analysis

We suggest a similar structure for French and Italian object omissions in bilingual children as in monolingual children, i.e. a structure where an empty operator is adjoined to IP, i.e. the structure in (8b) and (9b). The similarity in structure underlying object omissions accounts for the observation that the two types of acquisition do not differ with respect to the types of errors. As has been claimed for the monolinguals, the structure becomes illicit once the C-system is instantiated as required in the target-systems. Müller et al. (1996) argue that lexical instantiation of the C-system reflects the fact that there was a c-commanding head COMP in the children's representation at the second developmental phase, and, therefore, a PRO adjoined to IP, being governed, was no longer licensed. The approach predicts that a PRO in IP-adjoined topic position should be illicit once the C-system has been established. It does not imply that the topic position itself disappears. Indeed, we find evidence in all three bilingual children for its lexical instantiation: *Maintenant il travaille* "Now he works" (Iv:3;2,14). We have observed in the Romance language of all three bilingual children that target-deviant object omissions decrease once the C-related constructions are used, with a lexical (i.e. overt) representative in C or Spec of CP, thus corroborating the above prediction. Furthermore, we have observed in the Romance language of all the bilingual children that object clitics are used with low frequency or they are not used at all during the stage which is characterized by a high frequency of illicit object omissions. This observation represents another parallel with the monolingual data and is expected within an approach of discourse licensing of empty topics. Note that for Carlotta and Anouk, some uses of (non-reflexive) object clitics are evidenced during the first stage. This observation is also corroborated by findings from monolingual French and Italian children. Analyzing the speech of two monolingual French children (Grégoire and Philippe), Friedemann (1992) finds that the acquisition of object clitics is a gradual process. The same observation is made by Guasti (1993/94) for three monolingual Italian children. Note that this is not excluded under our analysis: children might start to use object clitics well before they fully instantiate their C-systems. However, if they do not (as Ivar), the sudden unavailability of "free" object drop may aid them to acquire the full object clitic paradigm as object clitics (or object agreement morphology) are the only device left for licensing an empty object position.

Quantitative differences

We have observed two types of quantitative differences between bilinguals and monolinguals.[31] First, all three bilingual children use object omissions to a much higher degree in their respective Romance languages as compared to monolinguals with a similar MLU/age. The frequency of object omissions in the Romance languages of the bilinguals corresponds to that found in the Germanic language of the monolinguals. Second, two of the bilingual children continue to use object omissions to a high degree during the stage when we have evidence of the gradual instantiation of the C-system in its target form. In other words, some bilingual children seem to pass through a rather long transitional stage before fully converging with the target-grammar.

The important question is why bilinguals evidence more illicit object omissions in French and Italian than monolingual children with a comparable MLU/age. Two hypotheses are plausible for the bilingual data: first, one might assume that French and Italian are directly influenced by the respective Germanic languages. If direct influence was at work in the case of bilingual children, how could we explain that monolingual children exhibit illicit object omissions as well? We could hypothesize that object omissions are mere performance errors in monolinguals. However, a rate of 11% for object omissions is "too much" to claim that they are performance errors. It

[30] Müller and Penner (1996) report on monolingual German and French children and observe transitional stages with a length between two weeks and two months. As one reviewer suggests, this statement has to be taken with caution since it is possible that as more and more monolingual children are observed longitudinally, more variation with respect to the length of the transitional stages may be evidenced.

[31] We did not use statistical methods to establish significance.

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has been shown that object omissions present in the speech of monolingual children observe certain restrictions (cf. van der Velde, 1998; Tiedemann, 1999) and, at least for Italian monolinguals, we have observed that they make use of object drop more frequently during earlier stages of language development (Guasti, 1993/94). Therefore, we do not adopt the hypothesis of direct influence of one language on the other in the domain of grammar studied in the present paper. It is not our intention to exclude it in the general case.

The second hypothesis, favored here, assumes that the French and Italian of the bilingual children are indirectly influenced by the respective Germanic languages. If one assumes that licensing of dropped constituents via discourse is a universal (pragmatic) strategy during early stages of language acquisition, also available to bilinguals (cf. Meisel, 1990a for a similar view on subject omissions), adult German and Dutch present the child with substantial evidence for the validity of this discourse strategy. A child acquiring French or Italian, however, gets confusing input for this licensing strategy. On the one hand, adult French and Italian contain constructions in which the canonical object position is empty; this might give the child the idea that discourse licensing is also at work in adult language. On the other hand, the French/Italian data are clearly different from the Germanic data, since in most cases, the empty object position is licensed by a (preverbal) object clitic. Therefore, although adult French and Italian seem to contain evidence for more than one analysis from the child's perspective, the monolingual French/Italian child will soon abandon the discourse licensing strategy. For the bilingual child, however, the situation is somewhat different. The input the child gets from French/Italian may present little evidence in favor of a discourse licensing analysis. The Dutch/German input, however, contains a lot of positive evidence for such a strategy. If it is plausible, as suggested here, that a discourse licensing mechanism of empty arguments is part of Minimal Default Grammar, we may rephrase the bilingual situation in the following way: the bilingual child (as the monolingual child) has to abandon Minimal Default Grammar. However, the bilingual child has to do so for both language types.

Abandoning Minimal Default Grammar

We have argued that there is a natural language fully converging with Minimal Default Grammar with respect to discourse licensing, namely Chinese. Müller et al. (1996) suggest a three-fold typology of adult topic drop constructions: first, the Chinese type of "free" topic drop where an A′-binding PRO hinges upon being in an ungoverned position,[32] second, German topic drop, where, supposedly, a *pro* is positioned in the specifier of a "rich" C-system;[33] and, finally, the French type where *pro* arguments are licensed "in situ" through object clitics, which are analyzed in this approach as "strong" agreement markers (i.e. object clitics do not represent arguments). The authors had to leave open the question of how *pro* in adult German topic drop constructions may be identified, as in nearly all cases of topic drop there is no corresponding agreement morphology on the verb, the only exception being when the topic is the subject. They suspected that the ultimate solution to this puzzle lies in the peculiarities of the German C-system, since German is a V2 language. Although we have to leave this problem unresolved, it is clear that adult German is different from adult Chinese and thus from Minimal Default Grammar. Both language types, the Germanic and the Romance languages, present the child with evidence for discourse licensing as made available by Minimal Default Grammar, the Germanic languages to a much higher degree than the Romance languages. When we discussed the monolingual data, we observed that monolingual children have more problems abandoning Minimal Default Grammar for the Germanic languages than for the Romance languages. This was argued to be the case because adult German and Dutch are topic drop languages whereas French and Italian are not (in both languages, empty arguments are licensed by morphological devices/clitics, i.e. *not* via discourse in the general case). The data from the three bilingual children give the impression that they have difficulty giving up Minimal Default Grammar in the Romance languages as well. In other words, the topic drop character of adult German or Dutch has the effect that the bilingual child is not able to map the universal strategies onto language-specific rules as quickly as the monolinguals

[32] There are two possible explanations which have also been explored in the literature: first, it may be assumed that Chinese has no CP (cf. Fukui, 1986 for a similar proposal for Japanese). Second, C in these languages does not contain the inherent features ±wh and ±Q. In the latter case, the SpecCP would be ungoverned because there are no features to be shared, under Koopman and Sportiche's (1991) definition of head government.

[33] German (and Dutch) allows for topic drop in the specifier of CP whenever the finite verb is raised to C. Given that German has finiteness features in C, in addition to ±wh and ±Q, the empty operator option is blocked. Adjunction is not an option either, as it is generally believed that this is disallowed for German CPs. Thus, the only remaining option is *pro* in SpecCP which will be licensed and identified by the verb in C (cf. Platzack, 1983 and Haider, 1993 for the proposal that the German CP is indeed a merger of INFL and COMP).

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do. S/he is confronted with a much wider range of language-specific syntactic possibilities and one of the possibilities seems to be compatible with a universal strategy. Put differently, we would like to argue for the existence of crosslinguistic influence which is induced by the mapping of universal principles onto language-specific principles, in particular of pragmatic principles onto syntactic principles. One could define such influence as *mapping induced influence*. In earlier publications we used the term "indirect" influence (Hulk, 1998a, b, 1999; Müller, Hulk, and Jakubowicz, 1999; Müller and Hulk, 2000) in order to distinguish this kind of crosslinguistic influence from transfer as direct crosslinguistic influence.

Mapping induced influence may also have the effect that the Germanic–Romance bilingual learner remains in a transitional stage for a longer time in the Romance languages as compared to monolinguals. In other words, Minimal Default Grammar competes with a language-specific grammar in the Romance languages of the bilinguals for a longer time than in monolinguals with a Romance background. Again, we would like to argue that this is due to the influence of the Germanic system, being a topic drop system, which resembles Minimal Default Grammar with respect to discourse licensing.

Internal vs. external bilingualism

Following Roeper's (1999) approach to universal bilingualism we would have to argue that the bilinguals, like the monolinguals, have to solve the problem of simultaneous access to multiple grammars, Minimal Default Grammar and language-specific grammar(s). In addition, they must cope with the fact that access to multiple grammars is found in both of the two languages to be acquired and that the languages may converge to different degrees with Minimal Default Grammar. In this light, it is conceivable that language separation and crosslinguistic influence are characteristics of the same developmental stage in a bilingual child. Yang (1999, 201) suggests that language acquisition within the UG framework may be stated in his variational learning framework (Yang, 2000). The "fitness" or appropriateness of a grammar is defined as the proportion of the input sentences with which it is compatible. When an input sentence is presented, the learner selects a grammar G with its associated probability P_G, and then performs grammatical analysis (e.g. parsing). The success (or failure) of G in analyzing the sentence increases (or decreases) P_G. We may rephrase these assumptions for the situation of our bilingual children: *mapping induced influence* occurs only in those domains of the grammar where the language learner is confronted with positive evidence for more than one possible structural analysis in one language and the other language favors/reinforces one of the two (or more) analyses. Thus, one of the two languages (French/Italian) is treated as if responding as frequently as the other language (German/Dutch) to a particular stimulus, that is, a sentence with an empty object in the input for the present purpose. In addition to the monolingual children, who according to Roeper (1999) show evidence of a type of *internal bilingualism*, the bilingual children have to cope with a type of *external bilingualism*, i.e. sentences in the input may be inherently ambiguous or contradictory from the child's perspective (allowing for an analysis both in terms of Minimal Default Grammar and a language-specific grammar), in one of the two languages and in both languages. However, the probability for either grammatical analysis (in terms of Minimal Default Grammar and a language-specific grammar) has to be determined for each language separately. It is plausible to assume that bilingual children are equipped with one grammatical performance system or with one system determining the probability P_G of an associated grammar G. In other words, the problem created by *external bilingualism* is to associate a 100% compatibility of a particular grammar / of particular grammars with all the input of a particular language, which may turn out to be difficult once there is a certain overlap of the two grammatical systems. This view presupposes that the bilingual child has separate grammatical systems, like the monolingual child. The weight of a grammar (as defined as the measure of confidence the learner associates with it) may be viewed as part of the speaker's competence if a grammar of a particular language is not a homogeneous object but consists of several coexisting grammatical systems with different weights. In this sense, the mapping induced crosslinguistic influence, or what we have defined as indirect influence in previous work, is reflected in the child's competence.

Vulnerability of the C-domain

We have observed that crosslinguistic influence is evidenced during the stage when the C-system is not lexically instantiated in child grammar as required by the target-system. We would like to argue that mapping induced influence is evidenced during the period when the C-system is radically underspecified. Why would this be the case? We would like to argue with Platzack (1999) that the C-domain represents a vulnerable domain due to its interface character which connects internal grammar with other cognitive systems and different levels of grammatical

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representation: pragmatic and syntactic information are exchanged at the C-level, e.g. in the case of topic drop. Although both language types, German/Dutch and Chinese, are topic drop languages, the availability of "free" topic drop differs. In contrast to Chinese, German and Dutch are not free topic drop languages in the sense that topic drop obeys syntactic restrictions (only the constituent in SpecCP may be dropped). The interaction between pragmatic and syntactic information seems to be particularly difficult for children. Hoekstra and Hyams (1998) have argued for a similar approach to the child's early declarative matrix sentences containing an infinitival verb form (Root Infinitives). They suggest that Root Infinitives are unanchored structures in which the eventuality is not fixed through the grammatical mechanisms of syntactic binding of a variable by a syntactic operator. Rather, it is discursively interpreted in the manner of a free pronoun. Pronoun resolution depends on discourse and other contextual information. There is a tension between syntactic binding and pronoun resolution: once the situation arises in the adult system in which a reading obtained through syntactic binding is indistinguishable from a reading obtained through free pronoun resolution, the grammaticality determined interpretation takes precedence. In the child's language, in contrast, the grammatical and the discourse-related mechanisms are available in the interpretation. In the present view, we may suggest that Minimal Default Grammar requires as little interaction as possible between different components of grammar and Minimal Default Grammar competes with a language-specific grammar when the child performs a grammatical analysis. Interestingly, two of the bilingual children showed evidence of a rather long transitional stage which we would like to interpret as a competition between the (fully) grammatical and the discourse-related mechanisms in developing grammar. If future research shows that our speculative assumption is correct, namely that bilingual children demonstrate a longer transitional stage than monolingual children, we will have another piece of evidence for the effect of delay created by the mapping problem in external bilingualism.

Language dominance

We have argued that crosslinguistic influence is likely to be related to properties of the grammatical phenomenon involved. What about the role of language dominance? Does the dominant/preferred/stronger language influence the weaker language (cf. e.g. Döpke, 1992)? One criterion to determine the dominant or stronger language is MLU. If language dominance were an explanation, we would expect that the respective Germanic language was the dominant language. This is not supported by the data in any of the children. Furthermore, we would not expect crosslinguistic influence to occur in both directions during the same developmental phase. This is, however, supported by the comparison of object drop phenomena (the Romance language is the target of influence) with finite verb placement in subordinate clauses (the Germanic language is the target of influence) (cf. e.g. Müller, 1998).

Table 26. *The MLU of Anouk in her two languages*

Age	MLU Dutch	MLU French
2;4,9	2.3	1.5
2;5,20	1.56	2.97
2;6,11	2.57	2.5
2;9,17	2.6	3
2;11,13	3.1	3.65
2;11,27	2.18	3.47
3;1,4	4.49	3.31
3;6,25	3.31	4.91
3;7,9	6.04	4.13
3;7,29	4.12	5.63
3;10,7	4.52	5.53

In Anouk, it is difficult to decide which language is dominant during the whole period of investigation (cf. Table 26). Her MLU is slightly higher in French than in Dutch.

In Ivar, German is the dominant language until 2;4. From 2;5 onwards, the relevant period for the present investigation, French may be said to be dominant: this is especially the case from age 3 onwards; cf. Schlyter (1990b) and Table 27. Furthermore, during the same period we may observe crosslinguistic influence in Ivar where German is influenced by French. Ivar uses correct word orders in his early (not lexically introduced) French subordinate clauses (Müller, 1993). In German, the finite verb does not surface, as required, in clause-final position (Müller, 1998), however.

As for Carlotta, if there is a dominant language at all during the period of investigation, it is the Romance language (cf. Table 28).

Interestingly, as in the case of Ivar, finite verb placement in her German subordinate clauses differs from adult German: during the period of investigation, she produces not a single subordinate clause with the finite verb in clause-final position. On a parallel with Ivar, Carlotta uses correct finite verb placement in her Italian subordinate clauses.

We may thus conclude that language dominance

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Table 27. *The MLU of Ivar in his two languages*

Age	MLU German	(base)*	MLU French	(base)
1;10,12	1.12	(69)	1.13	
1;11,17	1.41	(99)	1.31	(68)
2;0,2	1.68		—**	
2;0,29	1.63		1.31	
2;2,7	1.71		1.47	
2;3,5	1.80		1.35	
2;4,9	1.83		1.29	
2;5,7	2.76		2.93	
2;6,6	3.03		3.58	
2;7,17	3.35		3.51	
2;8,15	3.52		3.96	
2;9,18	3.82		4.55	
2;10,24	4.29		4.90	
2;11,21	4.77		4.90	
3;1,3	4.55		5.47	
3;2,14	3.90		6.01	
3;4,23	5.68		6.67	

* The base is indicated if below 100.
** The base is insufficient.

Table 28. *The MLU of Carlotta in her two languages*

Age	MLU German	(base)	MLU Italian	(base)
1;10,30	1.34	(92)	1.13	
2;2,4	1.75	(40)	2.17	
2;2,19	1.68	(80)	2.24	
2;3,2	2.38		2.63	
2;3,17	2.04		2.53	
2;4,7	2.27		2.56	
2;4,21	2.51		2.62	
2;6,9	2.7		2.6	(83)
2;6,23	2.81		2.84	
2;7,13	2.44		2.43	
2;9,11	2.63		2.43	
2;9,25	3.11		3.26	
2;10,16	3.58		3.92	
2;10,30	2.52	(94)	3.73	
2;11,13	3.91		4.04	
2;11,27	3.81		4.38	

cannot explain the crosslinguistic influence observed with respect to object omissions. We believe that our approach, in terms of properties of the grammatical phenomenon in question, is strengthened by this result. Our approach makes a testable prediction: if language dominance does not determine crosslinguistic influences, but rather properties of the grammatical phenomenon, then a bilingual child acquiring French or Italian and English (the latter not being a topic drop language) should not evidence more object omissions in the Romance language when compared to monolinguals. Johanne Paradis (p.c.) suggests that our prediction turns out to be correct in the English–French bilingual children she studied.

Summary of the results

In the present paper, we have argued that there is crosslinguistic syntactic influence in bilingual children which cannot be explained by language dominance or by the children's inability to separate the two languages. As for the question of when and where to expect crosslinguistic influence, we have argued that it is the grammatical phenomenon which plays an important role in determining when and where influences occur. Once language A allows for more than one grammatical analysis from the child's perspective and language B contains positive evidence for one of those possible analyses, language A is likely to be influenced by language B. We have further argued that crosslinguistic syntactic influence is evidenced during a stage where the C-domain is radically underspecified: the C-domain is particularly "vulnerable" since it represents an interface level which connects internal grammar with other cognitive systems and it connects different levels of grammatical representation: pragmatic and syntactic information are exchanged at the C-level.

In the present case of object drop, the effect of crosslinguistic influence was delay. Crosslinguistic influence may also have a positive effect on language development in the bilingual child: since bilinguals are confronted with more possibilities, development may be quickened in domains difficult for monolinguals (cf. e.g. finite verb placement in German root clauses, cf. Meisel, 1986).

We did not discuss the individual component, which is important when comparing longitudinal case studies of children (cf. e.g. Fritzenschaft et al., 1990). We have observed that Anouk and Carlotta exhibited a long transitional stage in the acquisition of licensing of empty objects. Currently, we have no explanation for the differences or for how individual differences may be explained in the framework of UG.

In the present study, we have analyzed longitudinal studies of bilingual children. These studies have the advantage that they may contribute to our understanding of the developmental path children take when they acquire two languages from birth. They have the disadvantage that one cannot study large populations. The study of more bilingual children, also from different language backgrounds, is necessary to verify our claims.

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PEER COMMENTARIES

The importance of discourse-pragmatics in acquisition

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In their keynote article, Müller and Hulk provide valuable evidence bearing on a question of central importance in the field of bilingual acquisition. Contrary to previous claims in the literature (e.g. Paradis and Genesee, 1996), they suggest that the two languages of a bilingual learner can and do influence each other in the course of acquisition, provided the right circumstances obtain. Though the logic of argumentation is somewhat complex, Müller and Hulk present it very clearly and illustrate it well with the situation of Germanic–Romance bilingual children learning about omission of objects. This article raises many very interesting issues which all would be great starting points for further discussion and research. However, I will limit my comments here to two issues which touch on pragmatics. First, I will address the first of Müller and Hulk's conditions for crosslinguistic influence in bilingual acquisition – that the structure in question must involve the interface between syntax and pragmatics. Second, I will raise some questions about children's use of pragmatic knowledge in argument omission, and elaborate this with reference to my own and related research.

Müller and Hulk claim that the C-domain is particularly vulnerable for both the monolingual and bilingual learner since it is here that children must interface between syntax and other cognitive systems, especially pragmatics. For the monolingual learner, structures which exist at this interface are particularly difficult to learn, and for the bilingual learner, such structures are susceptible to crosslinguistic influence. This claim is not new for research on monolingual children, as Müller and Hulk note. In fact, it has become rather epidemic in the field to reanalyze what once were considered paradigm examples of acquisition of pure syntax as situations in which pragmatics has a major influence in the acquisition process. Some examples of this include null subject and object (e.g. Schaeffer, 2000), root infinitives (e.g. Hoekstra and Hyams, 1997), and principle B (e.g. Chien and Wexler, 1990). While I find it very intriguing that the syntax–pragmatics interface poses special problems for learners, and while I do indeed think that discourse-pragmatics plays a large part in language acquisition, I think that there are a number of difficulties with raising the interface claim to the level that Müller and Hulk do.

In order to make very clear that the *interface* between syntax and pragmatics in the C-domain is the relevant factor that causes particular problems or allows for crosslinguistic influence, Müller and Hulk would need to control for several other possible explanations. Most obviously, they would need examples of structures which they believe are *not* at the syntax–pragmatics interface (either syntax alone or pragmatics alone), and therefore structures which they predict should not be vulnerable to special learning difficulties for monolinguals, or to crosslinguistic influence for bilinguals. Without such evidence, the relevance of the syntax–pragmatics interface seems convenient rather than strongly motivated, and it is not clear that Müller and Hulk are saying anything more than that both syntax and pragmatics are relevant for acquisition, or that it takes more time to master more complicated structures, which is certainly not news.

A second control of the interface hypothesis would address the issue of causality vs. correlation. Müller and Hulk show that the onset of the C-system, as indicated by the appearance of such structures as complementizers, verb second (V2) in Germanic, and topicalization, closely co-occurs in time with a decrease in target-deviant object omission (leaving aside some individual differences and variations from the standard pattern). However, co-occurrence does not necessarily mean causality, especially in this situation since numerous changes in the grammatical system occur right around MLU 2.6. The argument that the onset of the C-system *causes* a reanalysis of the mechanics of object realization from a universal pragmatic analysis to a language-specific syntactic analysis would be much more convincing if one were able to show that other changes at that time were not related to this reanalysis.

In the same vein, the importance of the interface would be supported by extending this analysis to other phenomena which have relevance for both syntax and pragmatics. An obvious candidate is subject drop, which also meets both of Müller and Hulk's criteria. Subject omission clearly involves both syntactic and pragmatic issues, and Minimal Default Grammar allows subject omission (see Müller and Hulk's (9)). Languages like Italian allow subject omission in the adult target. In languages like German, which typically do not allow subject omission, some evidence in the form of omitted subjects in imperatives and root infinitives is nonetheless available (Lasser, 1997), and could possibly mislead the child in his/her reanalysis from the pragmatics-based Minimal Default Grammar to the language-specific syntactic requirements at the onset of the C-system. It would be particularly interesting for Müller and Hulk to analyze subject and object drop simultaneously in German–Italian bilingual children, since their hypothesis would predict that the same child would be slower than monolinguals in learning about object drop in Italian and subject drop in German, while keeping pace with monolinguals in object drop in German and subject drop in Italian.

In summary, while I find Müller and Hulk's ideas about

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the relevance of the interface between syntax and pragmatics in the C-domain interesting, I would prefer to have more evidence of the type noted above before allowing myself to be convinced by their arguments. Note, however, that these concerns are relevant for the field as a whole and not just for Müller and Hulk.

In the rest of my commentary, I turn to the question of pragmatics and how relevant it is to Germanic–Romance bilingual children's difficulties with object drop. In fact, Müller and Hulk spend almost no time in the article discussing the pragmatic factors that play a part in the child's decision to drop an object. This is not unique to Müller and Hulk; rather, it is typical of much of the work noted in the second paragraph above. However, lack of information about which pragmatic factors are relevant makes it difficult for the reader to understand how pragmatics plays any part at all in acquisition of the structures at hand, and therefore how anything more than a change in understanding of syntactic constraints is important to the children's skill with object drop.

Müller and Hulk's appeal to pragmatics is summarized in a quotation following their example (9): "we suggest that in the early stages of acquisition all children use a pragmatic strategy to license the empty element (PRO) via discourse . . . Discourse licensing is part of the set of default representations which all speakers possess and, as such is part of Minimal Default Grammar. The child's task, during acquisition, is to find out what role discourse licensing plays in the specific target language." They later show several examples in which "the empty object represents the discourse topic". I repeat one of these examples (example (14a); repeated as (1) below) here for convenience, taken from Ivar at 2;6.6:

(1) A: tu as enlevé la musique? (= l'horloge)
you have taken off the music (= clock)
"Did you take off the clock?"
Iv: oui remets ici
yes put back here
"Yes, (I) put (it) back here."

In this example, the object (the clock) was explicitly mentioned in the adult utterance immediately preceding the child's utterance, and can thus be considered a topic for the child because it has now become salient in the minds of both speech act participants. An NP under such conditions is typically "reduced": it is no longer realized in speech as a full NP, but rather as a pronoun or as a null element, depending on language-specific requirements. Minimal Default Grammar, like Chinese, allows realization of such an argument as a null element; French rather requires an overt pronoun.

The logic of realizing already-salient referents as pronouns or null elements is fairly clear. However, determining what is "already salient" is rather complex and involves the interaction of several different discourse-pragmatic factors. Unfortunately, Müller and Hulk don't offer any detailed discussion of this, including how a child might come to understand what these factors are and how they affect argument realization. Müller and Hulk's figures show that even at the youngest ages children aren't omitting 100 percent of their arguments, which one might expect if they were applying Minimal Default Grammar indiscriminately. How do children know from the beginning which objects they can omit in accordance with discourse-pragmatic principles, and which they cannot? In other words, where is the pragmatics in the syntax–pragmatics interface hypothesis?

Recent work on language acquisition from a functionalist perspective has focused on determining just exactly what the discourse-pragmatic factors determining argument omission are. Greenfield and Smith's (1976) "principle of informativeness" is usually cited as the starting point for this discussion – the idea that children tend to encode those aspects of the event that are most informative to the listener, and fail to encode those aspects of the event that can be taken for granted. Many authors in both functionalist and formalist traditions have concretized the notion of "informativeness" using the new–given distinction. Clancy (1997) has further developed this idea, including newness as well as three other features characterizing "informativeness" (absence, contrast, query), and person and animacy. She shows that two Korean children aged 1;8–2;10 omit arguments in their spontaneous speech much more frequently when the referent is first or second person, animate, and/or not "informative" (i.e. the referent has just been mentioned in discourse, is present in the physical context surrounding the interaction, is not explicitly contrasted with another similar referent, and is not being questioned). I have found similar results using logistic regression with spontaneous speech data from four Inuktitut-speaking children aged 2;0–3;6 (Allen, 2000a). My subsequent work shows that in addition to pragmatic factors alone, the interaction between factors is also relevant (Allen, 2000b). I considered four factors – newness, contrast, absence, and differentiation in context (i.e. two potential referents for the same argument are present in the physical context) – and found that an argument representing a referent which is not "informative" for any of these factors was omitted in the children's speech in 81.8 percent of cases. By comparison, arguments representing referents which were "informative" for only one of the factors (e.g. absent from the physical context but already mentioned in discourse and not explicitly contrasted) were omitted in 71.3% of cases, for two of the factors in 43.5% of cases, and for all of the factors in only 13.8% of cases. This indicates that children are indeed highly sensitive to various discourse-pragmatic factors in the discourse, and adjust their speech accordingly. My data is unfortunately not well suited to analyzing developmental trends since each child is only followed for nine months. However, this method of analysis would be quite illuminating in determining what factors are relevant for children at various stages of development, in determining what a topic is and which arguments may be omitted.

Given this background, it is not clear from Müller and Hulk's work that pragmatics has to do with the Germanic–Romance children's difficulties with object drop in anything but a superficial way. In fact, all the examples that Müller and Hulk give of target-deviant object drop are ones in which the pragmatics seems correct but the syntax

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is wrong. In all 20 examples in which the object is incorrectly omitted, the object is translated in English as "it", suggesting that these are indeed pragmatically appropriate contexts for reduced arguments. In the three examples where the discourse context is given (i.e. (14)), the object is always mentioned explicitly in the immediately preceding utterance, which is a classic pragmatic condition permitting reduced arguments. By contrast, in the six examples of non-dropped objects (i.e. (12) and (13a′,b′,c′)), the object is always a full NP which suggests that the object is not in a pragmatically appropriate context for reduced arguments. Thus, it appears that the problem is always with the syntax. In the four monolingual Germanic examples, object drop is target-deviant because the verb is not in initial position (2a,3a) or because the subject is omitted as well as the object (2b,3b); presumably object omission by itself is perfectly fine. In the 16 monolingual and bilingual Romance examples, object drop is target-deviant because reduced arguments can only appear as pronouns in French. It is not apparent to me that any notion of syntax–pragmatics interface is relevant here, or that pragmatics itself is relevant in any interesting way. More attention to the pragmatics at the syntax–pragmatics interface would be most welcome.

In conclusion, I believe that Müller and Hulk have raised some very interesting questions for the relationship between syntax and pragmatics in language acquisition, whether monolingual or bilingual. I hope to have shown that more concrete investigation in the area of pragmatics would be one fruitful approach in pursuing these questions further.

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Individual rather than group differences?

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Müller and Hulk have produced an intriguing analysis of why developing bilinguals acquiring a Germanic and a Romance language might behave differently with respect to object deletion in their Romance language when compared with Romance monolinguals. The idea that crosslinguistic influence from the Germanic language input might lead to delay in the adult-like production of the Romance language seems entirely plausible, and merits further exploration in future research. However, I shall argue that until more research dedicated to this question has been conducted, it is premature to conclude that a quantitative difference between bilinguals and monolinguals has actually been established.

The bilingual data analysed by Müller and Hulk are from longitudinal studies of three children. We are presented with detailed information (Tables 20, 21, and 22) about the children's ages and MLU, and the number and percentage of object deletion at intervals over a period of one to one-and-a-half years. However, the monolingual data available to them for comparison are mostly from non-longitudinal studies collected using different methods, and providing cross-sectional group percentage scores which mask any variation between or within individual children, as well as raw scores.

Given the lack of suitable comparable monolingual data, it is clear that Müller and Hulk are attempting to do their best with what is available, and they rightly emphasize the importance of matching MLU or age in comparisons to be made. But I shall suggest that if we take this advice seriously, the evidence for group differences between the bilinguals and monolinguals is inconclusive. I shall focus specifically on the empirical claim that "the bilingual children differ considerably from the monolingual French and Italian children and resemble monolingual German and Dutch children, if one compares MLU values and ages". Where possible, I shall compare data from children with similar ranges of MLU rather than age, since MLU has been established as a more reliable predictor of stage of development.

To begin with the French data from the bilingual data of Ivar (Table 20), the range from MLU 3.58–4.90 would arguably match reasonably well the Jakubowicz, Müller, Riemer, and Rigaut (1997) group 2 data from monolingual French children (Table 6) where the MLU range is 3.22–4.95. During the period selected, Ivar's average monthly object deletion was 38.16% (or 36.26% overall, taking into account the raw figures for the selected period as a whole). This is considerably more than the figure given for Jakubowicz et al. Group 2, 4.2% (Table 8). The figure of 4.2% is of course a group average, with no indication of range, whereas we know from Table 20 that the range for Ivar was 25–50% over this period. But the average figures for Ivar and the monolinguals are certainly very different, providing an initial indication of support for the claim being tested.

If we now look at a comparable MLU range for one of the other bilinguals, Anouk (3.31–5.16, Table 21), we find that the average object deletion in her French over this period was 18.5% (or 17.5% overall). This figure is still considerably more than Jakubowicz et al's average of 4.2%, but considerably less than Ivar's figure of 38.16%. This raises the question of how homogeneous the bilinguals as a group will turn out to be. If we then set out to compare Ivar's data with that of Carlotta, the third bilingual, the most compatible MLU ranges to compare are 2.93–4.55 for Ivar (Table 20) to be compared with 2.84–4.38 for Carlotta (Table 22). For Ivar over this period the figure for object deletion is 45% on average and 44.57% overall. For Carlotta, however, it is 11.5% on average, or 10.48% overall. The ranges are 25–50% for Ivar and 6–24% for Carlotta, which are non-overlapping, suggesting yet again that the bilinguals may not be a homogeneous group.

In comparing Carlotta's data with that of the monolinguals, it is fortunate that there are some longitudinal data from two Italian monolinguals with roughly matching ranges of MLU. Thus we can compare Carlotta MLU 3.26–3.92 (Table 23) with Victor 3.18–3.93 and Chloé 3.15–3.90 (Table 9). Carlotta's average object deletion during this period is 9% or 8.97% overall, while Victor's average object deletion is 11.96%, and Chloé's is 5.7%. These figures suggest that the bilingual Carlotta has a similar percentage of object deletion to the two monolinguals, while we have already seen that she differs considerably from her fellow bilingual Ivar.

So on the basis of the comparisons we have been able to make so far of Romance data from the bilinguals and from monolinguals, we can say that Ivar's degree of object deletion in French certainly looks greater than that of the group of French monolinguals with a comparable range of MLUs studied by Jakubowicz et al. However, when French data from the bilingual Anouk are compared both with Ivar's and the same monolingual data, it falls somewhere in between. When Ivar's data are then compared with data from the third bilingual, Carlotta over a similar range of MLUs, we find that her data are much more similar quantitatively to that of two monolinguals than to Ivar's. So rather than the bilinguals differing quantitatively from the monolinguals in the Romance data, it looks as though there may be considerable individual differences between all the children, whether bilingual or monolingual.

Let us now consider the second part of the claim mentioned above, that the Romance data from the bilinguals resemble monolingual German and Dutch data in the extent of object deletion which they exhibit. We shall

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compare the same MLU range of Ivar's data (3.58–4.90) with the Jakubowicz et al. group 2 German monolingual data as we did with the French group 2 data. The MLU range of the German data is 3.33–4.7 (Table 1). The figure of 38.16% average object deletion for Ivar's Romance data can be compared with the very similar figure of 37.8% average object deletion by the monolinguals (Table 4), and contrasted with the figure of 1.8% for target-deviant object deletion. This suggests that almost all of the monolingual Germans' object deletion was of the kind allowed in adult German, e.g. where the object is the topic. To fully compare Ivar's French data with that of the monolingual Germans, it would have been interesting to know what proportion of the objects deleted were topics, involving deletion which would have been allowed in adult German, but not in adult French. It would also have been interesting to compare these figures with object deletion in Ivar's German. Müller and Hulk assume that this patterns in the same way as in the monolingual data, but this is an empirical question.

Nevertheless, the figures we have suggest that Ivar's object deletion in French is similar to that of the German monolinguals. However, this is not the case with Anouk, if we compare the same MLU range (3.31–6.16; Table 21) as was used in comparing her data with that of the French monolinguals. Anouk's figure of about 18% object deletion over this period is considerably less than the figure of 37.8% for the German monolinguals. Thus while Ivar's data appear similar to that of the German monolinguals and different from that of the French monolinguals, Anouk's data appear different from both.

If we now take into account the third bilingual, Carlotta, we see (Table 22) that she has no MLU range which compares well with any of the Jakubowicz et al. monolingual groups. Her age range corresponds partially with that of the Dutch monolingual Hein studied by Kraemer (1995) (Table 5), although there is no MLU information for Hein. In the absence of this we might venture to compare ages 2;4,7–2;10,30 for Carlotta with ages 2;4–2;11 for Hein. Hein's average object deletion during this period is 31.5%, whereas Carlotta shows 13.89% average object deletion over a comparable age range, or 12.83% overall. These figures do not look at all similar, although a comparison of this kind based on ages rather than MLU must be interpreted with extreme caution. However, combined with the other figures obtained from comparing the Romance data of the bilinguals with the Germanic data of the monolinguals, we again have a picture of considerable variation between individuals.

In the preceding discussion, it has been possible to establish neither that bilinguals differ from monolinguals in their use of deletion, nor that they are similar. The pattern which emerges instead is one of individual variation. However, one reason for our inconclusive results may be that we have been trying to compare data that are not really comparable. We have tried rashly to compare cross-sectional group data with individual longitudinal data, we have not always had comparable MLU information, and the data have been collected by various people using various methods.

Nevertheless, Müller and Hulk have set us the worthwhile goal of investigating the possibility of crosslinguistic influence with regard to object deletion in the input to bilingual compared with monolingual children, and they have provided an interesting analysis of this possible influence. What we now need is a "purpose-built" study to test their hypotheses, with longitudinal data collected in the same way from bilinguals and monolinguals over similar periods at similar intervals. In the case of the bilingual data collection, the language mode would have to be monolingual (cf. Grosjean, 1998; Müller, 1998, 190) to make genuine comparison possible. Not only would production in one of the bilinguals' languages and that of monolinguals be compared as in the present study, but the bilinguals' productions in each language would be compared with one another. It would also be desirable to collect and analyse the input data, to examine to what extent each child is exposed to topic-deletion constructions, and how this might be reflected in the child's output.

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On the complementarity between UG and other language acquisition models

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Müller and Hulk followed the development of object drop in three Romance–Germanic bilingual children. They found that target-deviant structures of these bilingual children were qualitatively the same as in monolingual children of similar development stages, but that quantitatively they were more pervasive and persisted for longer. The authors propose that this difference between monolingual and bilingual children in the development of Romance languages is due to topic drop being a licensed structure in the language-specific grammars of the bilingual children's Germanic languages. They argue that discourse licensing of empty objects is available to all young children through the Minimal Default Grammar (MDG) prior to the setting of language-specific parameters. In their view the bilingual Romance–Germanic child lets go of this strategy more slowly than the monolingual Romance child does because of the sustained evidence for topic drop in the Germanic part of the bilingual's input.

Overall, this is a promising development in the discussion of the cognitive realities of simultaneously bilingual children. It is pleasing that the field is increasingly moving beyond the preoccupation with showing that bilingual language acquisition is either qualitatively different to monolingual acquisition or that 2L1 equals 2xL1. Instead this new approach looks at the effects which the 2L1 situation has on the path of language acquisition and what it can tell us about the mechanisms involved in the process of language acquisition. This shift in perspective has the potential to enlighten our understanding of language development not only in bilingual contexts but in monolingual contexts as well.

However, as progressive as Müller and Hulk's approach may be, their explanation for the difficulties that the bilingual Romance–Germanic children seem to have in leaving MDG behind and identifying that their Romance language is not a topic drop language, does not tell the full story yet. The authors' explanation is largely limited to the following:

> "The topic drop character of adult German/Dutch has the effect that the bilingual child is not able to map the universal strategies onto language-specific rules as quickly as the monolinguals do. S/he [i.e. the bilingual child, SD] is confronted with a much wider range of language-specific syntactic possibilities and one of the possibilities seems to be compatible with a universal strategy . . . Crosslinguistic influence . . . is induced by the mapping of universal principles onto language-specific principles."

Müller and Hulk predict that crosslinguistic effects are particular to the transition from MDG to language-specific grammar. Moreover, they suggest that the pragmatic nature of the universal principles of the MDG predicts that crosslinguistic influences are a feature of the CP-level because of its interface character between discourse and grammar.

I see two problems with this explanation. Firstly, the reasons for the proposed difficulty are not made explicit. The authors are silent about *how* the mapping works and *how* it is different for monolingual and bilingual children. I believe that such explanations can be gleaned from other acquisition models, in particular cognitive functional approaches. Secondly, my own data indicate that structural overlaps between languages can lead to variation in the acquisition paths at any level of the structural hierarchy.

The suggestion that the formulation of principles of UG and the parametric variation between languages does not provide a sufficient level of explanation for how the child moves from the default options of UG to the specific language she is learning has been made at times by generativists themselves. Such comments point towards the need for considering the possibility that general cognitive capacities act as an interface between genetically determined UG operations and language-specific input. Thus Meisel (1990, 12) wrote: "Although UG does indeed, according to our hypothesis, function as a 'language acquisition device' (LAD), as it used to be called, one cannot hope to explain the patterns of language development unless various mechanisms of language processing and discovery procedures are also taken into account." In a similar vein, Tracy (1995, 8) argued that "a more comprehensive picture of information processing and cognitive structure building is called for and indispensable for a better understanding of the way in which UG interacts with and depends on other cognitive faculties". Although not intended by these authors, their views suggest that theories which are typically considered opposing and incompatible complement each other. One such theory is the Competition Model developed by Bates and MacWhinney (1989). The Competition Model has the potential to flesh out the quality of the general cognitive strategies which the child needs to draw on in order to make the leap from the MDG to the language-specific structures of the target language. (For an elaboration of my view of the Competition Model within the 2L1 context see Döpke, 2000, 210f., 222f.)

There are obvious parallels between claims of the Competition Model and learning theoretical conceptualisations within the UG framework. For instance, Roeper (1996) presented monolingual data where the same form is realised twice in an utterance, once in the base position and once in the moved position.

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(1) I did broke it (Roeper, 1996)
(2) I hurt my finger that Thomas stepped on it (Roeper, 1996)

Roeper proposed that this phenomenon is due to a degree of fluidity between grammatical default options and language-specific target structures. In terms of the Competition Model this fluidity is due to the two forms competing for structural functions. These two views are complementary. The Competition Model provides an explanation for the fluidity.

The positions held by Tracy (1995) and Hoekstra and Jordens (1994) sound curiously compatible with the Competition Model as well. Both consider saliency to play an important role in the acquisition of new structures. This can well be described in terms of cue strength based on availability, reliability, and saliency as proposed by the Competition Model. The advantage of the more detailed concept of cue strength is that it can explain *why* some cues are stronger than others and therefore adjoined or projected first. In fact, Tracy (1995) uses very similar terminology to the proponents of the Competition Model. She talks of "system internal conflicts" and "competing analyses" (p. 147) and of "matching" and "merging" (p. 184), and puts language mixing down to "on-line competition" between the languages (p. 482).

If structural cues are processed across languages, as proposed by MacWhinney (1997), then crosslanguage similarities should enhance the structural patterns which are alike in two languages. This might result in some structural templates being unduly strengthened. Such was obviously the case in my own bilingual data where the co-occurrence of SVO in German and English strengthened the VO pattern in the bilingual children's German and at the same time weakened the German OV pattern. As a result, the children seriously overused VO in German (Döpke, 1998, 2000). A similar thing appears to have happened in the French of French–Dutch subjects reported by Hulk (1997). The Dutch SOV pattern strengthened French preverbal object clitics to the point that general OV became a possibility in the children's French as well. The extended use of object drop in the Romance–Germanic children studied by Müller and Hulk could possibly be conceptualised in these terms as well.

In the psychological literature on first language acquisition, researchers have traditionally looked at correlations between adult input and child output. Their findings provide empirical evidence for the theoretical claims regarding the building of constructional schemata and the learners' orientation on templates (Langacker, 1987; Bates and MacWhinney, 1989). Rowland and Pine (2000) suggest that young children recognise the distribution of structures in the input, but lack the hierarchical understanding of grammar. Similarly, Tomasello (2000) reviews a range of experimental studies all of which show that there is little evidence of abstract syntactic knowledge among children under the age of 3;0. Instead schematic entrenchment appears to be the best predictor for correct usage. Such entrenchment is crucially related to the frequency of the relevant structures in the input.

In order to explore the question of entrenchment with respect to the object clitics studied by Müller and Hulk one would like to see a list of those object clitics which are already in use during the time of high object drop and those which are deviant. Is there possibly a relationship to input frequency with respect to correctly used target structures, both in monolingual and bilingual contexts? With their reference to Yang (1999), Müller and Hulk have largely conceded that general cognitive capacities which orient on frequency are involved in moving from the MDG to the grammar of the specific language.

In summary, the theory of UG provides an excellent description of the structures of languages and the state of knowledge once structures have been acquired. In terms of learning, it orients towards the deductive processes involved in language acquisition but remains largely silent on *how* the young child is accomplishing this. The Competition Model conceptualises the inductive processes involved in moving from the prelinguistic stage to the target language, but remains underspecified for most grammatical structures. Psychologists have provided valuable empirical evidence of the types of cues which engage in competition.

The Competition Model provides a framework within which the cognitive permeability between languages can be conceptualised. It has the potential to flesh out the active part which the child brings to the learning task in more concrete ways than is done within the UG framework. This is the case for monolingual and bilingual acquisition alike. For the latter the Competition Model has a valuable contribution to make in explaining the motivation for "cognitive permeability" between the languages of the simultaneously bilingual child.

In order to uphold the hypothesis that crosslinguistic influences happen at the transition between MDG and language-specific grammar as a core mechanism in simultaneous bilingualism, one would need to exclude all other influences between languages. The German–English data I have collected do not support this. The verdict on Müller and Hulk's proposal needs to be kept on hold. At this stage the "MDG to language-specific grammar" as the pivotal point for crosslinguistic influences is an interesting proposal, but I doubt that it can be generalised to all cross-language phenomena.

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The permeability of grammars in bilingual language acquisition

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By maintaining that "bilingual children are able to separate the two languages from early on", Müller and Hulk claim that crosslinguistic influence is present in areas that involve the C-system, considered by Platzack (1999) a vulnerable domain for language acquisition. They also claim that target-deviant constructions are rarer in monolingual children than in bilingual children because "crosslinguistic influence creates confusion and delay in the acquisition process of the bilingual child".

The article recalls an interesting paper by Silva-Corvalán (1993) where, quoting Weinreich (1953), she discusses, the "permeability of linguistic cells" in language contact, according to which permeability depends on the structural weaknesses of one of the languages. For Weinreich, as well as for Bickerton (1981), foreign grammatical elements may permeate the speech of bilinguals, but are rarely incorporated into the language as a code. Though Silva-Corvalán agrees in principle with this assumption, she proposes, studying Spanish–English bilinguals in the USA, that "any linguistic feature can be transferred from any language as a 'nonce-borrowing' in the speech of bilinguals, but only those that are compatible with the structure of the borrowing language at any given stage will be adopted, disseminated and passed on to new generations" (p. 20). Differently from Weinreich, her results indicate that "the permeability of grammars to foreign influence does not depend on its structural weaknesses, but rather on the existence of superficially parallel structures in the languages in contact" (p. 20). One such case is the use of the zero complementizer by bilinguals when speaking Spanish. This omission of the complementizer is not attested in relative clauses, which is, however, possible in English. The author argues that the possibility of the zero complementizer in complement clauses is due to the marginal, formal use of such omission in complements of verbs such as "creer" (believe):

(1) *Te ruego Ø me lo envies pronto*
I pray (that) you send it to me promptly

(2) * *Te agradezco el regalo* ***Ø me enviaste***
Thank you for the present (that) you sent me

Though here we are dealing with adult bilingualism and features of the target second language, and not with child bilingualism, some eventual similarities between the former and the latter can be pointed out:

(a) In the case of the zero complementizer we are dealing definitely with the C-system; in the case of object drop, Müller and Hulk assume it has to do with a PRO in CP which allows the pragmatic interpretation of the empty object;

(b) In the case of the complementizer, the omission is freer in English, where it affects both complement and relative clauses; in the case of object drop in bilingual children, it is proposed to be of the unrestricted Chinese type, in both initial states, that interferes with the topic drop phenomenon in the target German, which is much more restricted than the Chinese object drop. In both cases the less restricted form interferes with the more restricted phenomenon.

The similarity ends here since the bilingual child does not persist in the object drop when acquiring French, while the adult bilingual will adopt, disseminate, and pass the new form to new generations.

The authors seem to be quite convinced about the nature of object-drop in the child. In other words, they assume that in the first stage the null object is of the Chinese type, a category bound by a PRO adjoined to IP. In the second stage it disappears because the C-system is activated and PRO is no longer licensed since it is now governed. The problem is: why doesn't it become illicit in Chinese after its C-system is activated? For Raposo (1986) the null object in Portuguese is also a variable bound by a PRO in A′-position, but likewise adult-Portuguese retains the null object of the same nature as that of the child-Portuguese.

Huang (1991) proposes a new analysis for the null object in Chinese, reformulating his previous analyses (Huang, 1984, 1989). The proposal is that it is a null noun, the empty category equivalent to epithets (cf. Lasnik, 1991; Lasnik and Stowell, 1991). The category is [+pronominal, +referential]. The pronouns in Asian languages are actually like nouns, with no inherent case like the pronouns in Western languages, and require that case be added from the numeration for checking. The same can be said of epithets and their null counterparts.

Kato (in press) shows that Brazilian Portuguese has pronouns of the Chinese type, without an inherent case, and proposes that it also has a null object of the Chinese type. She shows that the null object in this language occurs in all but one context where epithets occur:

(a) both epithets and null objects can be A′-bound:

(3) a. **O João$_i$**, o Pedro disse que a Maria ama Ø$_i$
the João the Pedro said that Maria loves Ø
a. **O João$_i$**, o Pedro disse que a Maria ama **o**
the João the Pedro said that the Maria loves the
safado$_i$
bastard

(b) neither epithets nor null objects can be A-bound by a higher subject:

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(4) a. ***O Pedro$_i$*** disse que a Maria ama **Ø$_i$**
the Pedro said that the Maria loves Ø
b. ***O Pedro$_i$*** disse que a Maria ama **o safado$_i$**
the Pedro said that the Maria loves the bastard

(c) both epithets and null objects can occur in islands:

(5) a. Eu informei a polícia da possibilidade do
I informed the police of the possibility of the
Manoel ter guardado **Ø$_i$**
Manoel have put Ø
no cofre da sala de jantar
in the safe of the dining-room
b. Eu informei a polícia da possibilidade do
I informed the police of the possibility of the
Manoel ter guardado
Manoel have put
o negócio na sala de jantar
the thing in the dining-room

(6) a. Eu conheço o rapaz que trouxe **Ø$_i$** agora mesmo
I know the boy who brought Ø just now from
da pastelaria
the bakery
b. Eu conheço o rapaz que trouxe **o negócio$_i$** agora
I know the boy who brought the thing just now
mesmo da pastelaria
from the bakery

(d) however, epithets can be bound by an element in possessive position inside the subject, but the null object cannot:

(7) a. A mãe do Pedro$_i$ viu **o safado$_i$**
b. *A mãe do Pedro$_i$ viu __$_i$

To solve this problem, Kato (in press) proposes that, just like the ECP for non-pronominal categories, the empty noun has restrictions of its own, namely that its antecedent be governed by the same type of head, namely V, or eventually *v*, in the logical form. This principle would explain why the antecedent can appear in the position of the object or of the subject if it is a derived one, but not in the position of the possessive or in the subject position of an active clause.

(8) a. Tirei o relógio$_i$ para fora da caixa sem quebrar **Ø$_i$**
(I) took the clock out of the box without breaking Ø
b. O relógio$_i$ foi tirado para fora da caixa sem
the clock was taken out of the box without
quebrar **Ø$_i$**
breaking

If the null object of the bilingual children is of the Chinese type, then we must conclude that it is a null noun and not the variable bound by a PRO.

But there is another type of null object, different from topic drop and more constrained than the Chinese type. It is the European Portuguese (EP) null object, studied by Raposo (1986, 1998). In the former study Raposo shows that the null object in EP is a variable, since it cannot have an antecedent in A-position and is, moreover, sensitive to islands. In the later work, he proposes it is a mixed category (+pronominal, +variable) and relates the null object to a null clitic, which in turn he derives from a null article. For this author, only languages that can have bare plurals in generic DPs can have null objects. Of the Romance languages, Portuguese seems to be the only one that has bare plurals in generics and null objects. If the definite generic article is obligatory, then the language will have clitics and no null object. This may explain the general delay of children in acquiring clitics, since it is dependent on the acquisition of articles and the realization that it can be null. Until then the null object must be of a different type.

To say that the null object in child emerging grammars is of the Chinese type, defined by the authors as a variable bound by PRO, means to accept a chain-type category at this stage. However, in Huang's (1991) conception, the Chinese type is a null noun, which does not involve any movement. It is the less costly type since both the Portuguese type and the topic drop type involve movement. It is reasonable to assume, therefore, that the Chinese type is the "default" case and more in consonance with the concept of the Minimal Default Grammar (Roeper, 1999), defined in terms of economy.

In conclusion, the authors may be correct when they say that the emerging null object is of the Chinese type, but not in the way it was assumed to be represented.

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Object omissions in young bilingual children: assessing the evidence

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Natascha Müller and Aafke Hulk offer an elaborate account of object omissions in the speech of Romance–Germanic bilingual children. Their central claim is that during a specific developmental phase, the French and Italian speech of these children exhibits more omissions of obligatory objects than the speech of monolingual children, and that this quantitative difference can be attributed to indirect influence from the Germanic language.

Müller and Hulk discuss an issue that has gained increasing attention in recent years. While bilingual children have been shown to be generally able to differentiate their two languages early in development, it is currently a matter of debate in which domains and to what extent one language can influence the other. Müller and Hulk contribute to this ongoing discussion in a very straightforward manner, making clear and interesting claims and predictions, and discussing an impressive amount of empirical data.

I believe, however, that not all of their predictions can, in fact, be corroborated using the data they present. In this regard, I will argue in favor of a more careful approach to the available data and discuss a number of issues related to their methodology. On the basis of further data from a French–German bilingual child, I also want to address individual differences in more detail.

Let me begin by stressing that Müller and Hulk's account of target-deviant object omissions is a purely grammatical one. In their view, object omissions are no longer licensed once the C-system is instantiated in the child's grammar. As far as I understand it, the criterion for separating the children into groups in the cross-sectional data and for determining developmental phases in the longitudinal studies should therefore be the availability of CP. One might thus wonder why some German and Italian children figure under group 1, although they in fact produced C-constructions in the recording. Furthermore, how could the authors exclude the possibility that some of the group 1 children might have already been able to produce subordinate clauses, but, by chance, did not happen to do this during the recording? Finally, it is not clear to me why the second developmental phase in the bilingual child Anouk is claimed to begin at around age 3;1, given that Anouk starts to use subordinate clauses introduced by complementizers and wh-words two months earlier.

The formal definition of groups and phases is a crucial point because Müller and Hulk's main argument is based upon a comparison of mean rates of object omission within and across these two groups and phases. More specifically, they compare the average percentage of object omissions in the three bilingual children with the average percentage of object omissions in a group of monolingual children.

First of all, with respect to the calculation of average percentages in the cross-sectional studies, we do not know whether the children in the same group are all at a comparable developmental stage. Table 15 also reveals that the individual percentages of target-deviant object omissions are quite variable in the German children, where the first group exhibits omissions ranging from 8% to 66.7%. Given this considerable degree of individual variation, one might doubt whether the average of 24.3%, calculated for the total of object omissions, is of any reliability at all. Moreover, the MLU values of the group 1 children are substantially lower in the German than in the French and Italian children; the average MLU is 2.46 in the German group 1, while it is 3.00 and 2.99 in the French and Italian groups 1, respectively. How, then, can one exclude the possibility that these German children omit objects to a greater degree simply because they are less advanced with respect to grammatical development?

Turning now to the two developmental phases discerned in the longitudinal data, I find it methodologically problematic to calculate averages for a first developmental phase that, at least in the analysis presented here, has no clear-cut starting point (while the second phase, by definition, never ends). Consequently, the bilingual children's mean rate of target-deviant object omissions during phase 1 is directly dependent upon how many recordings have been included in this phase. Note that the longitudinal analysis of the bilingual data begins quite arbitrarily at an MLU of 1.33 (in morphemes) for Ivar, 2.0 for Anouk, and 1.13 for Carlotta. The lowest MLU values of group 1 children in the cross-sectional French and Italian data, however, are 2.92 for French and 2.47 for Italian. This amounts to saying that the bilingual data cover earlier developmental phases than the monolingual data. This is also true for the monolingual longitudinal studies, where – with one exception – we find an MLU of 2.6 as the lowest value. The exception is the Italian child Martina, who has an MLU below 2.0 in her first recording. Interestingly enough, Martina exhibits object omissions up to a rate of 39% in her earliest recordings. These rates are quite comparable to the bilingual data.

Nevertheless, Müller and Hulk do not hesitate to compare the German cross-sectional data to the French and Italian, or the bilingual (longitudinal) data to the (mainly cross-sectional) monolingual data. In other words, what are being compared here are (a) mean percentages of object omissions, calculated on the basis of an arbitrarily

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chosen number of subsequent recordings in one child, and (b) mean percentages of object omissions, calculated on the basis of an arbitrarily chosen number of cross-sectional recordings in a randomly chosen number of children. In my opinion, with respect to the data available, only the omission rates of individual children at given developmental stages can safely enter into a crosslinguistic comparison. Therefore, it is regrettable that individual rates are not presented for the French and Italian cross-sectional studies. Generally, concerning the monolingual data, one would also like to know more about the total numbers of target-deviant omissions and of obligatory contexts in each recording. Note further that percentages have been calculated from quite variable numbers of utterances, and that, in particular, the high rates of omissions in the German monolingual data, as well as in the bilingual data, are based upon comparatively few contexts.

With these reservations in mind, I seriously question the general conclusion that Germanic children omit obligatory objects twice as frequently as Romance children do. Firstly of all, there are no data at all on target-deviant object omissions in Dutch, nor are French data available for MLU values below 3.0. Müller and Hulk themselves suggest that the French and Italian data probably cover different developmental stages. Secondly, a closer look at individual children reveals that some German and Italian children indeed produce nearly the same rates of object omissions: the German child Baroudi exhibits 21.1% of object omissions at an MLU of 2.05, while the Italian child Martina omits objects at rates of 21% and even 39% at an MLU of 2.1. Similarly, Valerie (German, MLU 2.57, 31%) can be compared to Diana (Italian, MLU 2.6, 33%), and Leonardo (German, MLU 2.73, 20.8%) to Guglielmo (Italian, MLU 2.7, 20%). These data thus appear to contradict the alleged difference in the development of target-deviant object omissions between Germanic and Romance. However, the existence of this difference is a prerequisite for the claim that the bilingual children's omission rates are due to influence from the Germanic language. Therefore, further longitudinal data are needed to substantiate Müller and Hulk's claims more convincingly.

Let us take a look at object omissions in the French speech of another child, Pascal, who acquires French and German as first languages. Like Ivar, Pascal has been recorded in the DUFDE project. He should thus be perfectly comparable to Ivar. Pascal's grammatical development has been studied for a wide range of phenomena (see, e.g., the contributions in Meisel, 1994). According to Müller (1993), CP is evidenced in Pascal's French around age 2;05,05, and Kaiser (1994) finds both productive and quite frequent use of object clitics from age 2;04,07 onwards. During the period studied here, French is his preferred and grammatically more advanced language.

Table 1 shows Pascal's object omissions in the French recordings from 1;11,28 (MLU 1.63) to 2;10,13 (MLU 5.00). MLU values have been calculated on a morpheme basis. Pascal exhibits extremely high rates of object omission up to age 2;02,12. Note, however, that the absolute number of obligatory contexts is very low in these early recordings. At age 2;02,26, we find no object omissions at all. In the subsequent recordings up to age 2;06,02, Pascal exhibits a 35 to 40% rate of object omissions, which then slowly decreases. Only after age 2;09,01 do we find omission rates of lower than 10% of the obligatory contexts.

Table 1. *Object omissions (tokens) in obligatory contexts in Pascal's French*

Age	MLU	−OBJ	Total contexts	−OBJ (in %)
1;11,28	1.63	10	16	62.5
2;00,09		4	8	50.0
2;01,00	2.14	5	8	62.5
2;01,14		9	10	90.0
2;01,28	2.49	1	5	20.0
2;02,12		2	3	66.7
2;02,26	2.42	0	3	0.0
2;04,07	3.45	11	31	35.5
2;04,21		6	16	37.5
2;05,05	3.63	8	20	40.0
2;05,19		10	27	37.0
2;06,02	3.93	8	23	34.8
2;06,16		4	17	23.5
2;07,00	4.53	7	38	18.4
2;08,17	4.87	3	19	15.8
2;09,01		2	26	7.7
2;09,16		4	41	9.8
2;09,28		2	12	16.7
2;10,13	5.00	1	17	5.9

Recall now Müller and Hulk's initial assumption that the decrease of object omissions is motivated by grammatical changes. This hypothesis has been developed by Müller, Crysmann, and Kaiser (1996), who observe that a sudden decrease of object omissions, as well as the productive use of object clitics, co-occurs exactly with the instantiation of the C-system in the French speech of the bilingual child Ivar. However, evidence for a particular co-occurrence of these phenomena is not shown in the majority of the other children analyzed by Müller and Hulk. Returning to Pascal's data, we again find that the frequency of object omissions does not decrease dramatically with the availability of the C-system. Should we then conclude that Pascal is "delayed", like Anouk and Carlotta? At least in the bilingual children, such a delay appears to be rather the norm than the exception. To decide this issue, more longitudinal data from monolingual children will clearly need to be studied.

A further question is how Pascal's low percentages of target-deviant uses at the ages of 2;01,28 and 2;02,26 might be explained. Note that subsequent recordings of other children also show considerable variation in the rate of object omissions. There is also much variation across children with comparable MLU values. In the German group 1 for example, Clarissa omits only 8% of obligatory objects, while Valerie does so in 31% of the contexts (both children having MLU values of about 2.5). In the longitudinal Italian study, omission rates vary between 0% and 33% at an MLU of about 2.6.

Müller and Hulk leave unanswered how such substantial

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variation could be accounted for. Arguing against a grammatical explanation for subject omissions in young bilingual children, Meisel (1990) hypothesizes that individual variation is likely to occur in those areas where pragmatic strategies like discourse organization play a role and perhaps even override grammatical principles. In fact, it is reasonable to assume that discourse-related factors can indeed account for the individual variation observed in the present case. If young children's speech can be described in terms of a free topic drop language, then subjects as well as objects should be generally omitted, and the use of overt arguments should be restricted pragmatically to contexts of emphasis and clarification. In other words, the occurrence of object omissions is directly linked to discourse-related factors in the actual situation, which cannot be easily controlled and captured in frequency counts and comparisons. Children might also tend to use this strategy more or less often due to individual preferences. It is thus difficult to see how the frequency of use of a pragmatic strategy could provide evidence for crosslinguistic differences during the first developmental phase.

Concerning the second phase, Müller and Hulk assume that individual differences can be explained by Roeper's (1999) concept of "internal bilingualism". In other words, some children still appear to produce structures with empty IP-adjoined topics to a certain extent, although they may also use CP structures. However, one would expect object omissions never to occur in a subordinate clause. How could one account for structures like those in (1) and (2), where this is exactly what happens?

(1) parce qu'(il) faut pas mettre là haut jusqu' – jusqu'en bas (Pascal 2;09,28)
because one should not put up there downward

(2) parce- parce que il a mordu / parce que il a mordu de petits garçons, le lion (Pascal 2;09,01)
because- because he did bite / because he did bite small boys, the lion

Clearly, more research is needed in this area. Müller and Hulk have advanced some very explicit and challenging hypotheses. Their study provides possible answers to a number of questions and at the same time highlights new areas for discussion. I believe that their contribution indicates directions for further research into the similarities and differences between monolingual and bilingual first language acquisition.

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Are object omissions in Romance object clitic omissions?

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One of the most important components of Müller and Hulk's article is the proposal for a unified account of bilingual and monolingual L1 acquisition. More specifically, they argue that crosslinguistic influence in bilingual acquisition will be indirect in nature. Thus, instead of producing novel, bilingual-only transfer errors, crosslinguistic influence acts to magnify or prolong typical developmental errors in the bilingual acquisition context. In other words, the difference between monolingual and bilingual L1 acquisition will be one of degree and not kind. Furthermore, they found evidence for such indirect influence at the pragmatics/syntax interface. This adds a possible corollary to their unified account: the pragmatics/syntax interface will be a challenging problem space in any language acquisition context.

I would like to pursue the search for a unified account further by suggesting that what is vulnerable at the pragmatics/syntax interface in both bilingual and monolingual L1 acquirers of Romance may be vulnerable for all Romance language learners, L1 and L2, normally developing and impaired. In so doing, I want to expand on an aspect of Müller and Hulk's report, the emergence of object clitics in Romance, and argue that object omissions in the acquisition of Romance could be described more specifically as object clitic omissions. I will support this argument with evidence from learners of French. I will then discuss how this proposal could be integrated into Müller and Hulk's account of the quantitative differences in the monolingual and bilingual children they studied.

Müller and Hulk offer the following observations with respect to object clitics in Romance. First, object clitics form a different method of licensing an empty canonical argument position, in contrast with the use of discourse-connected PRO in the C-domain in topic drop languages like German and Dutch. Second, object clitics are acquired late in monolingual L1 Romance. Third, object omissions decline in the Romance language of the bilingual children as object clitics are used more frequently. This third observation begs the question of a possible connection between these phenomena.

Müller and Hulk do not draw a lot of attention to the fact that object clitic use is a pragmatically determined phenomenon, as is topic drop. Moreover, the pragmatic context in which one can use anaphoric devices like object clitics (antecedent understood by both speaker and hearer) has a great deal of overlap with the pragmatic context in which topic drop can occur. In fact, the contextualized examples given in (14) in their article are also places where object clitics could have been used. As such, object clitics, as well as topics residing in the C-domain, are items at the pragmatic/syntax interface. In addition, the tardy appearance of object clitics in acquisition could be explained in part by their complex interface structure. Object clitics are part functional, part lexical category, involve movement, and their syntactic use must be coordinated with pragmatic principles (cf. Jakubowicz, Nash, Rigaut, and Gerard, 1998).

Research I have conducted in collaboration with Martha Crago (Crago and Paradis, 1999) shows a connection between pragmatic context, object clitic use, and object omissions in French-speaking children with specific language impairment (SLI) and child L2 learners of French. We analyzed spontaneous language production samples from four groups of children: (1) seven-year-old monolingual, French-speaking children with SLI; (2) seven-year-old English-speaking children acquiring French as an L2 who had the same MLU as group (1); (3) seven-year-old monolingual, normally developing (ND), French-speaking children, and (4) three-year-old monolingual, ND, French-speaking children matched on the basis of MLU with groups (1) and (2). The children's language samples were coded for the presence of object clitics in "permissible" contexts. Permissible contexts were defined as contexts where the object of the verb being referred to had already been mentioned in near discourse, making pronominal reference possible. The samples were also coded for the presence or absence of objects, whether lexical or clitic, in the context of transitive verbs.

Our statistical analyses revealed that the children with SLI and the L2 children used object clitics less frequently in permissible contexts than ND age and MLU controls (see also Jakubowicz et al., 1998). In fact, they used object clitics in less than 50% of permissible contexts. The difference in object clitic use between the three-year-old MLU controls and the seven-year-old age controls was not significant (76% versus 96% respectively), but the absolute scores showed that the three year olds were not at ceiling. We suspect that the three year olds were close to, but not at, the end of the acquisition stage for object clitics in L1 French.

So, our initial analyses showed that L2 and SLI learners of French have difficulties with object clitics. Our second round of analyses was aimed at discovering their error patterns in object clitic contexts. What we found was that in the majority of cases, their errors were object clitic omissions (SLI: 75%; L2: 78%). Other errors included repeating the full DP, or using the pronoun-like form, *ça*, in canonical object position. Finally, for both the SLI and L2 groups, the majority of all object omissions occurred in object clitic permissible contexts. An excerpt from a transcript illustrating a child with SLI dropping an object clitic is given in (1).

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(1) EXP = experimenter; CHI = child (Byanca)

EXP:	ah elle est encore dans ton sac à dos?	"ah, it is still in your backpack?"
CHI:	non.	"no."
EXP:	elle est où?	"where is it?"
CHI:	ma mère a jeté.	"my mother threw away."

Put together, these findings suggest that a large part of the variable appearance of obligatory objects in French could be object clitic omissions. Therefore, we could speculate that the challenging problem space object clitics pose for learners of French is the principal mechanism underlying object omissions in development.

Why would object clitic omissions, hence object omissions, be more pronounced in bilingual L1, SLI, and L2 Romance than in ND, monolingual L1 Romance? Let us look first at the Germanic–Romance bilinguals. Müller and Hulk put forth a persuasive explanation for object omissions in their structural overlap account. They argue that the topic drop/empty canonical object position structure in Germanic and the object clitic/empty canonical object position structure in Romance result in competing evidence for the target structure in Romance. They propose that this overlap causes delay in convergence on the correct Romance target structure, the observable result of which is a protracted and magnified period of object omissions. I would like to suggest that the majority of these object omissions may actually be object clitic omissions. If this is correct, the influence of the Germanic language may be more precisely described as causing delay and confusion in the acquisition of object clitics, the result of which is a prolonged period of object omissions.

Since the monolingual children with SLI have no influence from a language with topic drop, their object clitic omissions must be due to another source. These children could be expected to display protracted acquisition of object clitics on the basis of comparison with what researchers have found for the acquisition of tense morphology in English-speaking children with SLI. For instance, normally developing L1 acquirers of English go through an optional infinitive stage of acquisition, whereas children with SLI show an *extended* optional infinitive stage (Rice, Wexler, and Cleave, 1995; Rice, Wexler, and Hershberger, 1998). Also, pragmatics in general and pronominal reference in particular have been found to be areas of weakness in English-speaking children with SLI (Leonard, 1998). Thus, because object clitics in French are late acquired in normal development and involve pragmatics, we could predict that they would be a particularly challenging component of French for children with SLI to acquire.

Similar to the children with SLI, the English-speaking L2 learners of French have no influence from a topic drop language, and yet they display object omissions. Nevertheless, influence from their L1 could explain their object clitic omissions. I would like to suggest that in their case it is the complete inability to transfer properties of the pronominal system from L1 to L2 that underlies their omissions in object clitic context. The object pronominal systems of French and English are highly divergent, whereas lexical objects are placed in same position in both languages. For example, English pronouns are strong pronouns, not clitics, and object pronouns reside in canonical position. In contrast, French has a more complex pronominal system involving both strong pronouns and clitics, with object pronominal clitics appearing in preverbal position. English-speaking L2 learners of French cannot transfer their L1 system of pronoun use to their L2 and one possible outcome of this inability could be delay and confusion in their acquisition of the target pronominal system. In turn, the result of this delay and confusion may be similar to other learners of French: object omission errors.

Let me summarize my argumentation as follows. Object clitics can be considered a vulnerable area at the pragmatics/syntax interface in the acquisition of Romance. I would like to predict that this aspect of the grammar will be problematic for all learners of Romance, in the spirit of a unified account. The outcome of the problematic nature of this aspect of the grammar will mainly, although not exclusively, take the form of object omissions in acquisition. Object omissions will be more pronounced in certain acquisition contexts, namely under an impaired language faculty, and when another language is being acquired either simultaneously with or prior to the acquisition of Romance, and where that other language provides misleading (Germanic) or opposing (English) evidence for the target structure. In my view, the advantage of analyzing the object omissions of the Germanic–Romance bilingual children Müller and Hulk studied as object clitic omissions is that it would permit the integration of their findings with those for other learners of Romance.

In conclusion, the overarching purpose of this discussion was to highlight the necessity of conducting cross-learner comparisons in order to further our understanding of what aspects of language acquisition are universal, and what aspects vary according to learner context. Accordingly, it is important to point out that Müller and Hulk's article is a significant contribution towards this goal.

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Modular and pragmatic perspectives on Minimal Default Grammars

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This finely focussed and insightful article shines a light upon the microscopic variation that characterizes both bilingual and monolingual children. Müller and Hulk advance our notion of Multiple Grammars and raise important questions beyond those raised by Roeper (1999) and Yang (2000) and, as far as I know, those in the literature on historical change. We will address these:

(a) does Minimal Default Grammar (MDG) demand modular independence?
(b) can we show the efffects of constructions rather than language dominance?
(c) how does one separate MDG from language transfer?

While theory cannot yet accommodate all of the variation at hand, basic contrasts begin to emerge. First the authors show nicely that "language-dominance" is not a useful grammatical construct, though it may be an important social one. One must look at more refined dimensions.

Then they adopt the view that not only target grammars, but MDGs may be at work in the bilingual child's mind. If the less dominant grammar contains elements that reflect an MDG, then they may "dominate" the dominant language.

They also suggest that: "Minimal Default grammars require as little interaction between different components of the grammar as possible". This observation reflects the traditional learnability claims that the learnability problem is mathematically reduced if we assume the independence of parameters. This translates into the view that Minimal Grammars minimize connections between modules because changes in one module would cause too many changes elsewhere, and then the computational complexity quickly becomes enormous. We can extend the suggestion to a Minimalist plus Multiple Grammars perspective: ideally different modules would each have an independently acquired grammar, with highly limited crossmodular connections. Thus one might have a choice of possible theta-grammars which include/exclude more complex thematic roles (are Patient and Beneficiary distinct?). This choice would be largely independent of binding theory, although a slender point of contact would be necessary. (Such as: all thematic roles can be bound.)

Another question they raise emerges in the deeper claim entailed in their "mapping induced influence" (MIL):

Does the child revert to the Minimal Default Grammar or to the other bilingual target grammar when deviations in a grammar arise?

The MIL claims that either MDG or the restricted grammar is available. In particular, they claim that Chinese is one instance of an MDG, allowing direct pragmatic control of missing arguments, assuming absent CP is a UG option. They provide ample evidence for this instance of MDG. Could the child however choose German over MDG-Chinese in using French? This would be an instance of old-fashioned translation and seems possible. Thus the child simultaneously juggles three grammars: MDG-Chinese, V2–German, and clitic-French, each of which leads to deletion in a different way. The result is a "delay" in fixing both German and French, as I understand it. The reason this arises, I believe, is that (phonological and lexical homogeneity aside) the child seeks to establish:

A single grammar in each of a set of module-based grammars.

Let us term them:

1theta, 2binding, 3wh-movement, 4case, etc.

For each of these modules the child seeks to maintain the kind of simplicity everywhere (in both grammars) that Minimalism guarantees. Therefore they seek a common German–French thematic system, wh-movement system, etc. In each instance, they are eventually forced to divide the grammars. However, the apparent delay is an effort to seek the simplicity that would result if, in that module, only one grammar were present. In each module the child must resolve conflicting data. For missing arguments, the pragmatic data is particularly complex if all three options are alive.

The child thus never has the idea (in an abstract sense) that she is bilingual. She asks of each of its ten modules whether, individually, one grammar or two is needed. In many instances, a single system may emerge. For instance, the article system is largely identical in French and German for many distinctions, with variation capturable as "lexical" features on "la" or "der", etc. Thus when the child figures out that "la" is an article in French, it immediately extends that grammar to German and should produce more rapid progress in German than say a child who tries to learn Chinese and German.

One factor which may determine "dominance" or cause a parallel grammar to be eclipsed, is the recognition of recursion. If an operation can apply inside itself or repeat itself, then it may be seen as the genuinely productive grammar. Recursion is inherently productive. The realization that a subject can be missing in both a matrix and a subordinate clause would reveal a recursive kind of argument deletion.

As usual, data is ahead of theory, and much remains unexplained here. Why, exactly, do children have fewer

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subject omissions? The answer may lie in syntactic intricacies that we have not explored, but other factors may play a role. Why, if +CP and −CP are absolute opposites, do we find shifting proportions? Some of the explanation may be social. If a child may have more occasions to use the subjunctive as it matures, then whatever invites subject deletion may involve more sophisticated social postures.

Another reason may lie in the syntactic/pragmatic (semantic) interface. If the child in general seeks to avoid "retreat", then they will make very narrow assumptions about semantic appropriateness. In African-American English (AAE) there is a preterite "had" form that signals the onset of a causal event (Rickford, 1999). Instead of:

(1) I slipped and fell

we can hear:

(2) "I had slipped and fell"

What is the "had" doing here? It seems to mark a kind of "aspectual" difference of the sort common in AAE. Now suppose all children are looking for subtle differences that may not occur in their language. For instance, we find remote past, immediate past, habitual, and other distinctions in various languages and therefore in UG. The child who hears "had" or "hat" may mark it first as *past-causal* before it grasps that it covers a wide variety of past tenses. In German, as the imperfect disappears, precisely the form "hat V-t" expands its temporal range. Could even German-learners momentarily treat "hat" as a marker of a causal event? The hypothesis could be present for a week and then dropped without any adult detecting it. Here again, the presence of distinctions in a bilingual environment may lead to more extended periods of hypothesis-testing to establish just exactly what the correct range of interpretations may be.

It is well known, for instance, that L2 speakers of English, coming from German, allow the present in English to be progressive. The expression "he plays tennis" could mean, in German, both that he plays tennis generally or that he is doing so now. In English no progressive is implied. This seems to be an instance where either an MDG or a direct influence of German could be present. If UG defines overt verb-raising as preferable to LF-verb-raising, then it is an instance of MDG. If UG prefers covert Feature movement to overt Feature-movement, then it is a direct influence of German. In a sense, the theory must decide. On the other hand, data from bilingualism could be relevant. If the interpretive error arises only in bilinguals where one grammar raises verbs, then it may be language particular. If it arises between two languages where neither raises verbs, then it is another matter.

In sum, this article invites many kinds of new theoretical reasoning and it will be interesting to see the questions raised examined in light of new empirical explorations where bilingualism or Multiple Grammars are at work.

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Pragmatic rules, C-domain, and language dominance

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Müller and Hulk presuppose that the two languages of a bilingual child are separated from early on, as is generally accepted by most scholars within the last ten years – in opposition to the earlier position, in which an initial common syntactic system was postulated. On the background of this general principle of separation, they argue for a subtle kind of influence: bilingual children may use constructions that are superficially similar to those of monolinguals, here utterances without objects, but to a higher degree and for a longer period than comparable monolingual children.

The authors argue that before the entire development of the C-system, when the system is vulnerable, there is about 23% of target-deviant object omission in German monolingual children, whereas in monolingual French children (and possibly Italian ones) there is about 11%. In the Romance language of a bilingual German–French, German–Italian, or Dutch–French child, the object omissions during this time have a tendency to be as frequent as in monolingual German children. Later, when the C-system is stabilized, object omissions almost disappear in monolingual and most bilingual children.

The authors impute this crosslinguistic influence to the ''Minimal Default Grammar'', so that ''bilingual children confronted with the input from two partially overlapping languages may tend to persist longer at a universal (pragmatic) stage''. This would imply that the bilingual children in their Romance language, longer than do monolingual children, use null objects if the referent is known from the context, instead of using an object clitic.

Pragmatics

The authors thus advocate possible pragmatic grounds for the persisting of object drop in Romance, and it would therefore be interesting to know more about the pragmatic rules involved. The tables show that the data are very variable, often varying strongly from one recording to another. This could be taken as an argument in favor of pragmatic factors – the variation depending on what is talked about, the nature of the interaction, etc. The authors also point to the difficulty for the child in finding the pragmatic rules, which govern topic drop in German and Dutch but not in Italian and French.

However, very few pragmatic analyses are given. It seems evident that the pragmatic conditions for the dropping of the object are different in the pre-C period and in the period after which C is lexically instantiated. In the former case, many objects are dropped in cases where this is not acceptable in adult German (e.g. *auch mach*) whereas after, object drop is acceptable only in topic position (e.g. *hab ich schon gesehen*), and probably under certain conditions concerning discourse and register. The authors give syntactic rules for what is and is not acceptable, but we do not see under what contextual or pragmatic conditions this occurs: how accessible must a referent be in order to be omitted as an object? The abundant research on such factors (cf. Schøsler, 2000; Muñoz, 1995; Ariel, 1994), i.e., under what discursive/pragmatic conditions a referent is reintroduced as 0, pronoun, NP etc., should be taken into account if one wishes to seriously develop this line of reasoning.

The variations in the data and the few occurrences in each sample also point to a methodological problem, namely the criteria for considering something an ''omission'' and if such, whether ''target-like'' or ''target-deviant''. The dropping of an object in any language is something rather variable and fuzzy, unlike stricter syntactic rules such as V2, etc. Object omission seems to depend strongly on factors such as pragmatic licensing, register, normative behavior, etc. We do not get much information on how the omissions, as well as target-deviance, are calculated with respect to these facts.

We can look at some examples from other data for discussion: are the following to count as object omissions or not, and in that case as target-deviant or not?

(1) Adult: qu'est-ce qu'il fait là?
"what does he do there?"
Child: il tient__
"he holds" or "it holds"

(2) C: moi j'ai vu ça à la télé
"I have seen that on the tv"
A: tu as vu__ à la télé?
"you have seen on the tv?"

(3) A: c'est un crocodile qui veut manger le capitaine
"it is a crocodile which wants to eat the captain"
C: mais il __ peut pas
"but he can not"

Example (1) is uncertain because of the interpretation; example (2) would in isolation probably be considered a target-deviant omission, but in this case it is the French-speaking adult who utters it, so it would have to be considered as acceptable, perhaps pragmatically licensed; example (3) is a very normal answer in French, but an informant with a strong sense of normativity could interpret it as target-deviant instead of "il ne le peut pas" of a formal register. So considering whether the examples of the different databases have object drop, and if so, whether of target-deviance, is a difficult and subtle matter. I suppose that native speakers have been asked for acceptability

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judgments (but this is not indicated). The problem is that if informants have been asked for the target-deviance of the omissions calculated, there must necessarily be different persons for the different languages in question, and these persons may have been more or less severe in their judgements. So how does one compare?

It would therefore be important, in further studies, to go carefully through the discursive and sociolinguistic conditions under which (a) an object can be omitted in German, in a target-like way, applied to the data presented here, (b) subjects and objects are omitted in early German child language, and (c) the same conditions are valid for the omissions in the Romance languages of the bilingual children (and consider to what extent). In that way the authors could avoid the risk of pragmatics being simply a waste-paper basket for unresolved syntactic phenomena.

It could also be interesting to further compare these facts to non-generative studies of Romance languages. For example, Schøsler (1999) shows a very interesting development of object drop in Romance languages – it is frequent in historical stages where the valency is clearly marked in some way: in Latin with case, in modern French with obligatory subjects. In stages of ancient French (and other Romance languages, thus Italian) with subject drop and without case, the object drop is much less frequent. In fact (in spite of the Italian data presented here), it seems that in many cases object clitics appear very early in monolingual Italian, well before the C-system (Antelmi, 1998), which could in this view be related to the subject drop in Italian. This implies that it is not impossible that the frequent object drop in bilingual German–Italian could also have another source, namely lack of subject drop in the child's Italian (to be studied). The principle postulated by the authors could be even more clearly studied in the case of null subjects: do the bilingual children overextend the pragmatic rules for the use of a subject, i.e., use subjects more often than do monolingual Italian children, due to the influence from German, where the subjects are much more frequently used? It is well known that in the case of subject drop there is also a continuum, from repeated VPs where both German and Italian drop the subjects, to contrasting the subjects or changing the on-line referent where both languages need a subject. It cannot be easy for a bilingual child to grasp these differences.

Influence only in the C-domain?

If the authors want to generalize the position presented in this paper, on the vulnerability of the C-domain, there seem to be problems with VO–OV, as described in earlier work by Müller. In Platzack's paper referred to by the authors, rather many phenomena are attributed to the C-domain; but if anything is not, it is the VO–OV word order, concerning infinitive verb forms.

There are also data from ongoing studies on the DP domain (Bernardini, Schlyter), which do not seem to be accountable for as related to the C-domain, even if we consider D as parallel to C. The phenomena concern the order NA or AN, of possessives. The Swedish–Italian child Lukas (Bernardini Röst, 2000) uses in his Italian, very systematically, only one of two possessive constructions: *la mia chiave* (DAN) but not *la chiave mia*, (DNA), whilst an Italian child exposed to Swedish and Italian living in Italy produces both pre-and-post-nominal adjectives and possessives, as soon as these elements appear. This fits well with the general "target-input" principle advocated by Müller and Hulk, since the child uses to a greater extent a construction which is the only one in Swedish, and which also exists in the Italian input. However, it fits less well with the "vulnerable C-domain" principle, since there is no question of C or of mapping pragmatics–syntax. The same type of phenomena are observed for the AN word order: for example, Lukas uses target-deviant orders like *la blu casa* ("the blue house") and does not use the postposed adjective, but only the preposed one.

However, one child (Alice), at a certain period, productively uses NA in Swedish (*en katt röd* = "a cat red", etc.; Alice 3;2), which is more problematic for the principles proposed here. The construction is clearly ungrammatical in Swedish and German, and the NA construction has, as far as I know, never been observed in monolingual Swedish children. Such constructions cannot be due to a simplified system, since NA is generally analyzed today as the N being raised above A. The simpler structure without raising, AN, is that generally found in younger French monolinguals, as well as in the French of Swedish–French bilinguals, in both cases earlier than NA. So the only possible source is the French of the same child, since in French Alice uses this construction frequently. This means that for this case, neither the proposal that the construction should exist in the input of both languages, nor the relevance of the C-domain, nor of mapping pragmatics–syntax, seem to be relevant.

What seems to be the case, however, is the language dominance, since Alice's dominant language is French and her Swedish is clearly weaker. (Dominance is taken in the sense of preferred language, with a clearly higher MLU, and a richer vocabulary than in the other language, cf. Schlyter, 1994 for criteria, and Schlyter, 1993 for L2-similar effects in the weaker language.) In French–Swedish children with less strong dominance of French, or with dominance of Swedish, such constructions have not been observed. Müller and Hulk refute, for the data presented here, language dominance as responsible for the cross-linguistic influence studied – which, however, indicates that they presuppose that such an influence may play a role.

The comments presented here just show some possibilities for further research – the very explicit hypothesis immediately stimulates the reader to try to verify it on more data.

(I owe thanks to Petra Bernardini for helpful discussions on these comments.)

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A view from a "multiple roots" perspective

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If – as we have good reasons to believe – children basically know that all languages are variations on a universal theme, the fact that bilingual children bother working out subtle contrasts between their input languages is particularly remarkable. Like monolinguals they do not settle for options which work just fine from a pragmatic perspective, and they certainly do not simply stick to the "easier" language among the running mates; indeed, they may be downright intrigued by the formal puzzles involved. In the case dealt with in the interesting article by Müller and Hulk, the Germanic and Romance input languages are sufficiently distinct for the child to successfully embark on separate developmental tracks from early on, probably long before the first words are uttered. Nevertheless, as the authors suggest, acquisition paths might be affected by "overlapping" patterns. My own research in the domains of monolingual and bilingual first language acquisition supports the claim by Müller and Hulk that – mixed utterances apart – bilinguals stay within the spectrum of structures familiar from monolinguals (cf. Tracy, 1995, 1996, 2000). The specific type of cross-linguistic influence proposed in the paper is most intriguing and in many ways complementary to the "bootstrapping hypothesis" of Gawlitzek-Maiwald and Tracy (1996).

I would have liked to learn more about how many and what types of covert elements should be attributed to sentences with missing arguments. If we took the representations in (8) and (9) seriously, we should arrive at the following impasse: on the one hand, the PRO analysis provides us with a nice explanation for why the child (unless he or she is acquiring Chinese) eventually stops adjoining PRO to IP after lexical complementizers and other representatives of CP appear, since PRO has to remain ungoverned (PRO Theorem). At the same time, however, (8) and (9) show that PRO originates in a governed position, leaving a governed trace, in accordance with the Empty Category Principle. Unless the authors wanted to claim that PRO adjoins to IP in order to "escape" its governor – a futile effort, given the trace – this contradiction needs to be resolved and makes me wonder whether it might not be advisable to consider better candidates than PRO for the various types of gaps to be accounted for. This would entail a more detailed discussion of the empty canonical position, of the empty topic, and possibly also of the abstract representative of a discourse/situational antecedent. In this context it might also be worth considering Radford's proposal (1992), which distinguishes lexical and syntactic satiation, thereby initially avoiding the projection of early empty objects onto syntactic levels. Temporary coexistence of both options (lexical and syntactic satiation) might help account for the gradual disappearance of deviant patterns. However, if one *does* look for early syntactic solutions, other candidates for the empty canonical position would be the variable *pro* or a null-deictic, as proposed by Kato for the earliest stages of the acquisition of Portuguese. And, given the observation that initially Romance clitics are used inconsistently and missing from their obligatory contexts as well, would it not be necessary to include a null third-person clitic (again along the lines of Kato, 1994) as a covert representative of object agreement?

I also asked myself what representations might enable the bilingual child to identify correspondences or "overlapping" structures in the first place. At a fairly superficial level, English *He ran fast* and German *Er rannte schnell* could be considered syntactically equivalent, and I guess this is what the authors have in mind. At the same time, the representations underlying these sentences could be quite different, namely IP for English, and – depending on one's theoretical framework – IP, CP, or a conflation of the two for German (cf. the range of options discussed from an acquisition perspective in Fritzenschaft, Gawlitzek-Maiwald, Tracy, and Winkler, 1990; various articles in Meisel, 1992; and in Tracy and Lattey, 1994). How exactly can we tell how far the learner's German/Dutch grammar has come on its way from the Minimal Default Grammar, and what phrase structure representation is available as an appropriate, supposedly unambiguous match for the child's French/Italian constructions?

I could hardly be more sympathetic to Müller and Hulk's claim that monolingual children behave like bilinguals. According to my own "multiple-roots" perspective, monolinguals start with different, but UG-consistent, structural fragments or sentential roots (including idiosyncratic lexical projections), which gradually converge (Tracy, 1991, 1995). In the best scenario, old representations are reanalysed within a more coherent overall system. A perspective which allows the coexistence of different types of root sentences provides us not only with an appropriate framework for understanding the overall spectrum of intra- and inter-individual variation. It may also help us gain a better understanding of the dynamics and mechanisms of change, because not all coexisting options are compatible, even though each of them may conform to UG.

According to this view, children acquiring German initially develop one sub-system/grammar (or even more than one) for productive verb-end formats (*Mama bus fahrn*, "mummy bus ride") while other, more or less formulaic expressions mimic V2-effects as in [*dazð*] *ball* ("there-s-the ball") (cf. Tracy, 1991, 1995). Eventually, the coexistence of basically incompatible representations, with verbs appearing in more than one position, ought to trigger truly constructive conflicts and lead the child to infer the

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existence of further levels of representation on which these conflicts can be resolved, for instance by the construction of a derivational relationship.

There is by now plenty of evidence on temporarily coexisting systems in the monolingual child, for instance with respect to variation of verb placement in main and subordinate clauses or variable question formats (cf. Fritzenschaft et al., 1990; Gawlitzek-Maiwald, Tracy, and Fritzenschaft, 1992; the articles in Tracy and Lattey, 1994; Gretsch, 2000; Hohenberger, in press). In all of these cases, clashes between competing representations should lead the child to consider reanalysis and restructuring. The conjecture by Müller and Hulk certainly encourages us to take a closer look at monolingual fluctuations and to investigate potential consequences for bilingual acquisition (cf. also Müller, 1998; Döpke, 1998).

Should the authors' high expectation of PRO indeed prove untenable in its current form, what other options come to mind in our attempt at explaining the gradual elimination of deviant object drop? Dissatisfaction with the ways in which different acquisition theories deal with null subjects and their elimination (where they are inappropriate) led Verrips (1994, 116) to propose the principle *MAX* (maximize input): *For every input string, create as many UG-allowed representations as possible*. Children should then start with the assumption that all sorts of empty subjects are possible. i.e. *MAX* allows children "the flexibility to entertain competing representations if no specific information is available to them for choosing between them" (ibid.). With time, however, the child would discover the strong or weak properties of INFL and then proceed to restrict the occurrence of empty subjects accordingly, context by context, which explains why empty subjects do not disappear in an all-or-nothing fashion. Might it not be possible to create a parallel scenario for null objects? Kato (1994, 150) points out that null variants tend to be much more restricted in their distribution than their lexical counterparts. If this is the case, the set of sentences containing null elements is smaller than the set containing sentences with lexically represented arguments. From this perspective, then, complete absence of arguments would turn out to be a perfect subset after all, that is the child could proceed conservatively, carefully taking into account different contexts until there is no more constraint to discover.

The adjunction analysis proposed by Müller and Hulk can also be related to patterns such as the following from monolingual German-speaking children. The episode in (1) demonstrates that the whole spectrum of possibilities, including overt and covert topics, gets put to use (cf. the Topic-adjunction analysis in Tracy, 1991, 368). Capital letters indicate stress, falling intonation.

(1) S. (1;10,15) trying to get her father to rebuild a toy bridge:

DA brücke neu machen\	"there bridge new make"
PApa machen\ ein BRÜcke machen\	"Daddy make\ a bridge make"
JETZT wieder neu papa machen\	"now again new Daddy make"
BRÜcke wieder neu machen\	"bridge again new make"
DAS papa wieder neu machen\	"that Daddy again new make"

For the child Florian (*floa*, *flo* in (2)–(3)), constructions like the following, with non-finite and finite root clauses, occur in significant numbers before the CP level is established. Note, in particular, that in some cases objects appear doubled, if not illicitly split.

(2) F. (2;5,22)

M: Wer hat die Brücke denn gebaut?	"who has the bridge built?"
F. pointing to one: DIE floa brücke macht\	"that F. bridge built"
to other one: DIE tracy macht	"that T. built"

(3) F. (2;7,27)

DIES flo will wegmachen\	"this F. wants-to away-take"
DIESE drei kommen autos\	"these three come cars"
(2;8.11)	
RUTSCHbahn flo dies aufbaun	"slide F. this up-build"

Finally, a last point, just out of curiosity: the authors mention several times that there were production effects in their elicitation task. With so much hinging on the child's initial pragmatic strategies, it should be particularly revealing to consider what went on in these cases. By doing so, we might stand to gain additional insight into the child's perception of those verbal and non-verbal contexts which support object omissions and ellipsis in general.

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Crosslinguistic influence revisited: an L2 perspective

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Müller and Hulk analyse data from three bilingual children acquiring a Germanic and a Romance language simultaneously, focussing on the phenomenon of object omission. They compare production data from these bilingual children with data from monolingual learners, observing that, in the case of children acquiring only one language, object drop is much more prevalent in Germanic than in Romance. The extent of object drop in the Romance of bilingual language acquirers is: (a) much greater than object omission in the production of monolingual children acquiring a Romance language; (b) similar to the rate and extent of object omission by monolingual children acquiring a Germanic language.

Müller and Hulk follow Roeper (1999) in assuming that all children adopt a Minimal Default Grammar, whereby certain default options permitted by Universal Grammar surface in the early grammar without the need for triggering input. Müller and Hulk suggest that object drop is permitted in the Minimal Default Grammar, the null object being licensed by discourse (as is in fact the situation in adult Chinese, for example). German is a topic drop language, permitting null topics, including objects which happen to be topics. Null objects, then, are licensed in adult German, although not in the same way as in Chinese. In the acquisition of German, there will be extensive input consistent with an object drop analysis, confirming the Minimal Default Grammar. In the case of French, on the other hand, while sentences are found without overt DP objects following the verb, as soon as children become aware of preverbal object clitics, they will realise that a discourse-licensed object drop analysis must be incorrect. Thus, monolingual German children make more extensive use of object drop because the German input provides many examples which are consistent with a discourse strategy sanctioned by the Minimal Default Grammar. Monolingual French children abandon this discourse strategy sooner, when they notice the presence of object clitics.

Turning now to bilingual acquisition, the child also starts off with a Minimal Default Grammar analysis of object drop, for each of the languages being acquired. Müller and Hulk propose that there is unidirectional crosslinguistic influence in this context. The idea is that, if input from a language A is consistent with more than one possible analysis of some grammatical phenomenon and input from language B provides positive evidence for one of these possible analyses, crosslinguistic influence is expected, in one direction only, namely from A to B. That is, possibilities allowed in A but not B will nevertheless appear in the learner's grammar of B. In the case of object drop, Germanic (German or Dutch) constitutes language A, while Romance (French or Italian) constitutes language B. However, it is important to note that the claim being made is not that the child's grammar of German (or Dutch) directly influences the grammar of French (or Italian). Rather, the Germanic input (which includes examples of topic drop of objects) somehow feeds into the grammar being acquired for the Romance language (which is itself, initially, the Minimal Default Grammar). Input from both Germanic and Romance provides some evidence for object drop but this is much more extensive in Germanic; hence, Germanic input influences the construction of the bilingual child's grammar of Romance but not vice versa, making the discourse-based analysis of null objects more persistent than in the case of monolingual Romance acquisition.

Similar proposals for unidirectional crosslinguistic influence have been discussed in a variety of frameworks in second language (L2) acquisition for many years, with researchers trying to explain why some aspects of language are more liable than others to transfer from the first language (L1) to the interlanguage grammar, why some L1 properties are particularly persistent, and why it makes a difference which language is the L1 and which the L2. For example, Zobl (1980) looks at the position of pronouns in interlanguage and notes that native speakers of Romance languages do not transfer the possibility of preverbal object clitic pronouns to their L2 English, i.e., they do not say things like *I her see* in place of *I see her*, whereas native speakers of English learning French do place pronouns after the verb, consistent with L1 order: *Je vois elle* ("I see her") instead of *Je la vois* ("I her see"). Zobl further proposes that this unidirectionality is due to the fact that, when English is the L2, there is no congruity between Romance and English. There is nothing in the English input to support an analysis where pronouns are preverbal clitics, whereas, when French is the L2, French SVO word order could confirm an incorrect hypothesis by a native speaker of English that any object, whether a full DP or a pronoun, can be placed in the postverbal position.

In a related vein, Andersen (1983, 178) proposes the *transfer to somewhere principle*: "A grammatical form or structure will occur consistently and to a significant extent in interlanguage as a result of transfer *if and only if* there already exists within the L2 input the potential for (mis-) generalizing from the input to produce the same form or structure." Similarly, Adjémian (1983, 255) argues that there will be transfer from the L1 lexicon to the L2 and that "learners will use ready-made hypotheses wherever they perceive them to fit the available primary data".

Similar ideas have been addressed in terms of markedness and associated learnability problems (e.g. White, 1987), particularly in the context of the Subset Principle

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(e.g. Finer and Broselow, 1986; Hirakawa, 1990; White, 1989). When the L1 grammar generates more marked forms, or permits structures that form a superset of those found in the L2, the L2 data will be partially consistent with the L1 grammar. For example, following Manzini and Wexler's (1987) proposal for a Governing Category Parameter, studies have consistently shown that learners whose L1 is a language like Japanese (which allows both local and long-distance antecedents for reflexives) assume that English also allows long-distance binding.

Let us consider Japanese, the L1, as language A and English, the L2, as language B: in a case like this, adopting the parameter setting exemplified in grammar A results in a persistent misanalysis of the input from language B. The L2 input provides evidence for local binding; the L1 grammar sanctions both local and long-distance binding. Thus, the L2 input is partially consistent with the L1 parameter setting; in consequence, this setting is incorrectly maintained in the interlanguage grammar. The influence is unidirectional, at least as far as long-term effects are concerned: if English were the L1 and Japanese the L2, there would be no potential for overgeneralisation. While learners might start with an overly restricted L1–based analysis, permitting only local antecedents for reflexives, positive L2 input is in principle available to show that long-distance binding is permissible, hence that the interlanguage grammar must be restructured (i.e., the parameter reset) to accommodate the L2 input. (However, there are cases where learners eventually fail to acquire properties which are exemplified in positive input from the L2. Even in such cases, it is the nature of the L1 grammar which determines how the L2 input is perceived. See Sorace (1993) for discussion.)

So far, we have seen that there are parallels between what Müller and Hulk propose as the source of cross-linguistic influence in the case of simultaneous child bilingual acquisition and what has been proposed in the literature on L2 acquisition. There are also some differences between the proposals in these domains, as well as some interesting questions that arise from a comparison of the two situations.

Of course, an obvious difference between bilingual acquisition and L2 acquisition is that two grammars are being acquired simultaneously in the former case, whereas in L2 acquisition, the mother tongue is acquired prior to the L2. In consequence, there is a difference in how the influence of one grammar on another is interpreted. Under Müller and Hulk's proposal, it is the Germanic input that influences the Romance grammar; they do not claim that the child's grammar of German directly influences the child's grammar of French. (Recall that the child's original object drop analysis does not come from either German or French but from the Minimal Default Grammar. Indeed, the child's grammar of object drop in German at this point is presumably identical to the child's grammar of object drop in French, since both conform to the Minimal Default Grammar. The analysis of object drop in adult German is actually irrelevant to the child.)

What Müller and Hulk are suggesting is that input data from one of the two languages (German or Dutch) somehow feeds into the grammar the child is constructing for the other language (French or Italian). In other words, German serves as primary linguistic data for French. This seems somewhat counter-intuitive. Since Müller and Hulk are proponents of the separation hypothesis for bilingual grammars, it is not entirely clear why the input from one language should influence the grammar of the other in this way. (Sorace (2000) makes a proposal regarding L1 attrition which has parallels with Müller and Hulk's claim about the effects of input from the "wrong" language. Sorace suggests that, in the case of near-native speakers, the L2 may have effects on the L1 grammar, not because of properties of the L2 grammar as such but because the L2 input somehow feeds into the L1 grammar.)

In contrast, in L2 acquisition a stronger claim is made with respect to the influence of the grammar; namely, it is the L1 grammar (not the L1 input) that directly influences the interlanguage grammar (e.g. Schwartz and Sprouse, 1996; White, 1985). In the case of the Governing Category Parameter discussed above, the interlanguage grammar of Japanese-speaking learners of English incorporates the L1 parameter setting, which cannot be disconfirmed by positive L2 input; hence, the L1–based analysis is maintained, reinforced by the fact that the L2 input is partially consistent with it. Assuming the interlanguage representation to be initially based on the L1 grammar, it is the L2 input (not the L1 input) that serves as primary linguistic data for the interlanguage grammar, in some cases leading to restructuring in the course of development, in other cases not (Schwartz and Sprouse, 1996).

An interesting question emerges from considering the parallels with L2 acquisition, namely the potential learnability problem. In the L2 context, when the L1 has a grammar yielding a superset of sentence types permitted in the L2, this has been argued to constitute a particularly difficult situation for the L2 learner to retreat from, a situation where negative evidence might be necessary (White, 1991) or where change in the more restricted direction would be impossible (Schwartz, 1993). Is there an equivalent retreat problem in the bilingual context? If input from one of the child's two languages has led to the other grammar being overly inclusive, how does the child retreat? What brings about grammar change? In the particular situation examined by Müller and Hulk, it appears that retreat will not be a problem. As they point out, object clitics may eventually provide the necessary positive evidence that discourse-licensed null objects are not possible in Romance. But if their proposal extends to other contexts, then one can conceive of cases where an incorrect analysis (based on primary linguistic data from the 'wrong' language) would be permanent.

In conclusion, although there may be differences in the effects of crosslinguistic influence on bilingual and L2 acquisition, it is clear that there are important common concerns. The crucial issue in both cases is the relationship between grammars and primary linguistic data: the nature of the grammar necessarily informs the learner's perception and analysis of input data; the data in turn may motivate grammar change or may fail to do so, depending on how well they fit the learner's current analysis.

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AUTHORS' RESPONSE

"Comment expliquez-vous?" Null objects in adults and children

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We are very happy to see that most commentators agree with our main claim that language separation and crosslinguistic influence coexist in bilingual first language acquisition. Our hypotheses as for where to expect this crosslinguistic influence raised more questions. We thank all commentators for their interesting comments. In this response we will address only some of them. In future research we hope to tackle some of the more fundamental points in more detail.

Research strategies

The main point raised by **Margaret Deuchar** is that our study showed more individual variation within the groups of monolinguals and bilinguals than variation between the two groups. Deuchar uses MLU matches in order to compare the children. One error in the presentation concerns Ivar's MLU: Ivar is the only child who cannot be compared with respect to MLU either to the monolinguals or to the other two bilingual children, since his MLU is morpheme-based while the MLU of the other (monolingual and bilingual) children is word-based. Yet, we also mention this in the article. This is the reason why Deuchar compares Ivar's first development stage (the object drop stage) with the group 2 monolingual French children (the adult-like stage) of the elicited production task and the second stage of the other bilingual children. Furthermore, it is not clear why Deuchar compares Carlotta's (German–Italian child) data with the French monolinguals Victor and Chloé. Deuchar's commentary raises an important issue. We have observed that once children have reached an MLU of 3 (word-based!) it may vary a lot from session to session. We believe that the picture is much more realistic if MLUs below 3 are compared. We would further like to mention that in combination with MLU other measures, such as standard deviation and type–token analysis are important. The problem was that we had done such analyses for the bilingual data we presented, for Carlotta and Anouk, but this information was not available for the longitudinal monolingual data and for Ivar. Therefore, we decided to take MLU, which, we agree, was not the best criterion. Since we were aware of the difficulty related to MLU comparisons, we included a qualitative criterion, namely the usage/absence of structures related to the C-system. We chose this criterion as there seems to be agreement on the observation that child speech lacks these structures during early developmental stages. Another difficulty related to MLU as a means of comparison is the following: recent studies on the acquisition of determiners and other functional categories have shown that *some* children use proto-forms instead of adult-like functional categories. The important observation is that only *some* children do (acquiring the same language) while others leave the position radically empty (cf. Kupisch, 2000 for a comparison of German and Italian). However, with respect to MLU (word-based), an utterance like *maman veux [n] pomme* "Mummy (I) want proto-form apple" contains four words, while *maman veux pomme* consists of three words. A further finding is that if children do use these proto-forms, they may use them abundantly, i.e. for all types of functional categories. In other words, at the level of MLU we measure the individual's ability to use a particular amount of words per utterance. Of course, this makes MLU (as the only measure) unusable for comparisons of groups of children, bilinguals and monolinguals.

This brings us to **Regina Köppe**'s troubles with our analysis. Why do we compare averages? If we had not, it would have been impossible for a reader who does not know the data to follow our arguments. The absolute numbers are all in the article. We are fully aware of the problem posed by a comparison of groups and individuals. This is why we also considered longitudinal monolingual (Dutch, French, Italian) data. Longitudinal German data were missing when we studied our bilingual children. The data are available now. The absence of monolingual German data represents a real gap in the analysis. This issue allows us to correct a real error in the article. In our first submitted version, we did not include longitudinal Italian data. One of the reviewers suggested including Maria Teresa Guasti's findings on monolingual Italian children. Unfortunately, we compared our bilingual data with her (longitudinal) monolingual data since we forgot (!) that we had a good reason to exclude them from our analysis. Guasti (1993/94) was not particularly interested in object omissions and thus she counted omissions of *all* cliticizable complements, e.g. direct objects, indirect objects, prepositional objects, and reflexives. Her percentages cannot be compared with the percentages presented in our article since we were not interested in clitics in general. Therefore, the amount of object drop in monolingual Italian children should be much lower than in Guasti

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(1993/94) and hence even more comparable to the 11% of object omissions in the monolingual French children.

We agree with **Margaret Deuchar** pointing out that one has to control for the type of interactions in which the bilingual child is involved. The bilingual children under investigation have been observed in a bilingual setting: the children's parents knew both languages and the interlocutors who were interacting with the children during the recording sessions were "bilingual" as well, at least with respect to language comprehension. In Carlotta's case we systematically started the recording session with a different language, i.e. at point A we started with Italian, at point B we started with German. Thus, the observation that the influence is unidirectional is sufficient in order to exclude an influence of the language mode. But notice that even in a monolingual setting it could be the case that the child will be recorded in Italian after a whole day in German kindergarten or after a long play session with her monolingual Italian grandmother. This raises the question of whether we can really control for the language mode in a bilingual child.

The grammatical analysis of object drop in child and adult language

Mary Kato, **Johanne Paradis**, and **Rosemarie Tracy** criticized our analysis of child object drop in terms of a PRO adjoined to IP. We admit that we do not believe in the particular analysis anymore, also because it is not compatible with current generative theory. Since our main point was the issue of crosslinguistic influence and we had to take into consideration four languages, we did not have the space (1) to really justify the PRO analysis for child grammar (cf. Müller, Crysmann, and Kaiser, 1996) and (2) to present and discuss a different approach to object drop in the adult systems. Although we do not believe in the particular analysis anymore, and Mary Kato suggests an interesting alternative, we thought that even without revising the grammatical analysis we would be able to show that all children pass through MDG (some children faster than others, depending on the language to be acquired), that MDG corresponds to Chinese with respect to object drop, and finally that instantiation of CP and decrease of illegitimate object omissions are related. It is true that we were silent on the fact that there are analyses which claim that Chinese has CP. We had good reasons to do so. Until now, it is far from clear how to account for topic drop or object drop in adult systems. Mary Kato, in presenting Raposo's analysis of null objects in European Portuguese, suggests that European Portuguese is the only Romance language that has bare plural in generics and null objects. The issue of object omissions is much more complex than we presented it in our article.

Tuller (2000) points out that adult French exhibits null objects (Fónagy, 1985; Lambrecht and Lemoine, 1996), a language in which the definite generic article is obligatory. Adult Italian allows for null objects as well, although their occurrence seems to be more constrained as compared to French. Chierchia (1998) and Chierchia, Guasti, and Gualmini (2000) point out the possibility of having bare arguments in object position in Italian (not in subject position): *Voglio latte* "(I) want milk", *Leo odia gatti e cani* "Leo hates cats and dogs". Notice that the respective sentences are ruled out in French. What examples are there for licit null objects in adult spoken French? Following Tuller (2000, 7ff.), we have to differentiate (1) structurally arbitrary (generic) human null objects of the type *Ceci pousse __ à conclure ce qui suit* "This leads to conclude what follows" and (2) discourse or situation-controlled null objects with definite reference as in (The gardener with a movement of his head toward the tree:) *J'abats__?* "I cut down?". Tuller (2000) mentions that the class of transitive verbs allowing object drop is vast in French, but in contrast to Germanic languages it is a closed class. Furthermore, French null objects are always third person, another contrast with German. Interestingly, null objects may violate both subjacency and strong-crossover: *Ce livre$_i$, je connais un mec qui a lu__$_i$* "This book, I know a guy who has read (it)". Tuller concludes from these observations that the empty object is a null pronoun, identified by a salient discourse topic. But notice that French exhibits articles obligatorily.

That child object omissions are clitic omissions cannot be proved on the basis of our data, since the necessary evidence for such an analysis is missing (e.g. gender and number agreement morphology on the past participle in Italian constructions with a null object). We believe that the observation that childrens' constructions with an empty object in French and Italian correspond to adult constructions with a clitic is not sufficient for the claim that object omissions are object *clitic* omissions. Note further that German and Dutch children drop the object under the same pragmatic conditions but these adult systems do not exhibit object clitics as compared to French and Italian.

The pragmatics of object omissions

The discussion of the grammatical analysis of child object drop leads us to **Suzanne Schlyter**'s and **Shanley Allen**'s main point, namely that we have to account for the pragmatics of object omissions in child and adult Romance languages. We agree that this should be the next step in our research. Nevertheless, since we have argued that CP plays a crucial role in the development of the child "drop-system", we will approach this issue from the perspective of the feature make-up of CP in the languages under investigation. The majority of researchers agree that Germanic and Romance languages differ significantly with respect to the feature make-up of CP. It is, however, not clear to what extent and how this difference is related to object omissions. Notice that null objects are possible in French subordinate clauses, whereas they are ruled out in German subordinate clauses. Therefore, the study of what features constitute CP (TOPIC, etc.) in the different adult and child grammars and how these are related to the possibility (and the extent) of having null objects are on our research agenda. We did not intend to use pragmatics as a waste-paper basket. The main issue of the paper was to show that

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null objects are not lexically/syntactically but pragmatically licensed (and identified) in early child language. However, we did not (yet) offer any detailed discussion of what a topic actually is or, especially, how a child might come to understand this phenomenon, as pointed out by Allen. Our next step will be to show what pragmatic licensing and identification really mean.

Rosemarie Tracy points out the desideratum to study the effects of the elicited production task in the light of our analysis of early pragmatic licensing and identification of child object drop. This will be very important in order to study the exact pragmatics of object omissions in child language. In Müller and Schmitz (2000) objects are compared with subjects for the monolingual German and Italian data for both elicited production and spontaneous interaction (cf. Jakubowicz, Müller, Kang, Riemer, and Rigaut, 1996 and Jakubowicz, Müller, Riemer, and Rigaut, 1997 for the monolingual French children, and Cantone and Schmitz, forthcoming for a bilingual German–Italian child): subject omissions seem to be of a different nature than object omissions, as pointed out also by **Shanley Allen** in her commentary.

Really CP?

Regina Köppe did not find an exact correlation of usage of object clitics, decrease of object omissions and lexical instantiation of CP, neither in our data nor in Pascal, the child analyzed in her commentary. Already Müller et al. (1996) were aware of the study by Friedemann (1992) who found that object clitics were used (although sporadically) before lexical instantiation of CP in monolingual French children:

> Analyzing the speech of two monolingual French children (Grégoire and Philippe), Friedemann (1992) found that the acquisition of object clitics is a gradual process. Note that this is not excluded under our analysis: children might start to use object clitics well before they fully instantiate their C-systems. If they do not, however, the sudden unavailability of free object drop may aid them in acquiring the full object-agreement paradigm [which equals object clitics in their approach]. (p. 58)

Both Carlotta and Anouk are not "perfect" children for a parameter-view of language acquisition, in contrast to Ivar. Carlotta and Anouk exhibit a rather long transitional phase with respect to lexical instantiation of CP and the complete absence of illegitimate object omissions. Let us turn to Pascal who resembles Carlotta and Anouk in many respects. It is true that Müller (1993) found that CP is lexically instantiated in Pascal around the age of 2;5 and Kaiser (1994) observed that object clitics start to be used around 2;4. However, Kaiser (1994) notes that "only at age 3;2 does Pa begin to employ object clitic forms other than *le(s)/la* or *se*" (p. 144). This contrasts with Ivar who starts to use third person object clitics at the same time as first and second person object clitics. With respect to CP, Müller (1993) shows that lexically introduced subordinate clauses are very rare in Pascal at the ages 2;5, 2;6, 2;7, and 2;8, and six (out of eight) involve the conjunction *parce que* "because". Only from 2;9 onwards does the picture change: Pascal uses a higher number of subordinate clauses in one recording and a diversity of conjunctions and wh-elements. This age corresponds to the age where object omissions reach a percentage lower than 10%. The picture is, again, different in Ivar: he starts to use first lexically introduced subordinate clauses at 2;11, but already at age 3/3;1, he produces more than just one or two subordinate clauses per recording and a diversity of subordinate conjunctions: *parce que*, *quand* "when", *comme* "as", *(pour) que* "in order that/to", *que* "which", *qui* "who", and *comment* "how". To summarize, it seems as if Pascal is more like Carlotta and Anouk in that he exhibits rather long transitional phases.

Our approach, as presented in the paper, makes the prediction that illegitimate object omissions should not occur in subordinate clauses. Unfortunately, we were not able to investigate this issue since the children did not use enough subordinate clauses during the period of investigation. The example (1) in Köppe is a legitimate object omission: in French, it is very common to drop the object after *(il) faut*, e.g. *faut pas faire* "(one) should not do (it)". The second example may be a self-correction. But let us suppose that Köppe's examples are examples for illegitimate object drop in subordinate clauses. We believe that it is not a mere coincidence that these clauses are introduced by *parce que*. It has been observed that English children confuse "because" and "why". De Villiers (1991) has suggested an analysis of children's why-questions as being in topic position, i.e. "why" is attached to IP and the structure does not contain a trace. It would have interesting implications for the issue of object omissions if de Villiers' analysis applies to "because"-subordinate clauses and if French children confuse the French counterparts of "because" and "why".

Suzanne Schlyter highlights the issue that other functional categories may play such a crucial role for cross-linguistic influence as the CP in our approach. We did not exclude this possibility. It is the interface character of a functional category which creates confusion in monolinguals and to a higher degree in bilinguals. We would like to make one final remark with respect to Schlyter's commentary where she proposes that the presence of lexical subjects might be a better candidate to explain the disappearance of null objects than the properties of CP: subject omissions have been studied in Carlotta and she behaves quantitatively like a monolingual Italian child in this respect. Lack of subject drop is thus not evidenced. Moreover, it is unclear what Schlyter's hypothesis would have to say about Anouk's French.

Really influence?

Lydia White points out the differences and similarities of our approach with studies on second language development. Due to space limitations we could not address the question of second language acquisition, but we are convinced that both types of learners, first and second language learners, have similar problems with the grammatical domain we studied, object omissions. That data of language

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A serves as primary linguistic data for language B in the case of bilingual *first* language acquisition, and the assumption that the languages are separated at the same time is not necessarily counterintuitive. We actually quite agree with what White calls the stronger claim: that it is the grammar of language A that influences the grammar of language B. A language A-based grammar is adopted when the language B input is partially consistent with it. As **Tom Roeper** puts it: the child simultaneously juggles three grammars, the MDG, the grammar of language A, and the grammar of language B, for the relevant phenomenon. Furthermore, at the stage when the child has already chosen the target grammar(s) for the relevant phenomenon, s/he may still assume MDG or juggle with three grammars for another grammatical phenomenon. This view implies that the issue of language separation cannot be discussed for a whole grammatical system (the grammar of one language), but for the particular grammatical domain. This assumption has far-reaching consequences for the whole issue of bilingualism. Lydia White's commentary also forces us to reflect upon the most interesting question which has received no satisfying answer yet: what makes the child bilingual? Or, put differently: what forces the individual to look for different grammatical analyses? It is perhaps the stage of "competing" syntactic subsystems which coexist without overt cues, which is most telling. The existence of competing syntactic subsystems may force the learner to analyze competing variants in the input as evidence for two linguistic systems (Kroch, 1989). Under this view, the difference between monolinguals and bilinguals (first and second language learners) disappears – a desirable result. This will probably also clarify some of the issues discussed by **Susanne Döpke**: the existence of competing syntactic analyses can be accounted for in a hybrid model of linguistic competence, as the one by Yang (2000). It does not mean that we have to adopt the Competition Model, although we agree with Döpke that "a more comprehensive picture of information processing and cognitive structure building is called for".

Suzanne Schlyter reports on research on the acquisition of DP in a Swedish–Italian child. She mentions that a target-deviant construction which the child uses in Swedish has never been observed in monolingual Swedish children. We would like to point out that our approach makes it necessary to define what *never* means. This is also an important point in **Tom Roeper**'s commentary where he suggests that in some cases of monolingual acquisition a hypothesis could be present for a week and then dropped without any adult detecting it. Hulk and van der Linden (1996) found that a construction which is used for a very short time and with very low frequency (below 5%) in monolingual French children, *livre lire* "book read", is used much longer and with a higher frequency in the French of the bilingual Dutch–French child they studied. Furthermore, the construction as such does not exist in the input. However, a left-dislocation like *(le) livre (je) (veux) (le) lire* "the book I want to read it", where all elements which are systematically absent in early child speech are in parentheses, might lead the child to the assumption that topicalized constructions as in *livre lire* are a good first guess for French. This is the reason why we said that *from the child's perspective* there must be a certain amount of overlap of the two grammatical systems. We fully agree with Schlyter that our mapping approach has to be extended to the mapping of syntax and semantics (which should be as problematic as the mapping between syntax and pragmatics).

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