(A)symmetries in the production of object clitics by Romanian children

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1. Introduction

In the literature dealing with object clitics one can identify two main research options. Some studies focus on what pronominal clitics have in common – deficiency and distribution – and try to provide a unifying analysis (see, for example, Cardinaletti and Starke 1999). Others focus on the different properties evinced by the various types of object clitics. Besides the uncontroversial distinction between reflexive and non-reflexive clitics, Accusative and Dative object clitics have also been argued to have different status (see, for example, Sportiche 1996). Within the class of Accusative clitics, Uriagereka (1995) and Kayne (2000) make a distinction between 3rd person and 1st/2nd person Accusative clitics (ACs). According to Kayne, the former are Determiner-clitics. Uriagereka (1995) argues that 3rd person clitics occur in D, on a par with articles, and take a null complement, whereas 1st/2nd person clitics are strong phrasal clitics which project as DPs. Recently, the issue of the developmental path of 1st/2nd person vs. 3rd person ACs has also been addressed (Avram and Coene 2007, Coene and Avram 2011, Silva 2010). Longitudinal data from child Romanian reveal a higher omission rate for 3rd person than for 1st/2nd person ACs.

The goal of the present paper is to investigate the early production of reflexive and non-reflexive object clitics in Romanian with a view to getting a better understanding of the role of the person feature in the acquisition of clitics. The central question targets the 1st/2nd vs. 3 person asymmetry in the early acquisition of different types of clitics: do we find the same person asymmetry in the acquisition of all types of object clitics? If we do, it means that this is a genuine person asymmetry. In terms of learnability, the hypothesis would be that the category of person plays a central part in the acquisition of pronominal clitics. But if this developmental person asymmetry is attested only with some types of clitics, one would have to identify and explain its cause in relation to

features other than person. In terms of learnability, this will raise the question of how the child copes with the particular identified cause of the asymmetry. Ideally, whether the same person asymmetry can/cannot be found across the various types of clitics might offer a hint with respect to the way in which the person feature is encoded in the syntax of clitics as well as with respect to the way in which it may interfere with other syntactic properties of this type of pronominal objects.

The paper is organized as follows: Section 2 briefly lists and illustrates the obligatory clitic contexts in Romanian. The data and the method are presented in Section 3. Section 4 contains the results: (i) the early production of non-reflexive Accusative clitics; (ii) the production of early non-reflexive Dative clitics; (iii) the production of reflexive Accusative clitics. Section 5 addresses the 1st/2nd vs. 3rd person distinction across the various types of clitics in more depth and offers an account of the attested asymmetries. The conclusions are summarized in Section 6.

2. Obligatory clitic contexts in Romanian

2.1. Preliminary remarks

One important step in the study of the acquisition of clitics is the identification of those contexts in which the use of the clitic is *obligatory* in the target grammar. This is even more important in a language like Romanian, where the use of Accusative and Dative object clitics is subject to optionality in many contexts. Moreover, there are important differences between previous studies which described the use of clitics and the actual use of clitics in the spoken language.

2.2. Obligatory contexts for Accusative object clitics

In Romanian, third person ACs are obligatory in: (i) left dislocation structures with D-linked direct objects (1); (ii) direct object relative clauses (both restrictive and non-restrictive) introduced by the relative pronoun *care* 'who, which' (2); (iii) *wh*-questions with *care* 'which' (3); (iii) sentences in which the post-verbal complement position is phonetically

empty (the so-called single clitic constructions) and the clitic has a (salient) discourse antecedent (4). ACs are also obligatory in clitic doubling constructions, when the double is a definite pronoun (5), but optional in any other clitic doubling construction (6).

(1) a. *Cartea # am dat *(-o).*
book.the # have given clitic 3rd fem sg ACC
'The book, I have given away.'

b. *o carte # am dat *(-o).* [under specific reading]
a book # have given clitic 3rd fem sg ACC
'A book, I have given (away). '

c. *pe Ion # *(l-) am văzut.*
pe Ion # clitic 3rd masc sg ACC have seen
'Ion, I have seen.'

(2) a. *Mărul pe care *(l-) am mîncat.*
apple.the *pe* which clitic 3rd sg masc ACC have eaten
'The apple which I have eaten.'

b. *Fata, pe care *(o) ştia ...*
girl.the *pe* whom clitic 3rd sg masc ACC knew
'The girl, whom he knew, ...'

(3) *Pe care *(l-) ai ales?*
pe which/whom clitic 3rd sg masc ACC have chosen
'Which one have you chosen?'

(4) A: *Ce-ai făcut cu mărul?*
'What have you done to the apple?'
B: **(L-) am mîncat.*
clitic 3rd masc sg ACC have eaten
'I have eaten it.'

(5) **(O) avem aici pe ea/aceasta.*
clitic 3rd fem sg ACC have here *pe* her/this fem sg
'We've got her/this one here.'

(6) a. *(O) avem aici pe Ruxi.*
(clitic 3rd fem sg ACC) have here *pe* Ruxi.
'We've got Ruxi here.'

b. *(L-) a văzut pe copil.*

(clitic 3rd fem sg ACC) has seen *pe* child
'(S)he has seen the child.'

First and second person ACs are always obligatory, since their antecedent is always a pronoun.

2.3. Obligatory contexts for Dative object clitics

Third person Dative object clitics (DCs) are obligatory: (i) when the indirect object has been fronted to sentence initial position (7); (ii) in indirect object relative clauses (both restrictive and non-restrictive) introduced by the relative pronoun *care* 'who, which' (8); (iii) in sentences in which the post-verbal complement position is phonetically empty and the null indirect object has a (salient) antecedent in the preceding discourse (9). In the so-called clitic doubling constructions, the clitic is obligatory when the double is a definite pronoun (10). The clitic is optional in any other clitic-doubling construction in which the double is in post-verbal position (11) (see also Rădulescu Sala 2008) as well as in *wh*-questions with *cui* 'cine$_{DAT}$' (12):

(7) *Lui Ion *(i-) am dat cartea.*
to Ion clitic 3rd sg DAT have given book-the
'I have given the book to Ion.'

(8) *Omul căruia *(i-) am dat cartea a plecat.*
man-the who DAT clitic 3rd sg DAT have given book-the has left
'The man to whom I gave the book has left.'

(9) A*: L-ai văzut pe Ion?*
'Have you seen Ion?'
B: *Da; şi *(i-) am dat cartea.*
yes and clitic 3rd sg DAT have given book-the
'Yes, I have; and I gave him the book.'

(10) **(I-) am dat cartea lui/ acestuia.*
clitic 3rd sg DAT have given book-the him DAT/ this DAT
'I gave the book to him/to this one.'

(11) *(I-) am dat cartea lui Ion*.
clitic 3rd sg DAT have given book-the to Ion
'I gave the book to Ion.'

(12) *Cui (i-) ai dat cartea?*
who DAT clitic 3rd sg DAT have given book-the
'To whom have you given the book?'

First and second person DCs are never subject to optionality.

3. Data and method

3.1. Data

The present study relies on data provided by three longitudinal corpora of child Romanian, consisting of weekly 60 minute audio recordings of natural unstructured conversations of monolingual Romanian children: a girl (B.1;3–3;2) and two boys (A. 1;9–3;6 and I. 2;0–3;5), transcribed in Childes format (MacWhinney 2000). For the present analysis, we examined one recording per month for the period 2;0–2;11 for child B., 1;9–2;11 for child A., and 2;0–2;11 for child I. In each case, the first file examined corresponds to the one in which the first clitic was attested. The data are summarized in Table 1 below:

Table 1. Longitudinal data

Child	Age	MLU	Nr of 60' recordings
A.	1;9–2;11	1.514–3.174	15
B.	2;0–2;11	1.392–2.790	12
I.[1]	2;0–2;11	1.407–3.720	8

3.2. Method

The method used for coding and counting is similar to the one used for the analysis of ACs in Avram and Coene (2009). This involved a detailed examination of each transcript in order to identify all the obligatory clitic

contexts. We investigated the production of Accusative and Dative non-reflexive clitics by looking at occurrences and omissions only in obligatory contexts. We distinguished between 3rd person and 1st/2nd person object clitics. In the analysis of the acquisition data, we considered clitics to be omitted only when they were not used in an obligatory clitic context[2]. In optional clitic contexts, omission of the clitic was considered grammatical, even when adults used the clitic in an identical context in the same conversational turn[3].

For reflexive clitics[4] (RCs), which are always obligatory, we counted only the Accusative forms. The attested number of reflexive Dative clitics was much too small to be taken into account. No distinction was made between various types of reflexive clitics (reflexive/reciprocal, passive, unaccusative/inchoative) because the number of some types of reflexives was either absent in some corpora or too small to allow a comparative analysis. We distinguished between 1st/2nd person vs. 3rd person Accusative reflexives.

4. Results

4.1. Non-reflexive clitics

4.1.1. Accusative clitics

4.1.1.1 The data

The data reveal that the first ACs are attested early in the three corpora. In the B. corpus, the first ACs emerge as soon as the child has entered the two word stage. The first clitic, placed in post-verbal position, is attested at 1;10:

(13) *apa … pus-**o***
water-the put clitic 3rd fem sg ACC [B. 1;10]
'I have put the water.'

An examination of the next recording sessions reveals, however, that no other AC is attested until 2;0. This is why we only analyzed the data beginning with this age, which we take to be the age of the first clear instance of repeated use (as defined in Snyder 2007:77), i.e. the age at

which a clitic has been used at least twice, in order to exclude incidental use (see also Stromswold 1996). ACs are correctly placed from the earliest stage[5]. However, random omissions are attested in the examined files until 2;11 (14). The data are summarized in Figure 1.

(14) a. *Ăsta trebuie să *(-l) apăr.*
this must să SUBJ (clitic 3rd sg masc ACC) defend
'I must defend this one.' [B. 2;7]

b. *Nu *(mă) vezi pe mine aici?*
no clitic 1st sg ACC see 2nd sg *pe* me here
'Don't you see me here?' [B; 2;10]

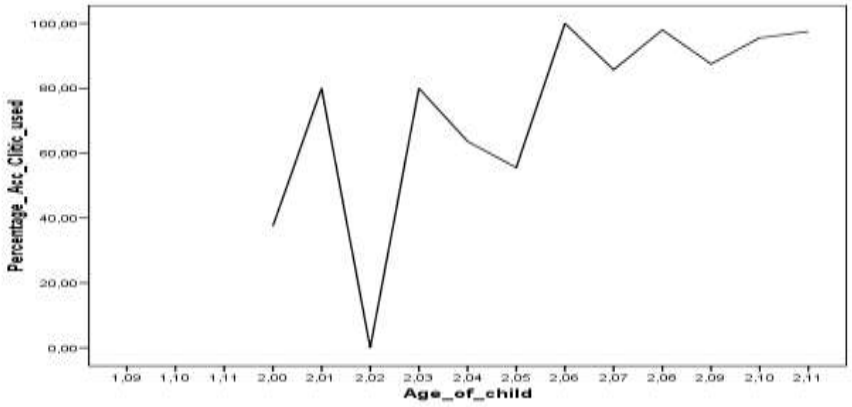


Figure 1. Production of ACs in the B. corpus

In the A. corpus ACs are found in the first recording session, i.e. as early as 1;9. Just as in the B. corpus, the first attested AC is the feminine *o* 'her' in post-verbal position:

(15) Adult: *ce-ai făcut cu ligheanul?*
'What have you done to the bowl?'
Child: **spart-**o.***
has broken clitic 3rd sg fem ACC [= bowl MASC]
'I have broken it.' [A. 1;9]

As already pointed out for corpus B., early emergence is followed by a stage when ACs are used in a non-adult like way. They are randomly omitted until 2;8:

(16) Adult: *şi ce-a făcut moşu(l) cu cocoşu(l)?*
'And what did the old man do to the rooster?'
Child: **(l-)* *a bătut.*
clitic 3rd masc sg ACC has beaten
'He has beaten (it).' [A. 2;0]

(17) *aia , am călcat* **(-o).*
that one have stamped clitic 3rd fem sg ACC
'I have stamped on that one.' [A. 2;8]

The data are summarized in Figure 2:

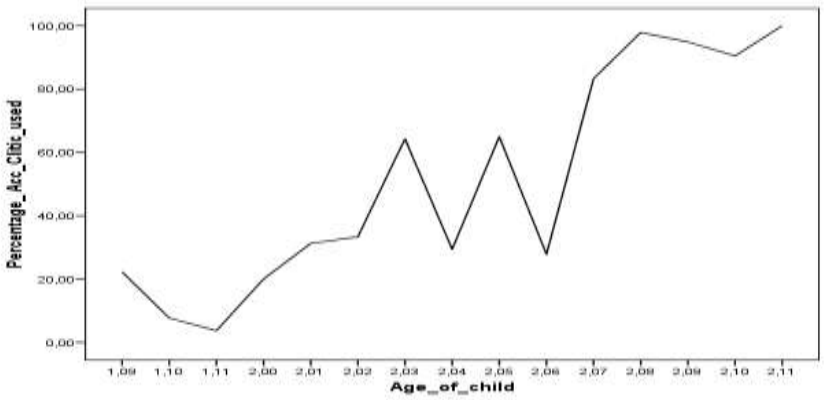


Figure 2. Production of ACs in the A. corpus

As can be seen in Figure 3 below, ACs are attested at 2;0 (MLU 1.407) in corpus I. However, the only clitic attested (a 1st person sg clitic) occurs three times with the same verb in what can be a formulaic construction (*lasă-mă* 'let me'). This is why we take 2;1 as the age when the first freely used ACs are attested. But random omissions are found until 2;11, the last file examined:

(18) Adult: *Dar ieri ai văzut-o?*
'But did you see her yesterday?'

Child: *Da. Da' din maşină pînă la Colentina n-am văzut *(-o).*
yes but from car to Colentina not have seen clitic
'Yes, I did. But I could not see (her) from inside the car until we reached Colentina.' [I. 2;11]

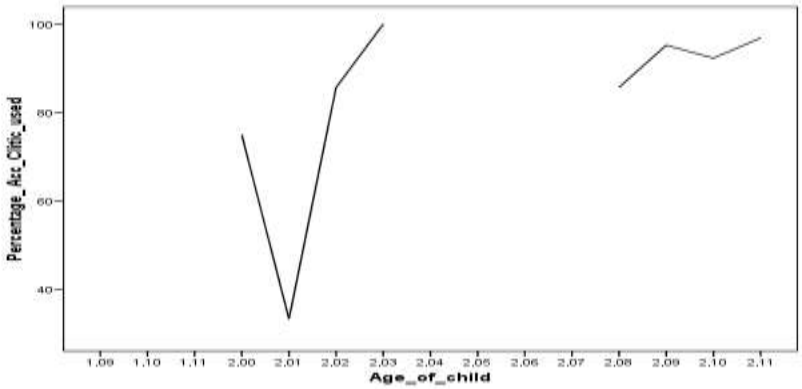


Figure 3. Production of ACs in the I. corpus

As can be seen in Figure 4 below, the omission rate of ACs in the three corpora is similar[6]:

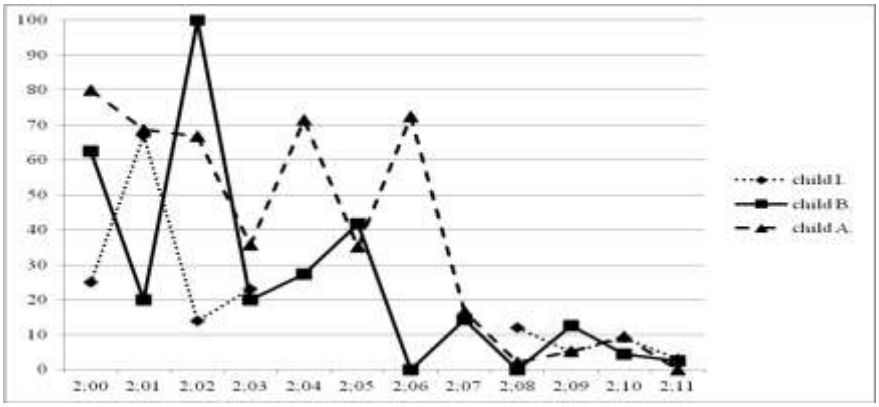


Figure 4. Omission of ACs in the A, the B and the I. corpus

No clitic placement errors have been found in any of the corpora.

At first sight, the analysis of the data indicates that 3rd person ACs emerge slightly earlier than 1st/2nd person ACs. In the B. corpus, for example, the first 3rd person AC (the feminine clitic *o*) is attested at 1;10 (MLU 1.091), in post-verbal position, and the first repeated use (FRU, Snyder 2007) is attested at 2;0. First/second person ACs are first attested in the formulaic *te rog* ('please-Acc clitic 2nd sg) at 1;11; no other 1st/2nd person AC is attested until 2;1 (MLU 1.734). The data in the A. corpus also indicate that 3rd person ACs emerge earlier than 1st/2nd person ACs. Whereas 3rd person ACs (the feminine clitic *o*) are attested as early as the first recording session, at 1;9 (MLU 1.392), the first 1st/2nd person ACs are attested at 2;4 (MLU 2.136), actually one month after the first pre-verbal 3rd person AC. Because of the small number of tokens it is impossible to safely assert whether this is an instance of ordered acquisition or whether the two types of ACs emerge at the same age. However, one can notice that both A. and B. go through a very short stage (lasting from age 1;10 to age 2;1 in corpus B. and from age 1;9 to age 2;2 in corpus A.) when the only AC used is the feminine singular *o* 'her', even when the antecedent has masculine (or neuter, i.e. masculine in the singular) gender, and that it is placed exclusively in post-verbal position (see 15 above).[7] Interestingly, in both corpora the emergence of 1st/2nd person ACs coincides with the emergence of 3rd person ACs in pre-V position. This may indicate that the early *o* clitics are used as default forms and that actually all ACs, irrespective of their Person feature, emerge at the same time. The conclusion is reinforced by the data coming from the I. corpus, where the first repeated use of 1st/2nd and 3rd person ACs is attested in the same file, at 2;1. In terms of emergence, then, there does not seem to be any Person asymmetry. But the investigation of the omission rate of ACs in obligatory contexts indicates an asymmetry between 1st/2nd person and 3rd person ACs (see also Avram and Coene 2010, Coene and Avram 2011). In the B. corpus, the omission rate of 3rd person ACs is significantly higher than the omission rate of 1st/2nd person ACs (Wilcoxon Signed Rank test, $p = .047$). After 2;8, ACs are used almost adult-like, but the few omissions which are attested after that age are exclusively 3rd person ACs. The data are summarized in Figure 5 below:

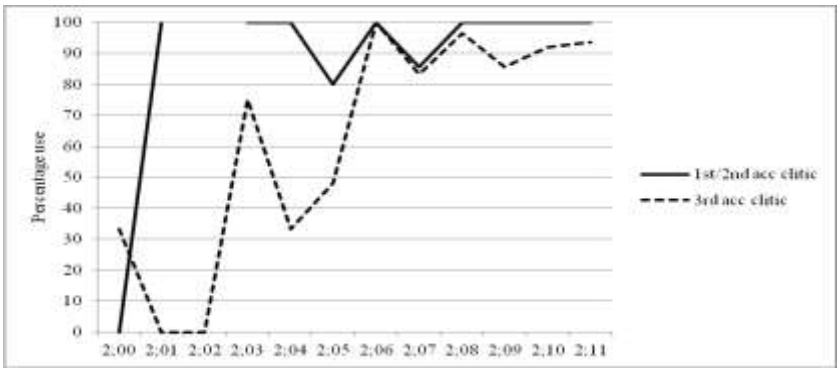


Figure 5. Production of 1st/2nd vs. 3rd person ACs in the B. corpus

Similarly, in the A. corpus, there is almost no omission of 1st/2nd person ACs, apart from an incidental increase in omission rate at 2;5. Third person ACs, on the other hand, in spite of very early emergence, continue to be omitted (even though at a low rate) when the omission rate is 0% for 1st/2nd person ACs. The data are summarized in Figure 6:

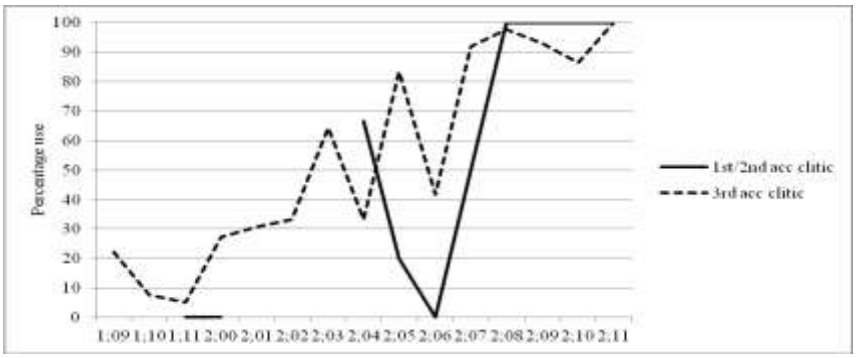


Figure 6. Production of 1st/2nd vs. 3rd person ACs in the A. corpus

In the I. corpus the analysis of the used/omitted ACs reveals the same person asymmetry. The omission rate of 1st/2nd person ACs is lower than the omission rate of 3rd person ACs (Wilcoxon Signed Ranks test, p= .018). The data are summarized in Figure 7:

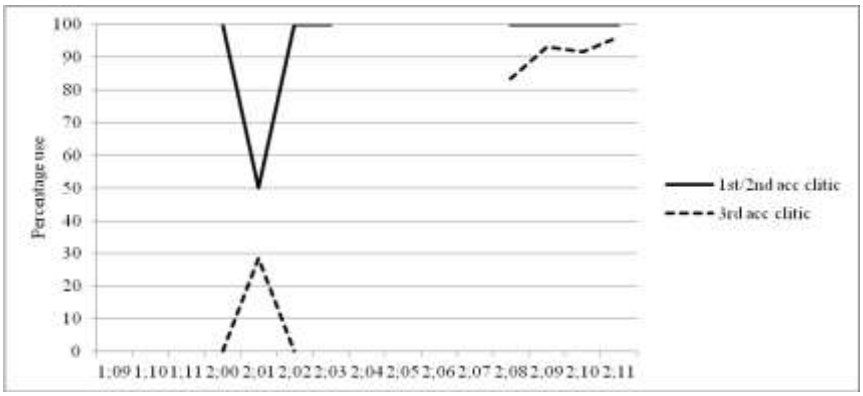


Figure 7. Production of 1st/2nd vs. 3rd person ACs in the I. corpus

There is a significant 1st/2nd vs. 3rd person asymmetry in the three corpora.

Gender and number agreement errors are attested, but they are extremely rare:

(19) a. *cînd termin eu ţi- *o*
when finish I clitic 2nd sg DAT clitic 3rd fem sg ACC
dau ăstea.
give these 3rd fem pl
'When I have finished I'll give you these.' [B. 2;6]

b. **îi bag şi pe fetiţe.*
clitic 3rd masc pl ACC put and *pe* girls DIM fem pl
'I am putting the little girls inside as well.' [I. 2;8]

There are no agreement errors with 1st or 2nd person ACs. Actually, plural forms are attested only for the 3rd person[8]. It is worth pointing out that the data reveal an asymmetry between the omission rate of 3rd person singular and 3rd person plural ACs (Wilcoxon Signed Ranks, B. p = .018, A. p = .036, I. p = .068). However, the production rate of 3rd person plural is higher in corpora B. and I., whereas A. uses more 3rd person singular clitics. The data are summarized in Table 2 and Figure 8:

Table 2. Production of 3rd person sg vs. 3rd person pl ACs in the three corpora

Child	Total contexts 3rd sg	Total 3rd sg clitics production	Total contexts 3rd pl	Total 3rd pl clitics production

B.	151	78.14% (n =118)	32	90.62% (n=29)
I.	93	83.87% (n =78)	19	94.73% (n=18)
A.	269	60.96% (n=164)	28	39.28% (n=11)

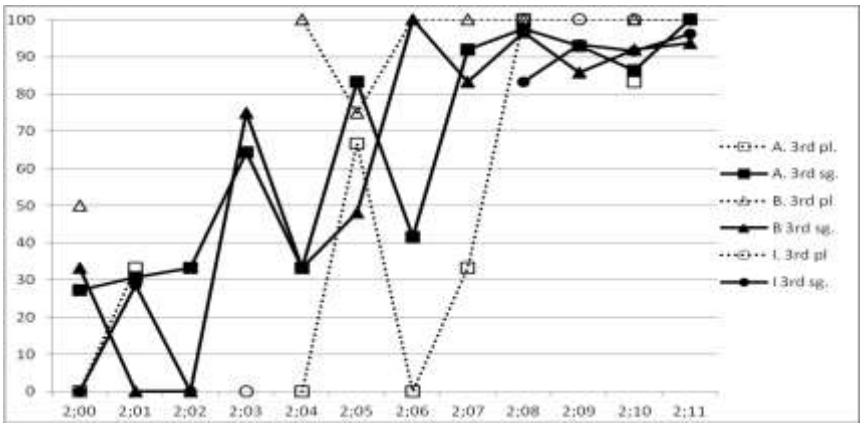


Figure 8. Production of 3rd person sg vs. 3rd person pl ACs in the three corpora

4.1.1.2. Preliminary summary

The data available in the three corpora reveal that in most respects the acquisition of ACs in Romanian is similar to what has been found for other languages. They emerge very early (before age 2;0 and at an MLU < 2) and are never misplaced. This is similar to what has been reported in longitudinal studies of several other languages, among which Spanish (Domínguez 2003) and Greek (Marinis 2000). In two corpora, during a very short stage, only the feminine clitic *o 'her'*, placed exclusively in post-verbal position, is attested. The fact that only the post-verbal clitic *o 'her'* is used during this early stage may be taken as evidence for one of the following two claims: (i) both children prefer Merge over Move, leaving the clitics *in situ*, or (ii) the feminine clitic *o* is used as a default form during this early stage. This clitic is exceptional among the other Romanian ACs in that it is the only one which can be placed either in pre- or in post-verbal position in finite constructions:

(20) a. ***o*** *vede*
clitic 3rd fem sg ACC sees
'He/she sees her.'
b. *a văzut* ***-o***
has seen clitic 3rd fem sg ACC
'He/she has seen her.'
c. *ar vedea-**o***
aux see clitic 3rd fem sg ACC
'He/she would see her.'

In terms of article-clitic homonymy, *o* is the only AC which is homophonous with the indefinite article, not with the definite, as is the case with the other 3rd person ACs. It also represents the default clitic; it occurs in frozen constructions where it does not always have a referential value: *a o şterge* 'to run away', *a o lua pe coajă* 'to get spanked', etc. It is also the clitic which can have a clausal antecedent. The exclusive use of *o* in post-verbal position during this early stage might indicate that this has to be taken as a language specific phenomenon, rooted in the properties of the feminine clitic *o*. The early clitic *o* might be a default clitic, used in the process of paradigm building. A similar phenomenon is discussed in Domínguez (2003). She observes that the Spanish child Maria goes through a stage when one clitic is used as a "substitute". The clitic which Maria uses during the early stages is the masculine *lo*. Zesiger, Zesiger, Arabatzi, Baranzini, Cronel-Ohayon,Franck, Frauenfelder, Hamann, and Rizzi (2010) also report that, in experimental data, French children use the masculine singular clitic as a default. For Romanian, however, the number of tokens is too small; the existence of a short "default clitic" stage is not backed up by significant statistics. Moreover, as mentioned in the previous section, such a stage is attested only in two of the examined corpora.

Clitic omission, however, is attested in all the corpora. ACs are omitted during a short period of time. As children's MLU increases, clitic production increases as well (see, for similar findings for Italian, Caprin and Guasti 2009) and by age 3;0 the omission rate drops below 5%. But, interestingly, the rate of omission is not the same for all the ACs. There is an obvious asymmetry with respect to the omission of 1st/2nd vs. 3rd person ACs. All ACs emerge concurrently but the omission rate is statistically significant only with 3rd person ACs. 1st/2nd person ACs are hardly ever omitted. The comparison of the data in the three corpora reveals a highly

significant difference (Wilcoxon p = .001). The data are summarized in Figure 9:

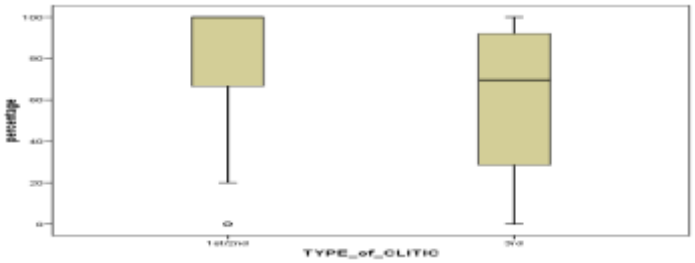


Figure 9. Overall use of 1st/2nd person vs. 3rd person ACs in the three corpora

The Romanian data are not singular in this respect either. Studies of ACs in longitudinal data for French (Hamann 2002, Rasetti 2003) also indicate a slight advantage for 1st/2nd person ACs during the early stages. In the Augustin corpus, the first attested object clitic is a 3rd person AC (at 2;2.13), but in between 2;4,01–2;6,16, only RCs and 1st person ACs are attested (Hamann 2002:35,Table 7, Rasetti 2003, Table 23). In the Marie corpus, after a file where 1st, 2nd and 3rd person ACs are attested (at 1;8,26), one notices a time span (1;9,03–1;11,5) when 1st/2nd person ACs outnumber 3rd person ACs (Rasetti 2003, Table 23). Along the same line, Silva (2010) provides experimental data from European Portuguese which indicate that children produced more 1st/2nd person ACs than 3rd person ACs.

One more asymmetry which was found in the data was the one between 3rd person singular and 3rd person plural ACs. The omission rate is much lower with plurals in two corpora, B. and I., but higher in the third one. The asymmetry found in the B. and the I. corpora is in line with previous findings for other languages, such as French (Rasetti 2003), Spanish (Domínguez 2003) and European Portuguese (Silva 2010).

4.1.2. Dative clitics

4.1.2.1. The data

DCs are first attested slightly later than ACs. In the B. corpus, the first DC in the examined files is found at 2;0, but no other DCs are found until 2;3. This is why we take 2;3 as the first instance of repeated use in this corpus (21). The first DC in the A. corpus is found at 1;11 but no other DC has been found in the examined files until 2;2 (22). This is why we take 2;2 as the first instance of repeated use in the A. corpus. The first DC is attested in the first file available (2;0) in the I. corpus, but in a structure which could well be formulaic. We take 2;2 as the first instance of free use, since it is in this file that a DC is used with more than one verb (23):

(21) *Dă -mi mie.*
give clitic 1st sg DAT me 1st sg DAT
'Give (it) to me'. [B. 2;3]

(22) *Dă -i apă!*
give clitic 3rd sg DAT water
'Give her/him some water.' [A. 2;2]

(23) *îmi pui ăs(t)a?*
clitic 1st sg DAT put this
'Will you put this to me?' [I. 2;3]

As can be seen in Figure 10 below, in the B. corpus the production of DCs reaches a 100% rate as early as 2;7, earlier than with ACs. But there is no significant difference between ACs and DCs in the B. corpus (Figure 11).

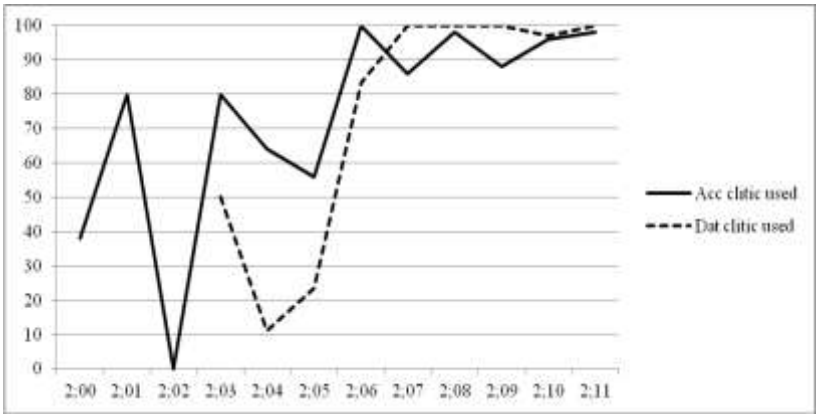


Figure 10. The production rate of ACs and DCs in the B. corpus

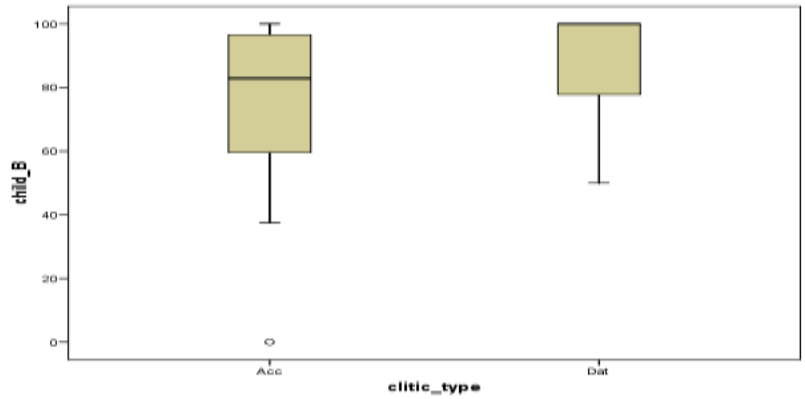


Figure 11. The overall production rate of ACs and DCs in the B. corpus

In the I. corpus, a 100% production rate with DCs is reached at an even earlier age (Figure 12); however, there is no significant difference between ACs and DCs either (Figure 13):

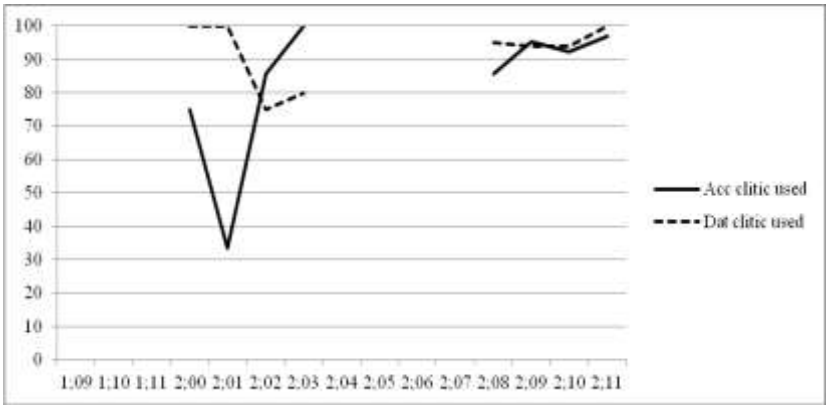


Figure 12. The production rate of ACs and DCs in the I. corpus

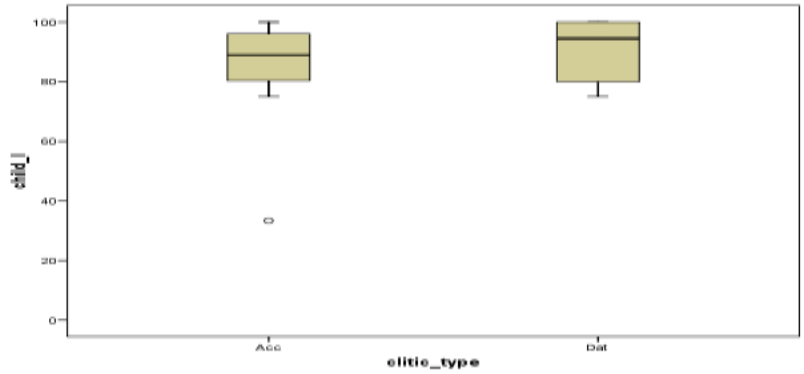


Figure 13. The overall production rate of ACs and DCs in the I. corpus

The data in the A. corpus differ from what was found in the other two corpora; with A., one finds a significant difference between ACs and DCs: A. uses significantly more ACs than DCs (Wilcoxon Signed Ranks z = -2.275; p = .023). The results might, however, be misleading; the vast majority of omitted DCs in the A. corpus appears in the context of one and the same verb which is used very often. This is why it is plausible to assume that the data cannot be taken as evidence in favour for or against a DC/AC developmental difference.

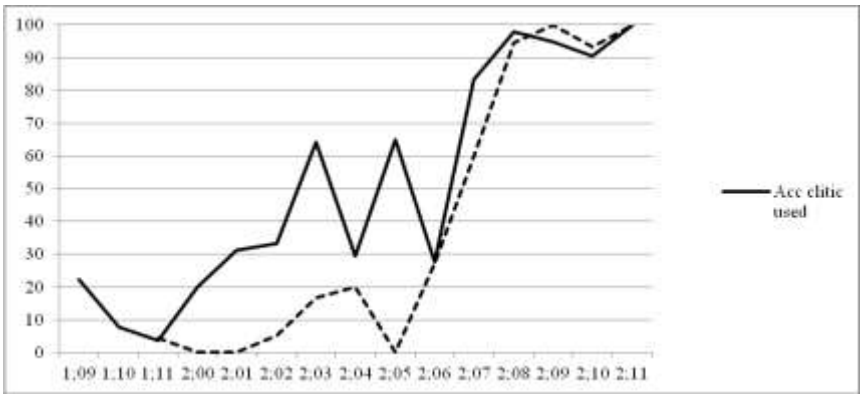


Figure 14. The production rate of ACs and DCs in the A. corpus

With respect to person, at first sight, in both the B. corpus and the I. corpus, there seems to be a slight difference between 1st/2nd person and 3rd person DCs, with 3rd person DCs being omitted over a longer period of time and at a higher rate:

Table 3. Target like use of 1st/2nd person vs. 3rd person DCs

Child	DC 1st/2nd	DC 3rd
B.	84.29% (n=102)	25% (n=1)
I.	88.23% (n=60)	83.33% (n=15)

The comparison is summarized in Figure 15 for B. and in Figure 16 for I.:

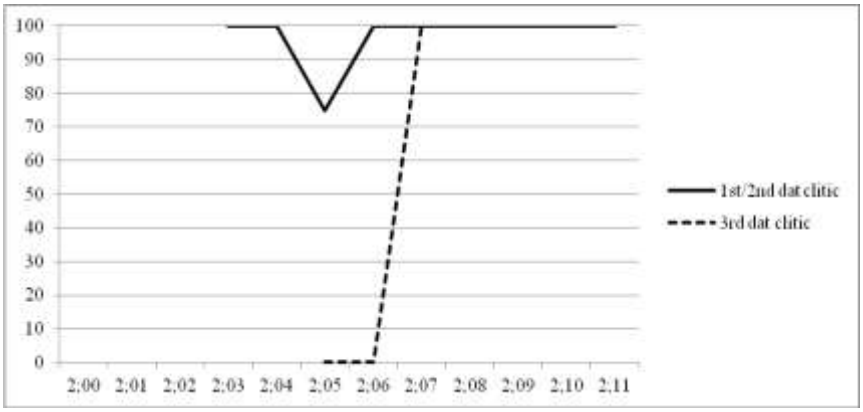


Figure 15. The production rate of 1st/2nd vs. 3rd person DCs in the B. corpus

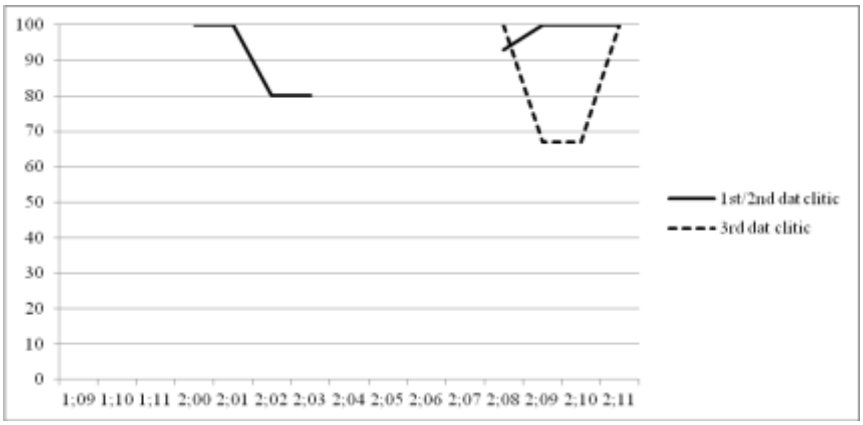


Figure 16. The production rate of 1st/2nd vs. 3rd person DCs in the I. corpus.

But the difference does not reach significance in any of the two corpora, most probably because of the small number of tokens. In the A. corpus the difference is marginally significant (z = -1,680, p = .093), with 1st/2nd DCs being omitted less than 3rd person DCs overall.

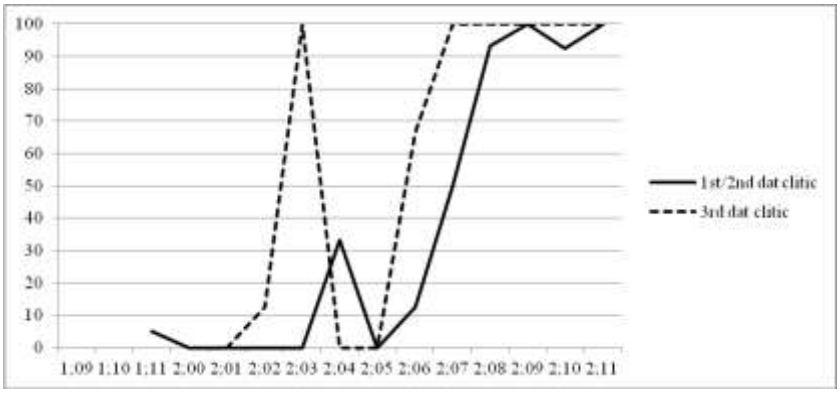


Figure 17. The production rate of 1st/2nd vs. 3rd person DCs in the A. corpus

Case errors are attested only in two corpora: the Accusative form is used in Dative contexts. In the B. corpus, case errors are attested at a stage when the omission rate shows target-like use. Across the files, out of 103 clitics used in Dative contexts, 63.72% (n= 65) are Accusatives. The case errors are attested exclusively with 1st and 2nd person DCs:

(24) a. *trebuie să* ****mă*** *dai.*
must să SUBJ clitic 1st sg ACC give 2nd sg
'you must give me'.
b. *a zis că* ****mă*** *fură iepurii*.
has said that clitic 1st sg ACC steals rabbits
'She said she will steal my rabbits.'
c. *Vreau să* ****te*** *povestesc.*
want să SUBJ clitic 2nd sg ACC tell 1st sg
'I want to tell you a story.' [B. 2;10]

In the I. corpus, the percentage of case errors is much lower. Out of the 75 clitics used in Dative contexts, only 5.33% (n= 4) are realized as ACs. No case errors are found in the A. corpus.

4.1.2.2. Preliminary summary

Summing up, DCs are attested very early but slightly later than ACs in all the three corpora. The production rate of DCs reaches 100% shortly after first use, but in terms of overall production the difference between ACs and DCs does not reach significance. The Romanian data are similar to the ones reported for European Portuguese, where the omission rates for ACs and DCs are comparable (Silva 2010). As regards Romanian early clitics the comparison has to take into account two facts: case error substitutions and omission/production rates. With respect to case errors, the performance of ACs is better. With respect to omission/production rates, it is still the performance of ACs which is slightly better, though the difference does not reach significance. The Romanian children seem to behave like the Portuguese children in this respect and to differ from Italian children. Caprin and Guasti (2009) report that Italian children omit ACs more than DCs.

There is a slight 1st/2nd vs. 3rd person asymmetry with DCs across subjects, but it only reaches (marginal) significance with one child. In this respect, the Romanian data differ from the ones reported for European Portuguese. Silva (2010) reports an asymmetry between 1st/2nd vs. 3rd person both in the case of Accusative and in the case of Dative clitics.

Case errors are attested only with 1st/2nd person DCs and the rate is subject to individual variation.

4.1.3. Reflexive clitics

4.1.3.1. The data

RCs emerge early. In the A. corpus, the first RCs are attested at 2;4 (MLU 2.136). In the B. corpus the first RC is attested at 2;1. One should, however, notice that all the instances of RCs at 2;1 are all 2nd person sg reflexives which occur with the same verb used in a formulaic-like imperative (*du-te* 'go-refl 2nd sg'). Therefore, we believe that B. produces the first "genuine" reflexives at 2;2. In the I. corpus, RCs are attested at 2;1. What is striking is that there is almost no omission of RCs after their emergence. In the B. corpus, the production of reflexives increases to 100% as early as 2;3 (MLU 1.821), only one month after the first genuine reflexive was used. The data are summarized in Figure 18:

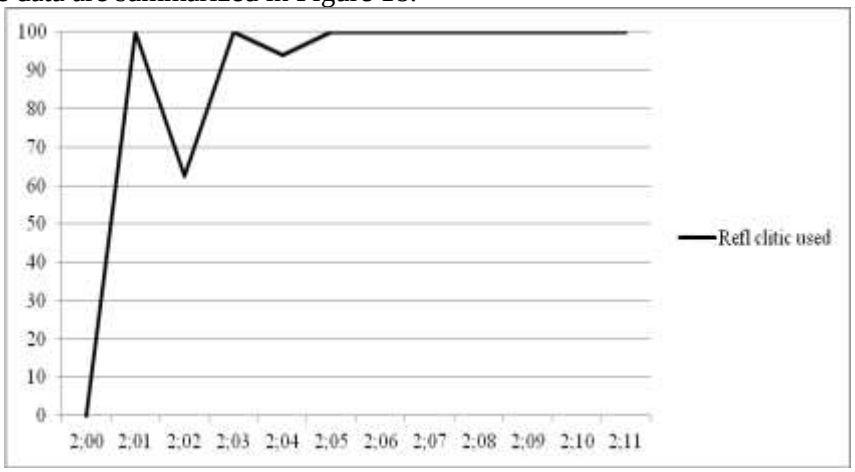


Figure 18. The use of RCs in the B. corpus

The same picture emerges from the I. corpus, as can be seen in Figure 19:

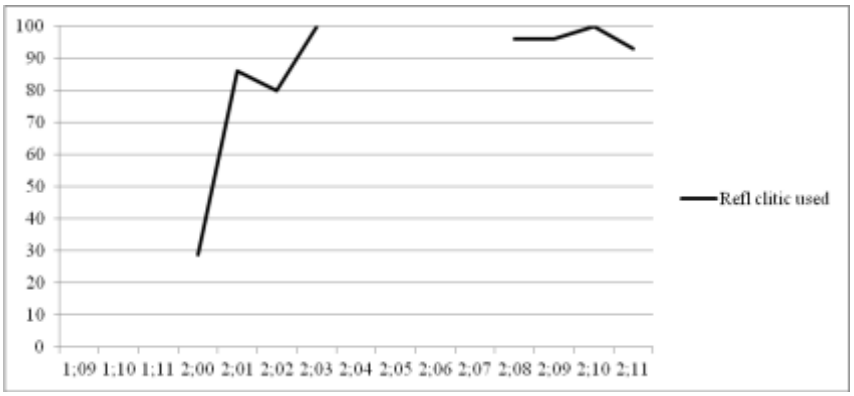


Figure 19. The use of RCs in the I. corpus

In the A. corpus as well the production rate of RCs increases to 100% early, at 2;8 (MLU 3.099). The data are summarized in Figure 20 below:

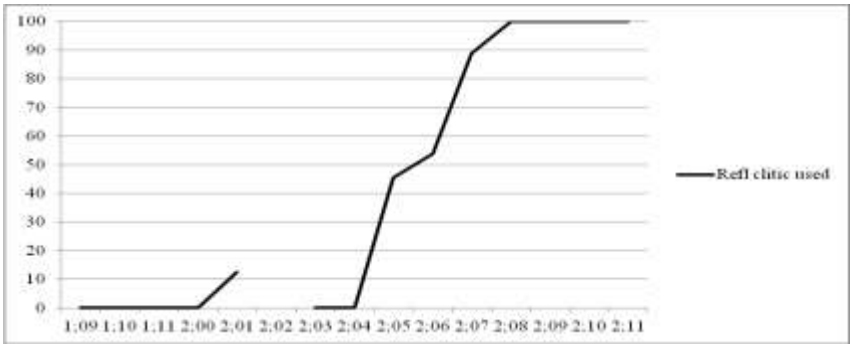


Figure 20. The production rate of RCs in the A. corpus

The comparison of RCs with ACs in the B. corpus reveals a significant difference between reflexives and non-reflexive accusatives with respect to production rate; the former have a higher percentage of target-like use than the latter. This indicates that reflexives are acquired earlier than ACs (Wilcoxon Signed Ranks z= -2,135, p= .033). In the A. and the I. corpora, the results seem to go along the same line, however without reaching significance. But all the three children have a higher percentage correct use

at an earlier age, and RCs are used in a target-like manner earlier than both ACs and DCs.

There is a slight person asymmetry within RCs, but in this case it is reversed: it is the 3rd person clitic whose omission rate is lower, as can be seen in Figure 21 for B., Figure 22 for A. and Figure 23 for I. But the difference does not reach significance (B. p = .180; A. p = .593; I. p = .248).

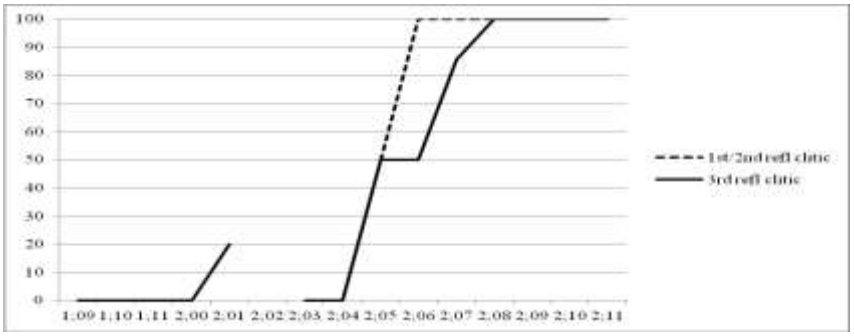


Figure 21. The use 1st/2nd person vs. 3rd person RCs in the B. corpus

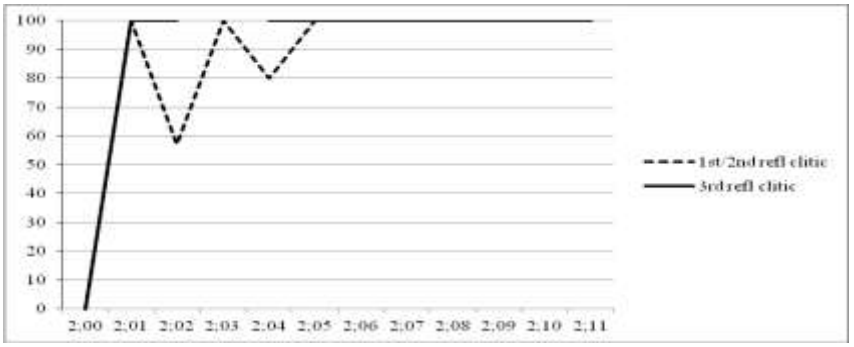


Figure 22. The use 1st/2nd person vs. 3rd person RCs in the A. corpus

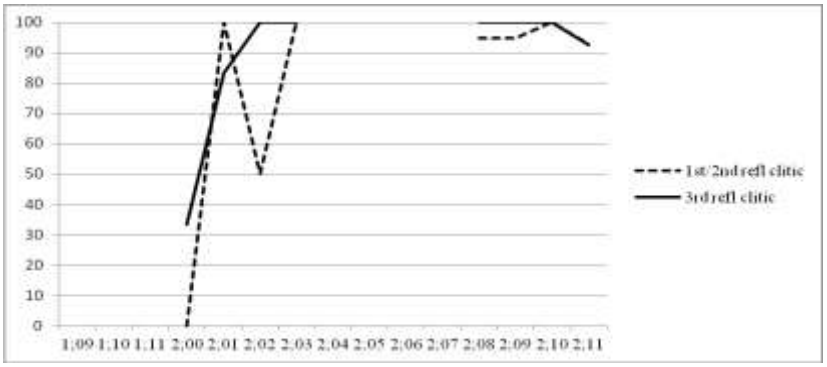


Figure 23. The use 1st/2nd person vs. 3rd person RCs in the I. corpus

A comparison of the developmental path of RCs and ACs reveals that the observed differences in omission rate are highly significant in the B. corpus, where RCs are acquired earlier than both ACs ($p = 0.033$) and DCs ($p = 0.043$). Figure 24 shows that RCs reach 100% production rate shortly after emergence:

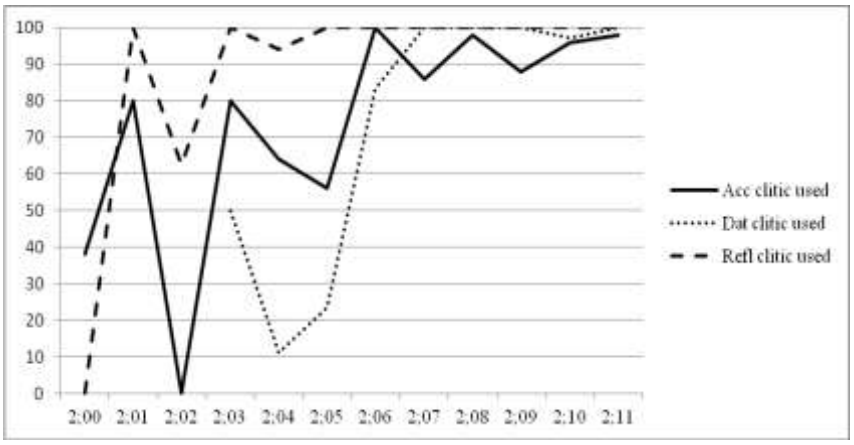


Figure 24. The production of ACs, DCs and RCs in the B. corpus

In the other two corpora, the longitudinal data go along the same line (without reaching significance though), as can be seen in Figures 25 and 26:

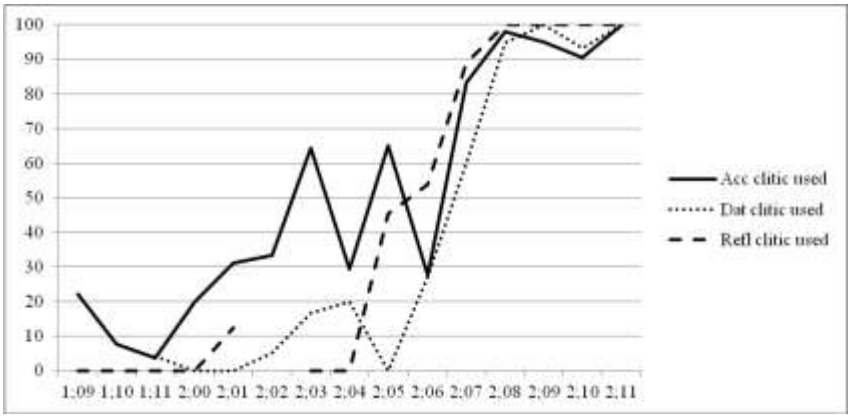


Figure25. The production of ACs, DCs and RCs in the A. corpus

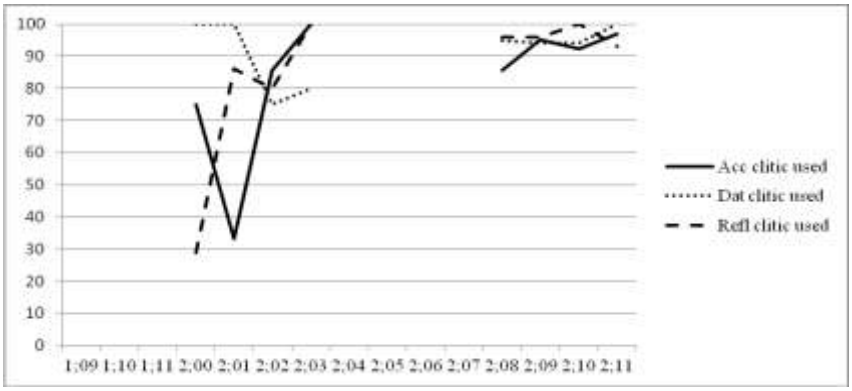


Figure 26. The production of ACs, DCs and RCs in the I. corpus

4.1.3.2. Preliminary summary

RCs (taking together 1st, 2nd and 3rd person contexts) reach a 100% target-like use in required contexts earlier than ACs or DCs and do so shortly after

emergence. This finding comes as no surprise, as several previous studies report lower omission rates for RCs. For example, several previous studies report lower omission rates for RCs than for ACs in French (Jakubowicz 1991, Jakubowicz, Müller, Riemer, Kang, and Rigaut 1996, Hamann, Rizzi and Frauenfelder 1996, Crysman and Müller 2000, Rasetti 2003) and lower omission rates for RCs than for both ACs and DCs in Italian (Caprin and Guasti 2009). The Romanian data are similar to the Italian data in this respect.

No $1^{st}/2^{nd}$ person vs. 3^{rd} person asymmetry has been found with RCs. As in the case of the other types of clitics, no clitic misplacement has been attested.

5. Discussion

5.1. Starting point

The longitudinal data which we have examined reveal that the omission/production rate for various object clitics in child Romanian is not uniform. The following (a)symmetries have been attested: (i) the omission rate of $1^{st}/2^{nd}$ person ACs is lower than that of 3^{rd} person ACs but it is similar to that of RCs overall; (ii) there is a significant person asymmetry with ACs but not with DCs or RCs; (iii) the omission rate of RCs is lower than the one of DCs and of ACs overall; (iv) case errors are attested only with $1^{st}/2^{nd}$ person DCs. In what follows we will try to provide an account of these developmental (a)symmetries.

5.2. Context-dependent vs. discourse-dependent referentiality

Concerning the $1^{st}/2^{nd}$ person vs. 3^{rd} person AC asymmetry, one common difference that is often made between $1^{st}/2^{nd}$ vs. 3^{rd} person pronominals in general is that only the former are inherently deictic; their interpretation is always discourse-dependent in that their reference is determined by the changing of discourse roles (Harley and Ritter 2002). 3^{rd} person pronouns are variables whose reference is context-dependent and not indifferent to the 'referential intentions of the speaker' (Schlenker 2003:51). Also, speaker and addressee are higher than non-participant (3^{rd} person) on a cognitive accessibility scale (Siewierska 2004:46). Their referent is highly

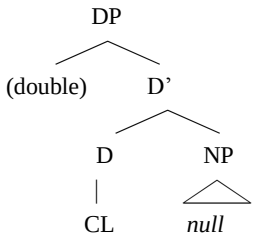
accessible. This distinction might be taken as a starting point in an account of the person asymmetry within ACs which we found in our acquisition data. Children may deal differently with discourse-related (deictic) and context-related referentiality. There are, however, several facts which indicate that this difference alone cannot help us disentangle the acquisition facts. One is that the same "person effect" would be predicted across the various types of object clitics, a prediction which is not borne out by our data. With DCs, we found no significant difference between $1^{st}/2^{nd}$ person and 3^{rd} person clitics. With RCs, if there is a difference (though not statistically significant), it goes in the opposite direction, with 3^{rd} person RCs being less omitted than $1^{st}/2^{nd}$ person RCs. This suggests that the observed asymmetry might either not be a person asymmetry at all or that it might be rooted in a coalition of factors, person included.

5.3. First and second person vs. third person ACs

5.3.1. Previous accounts

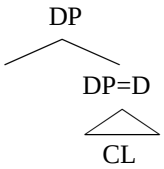
As mentioned in section 1, there are - to our knowledge - two previous studies which explicitly address the difference between $1^{st}/2^{nd}$ person clitics and 3^{rd} person clitics: Uriagereka (1995) and Kayne (2000). The two studies converge on one important conclusion: 3^{rd} person clitics do not belong to the same class as $1^{st}/2^{nd}$ person clitics. They have different etymology, different morphological make up, different categorial status, and different syntactic properties. But the details of their analyses, as well as the conclusions with respect to the categorial status of the two classes of clitics are different. According to Kayne, $1^{st}/2^{nd}$ person clitics are NPs, with an empty D^9, whereas 3^{rd} person clitics are DPs. One important ingredient in his argumentation is gender. Since $1^{st}/2^{nd}$ person clitics do not specify gender, they cannot project D. Consequently, they are NPs. 3^{rd} person clitics, on the other hand, are specified for gender and, hence, they project as DPs. Uriagereka's analysis builds on the synchronic and diachronic relationship between 3^{rd} person clitics and determiners. 3^{rd} person ACs in Romance, which derive from the Latin demonstratives, are Ds which take a null complement (25). They are, using his terminology, weak determiner clitics, which are referentially deficient.

(25)



1st/2nd ACs are not referentially deficient, they specify person and behave like strong phrasal clitics. They are DPs (26):

(26)



The important element in Uriagereka's analysis seems to be referential deficiency. In what follows, we will show in what way the two main ingredients in these two studies, gender and referential deficiency, can be integrated in one analysis.

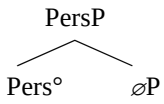
5.3.2. The features in D and types of clitics

Our account of the asymmetry which was found in the acquisition data builds on the important insight that the notion of 'pronominal clitic' does not refer to a homogeneous class of pronominal elements. In particular, ACs do not represent a homogeneous class. It can be argued, on the basis of morphological make up and syntactic properties, that it is necessary to differentiate between these two classes. A finer-grained classification has the advantage of explaining the observed developmental asymmetry.

The two studies briefly mentioned in the previous subsection built the proposed differentiation on the morphological make up of the DP. But D encodes two types of features: person features, responsible for the referential index of the DP, and *phi*-features (number and gender). Along

the line of Longobardi (2008), we assume a distinct representation of the person head; this projection hosts the feature associated with referentiality, as suggested in Chomsky (1999), where it is associated with *one* variant of D: 'Similarly D, – or at least one variant of D – might be associated with referentiality in some sense, not just treated as an automatic marker of "nominal category" (Chomsky 1999:35 fn10). Following this insight, we take the "traditional" DP to contain *two* projections: Person Phrase and ∅Phrase (with the possibility of further splitting the ∅P[10] into a Number and a Gender Phrase). The former is the projection of the referentiality feature. The latter is a projection of the number and gender features:

(27)



1st/2nd person clitics are deictic. They have a Person feature (or, alternatively, a Participant feature, as one reviewer suggests), which is licensed by an operator in the C-domain, like any other deictic element, as proposed by Sigurðsson (2005). It is commonly assumed that 1st/2nd person clitics are not specified for gender (or, arguably, for number). This is what made Kayne (2000) analyse them as NPs. Though it is true that they do not encode gender, it is not entirely correct to say that they are indifferent to the gender feature. We would like to propose that they contain an underspecified ∅P which will be assigned a value via the same computation process through which the person or participant feature is licensed. The implicit assumption is that if a nominal is specified for person, it will also be specified for number and gender (see also Shlonsky 1989 for a similar assumption with respect to the possible projection of a split IP). This is reflected in gender marking on epithets (see also Coene and Avram 2011). In (28) below, if the double contains an epithet, it has to be adjusted, since the double of 1st/2nd person ACs can be only a pronoun[11]. (28a) is ungrammatical precisely because the double is a lexical DP. In (28b) and (28c) the semi-pronominal epithet is marked for gender and number:

(28) a. *(Pe mine,) nimeni nu mă ajută *pe prost.*
pe me no one not me helps *pe* stupid
b. *Nu mă ajută nimeni pe prostul de mine.*
not me helps no one *pe* stupid-the masc of me

c. *Nu mă ajută nimeni pe proasta de mine*.
not me helps no one *pe* stupid-the fem of me
'No one will help me, the fool that I am.'

We therefore assume that 1st/2nd person ACs project as a Person Phrase which contains an underspecified ∅P, whose feature(s) is/are context-dependent. This is in line with Uriagereka's (1995) analysis, according to which 1st/2nd person clitics are DPs. But at the same time it also captures the important property that they are not specified for gender (or number); these features are valued via discourse anchoring, in the computation of the person/participant feature.

In terms of binding, they are subject to Condition B. In (29) below, the 1st person AC does not corefer with the DP which c-commands it in its local domain:

(29) *Vasile m- a desenat.*
Vasile clitic 1st sg ACC has drawn
'Vasile has drawn me.'

Local binding obtains only in the case of reflexives. We take the property of 1st/2nd person non-reflexive ACs illustrated in (29) to reflect their pronoun status. They differ from strong pronouns, though, in that they cannot be the complement of a preposition (see Cardinaletti and Starke 1999). Their Person Phrase (DP) status also accounts for the fact that they are used as arguments.

In Romanian, 3rd person ACs are identical in form to the definite article[12]. Unlike 1st/2nd person ACs, they lack a referential index. They enter the derivation as articles, as D. Semantically, they do not have fixed reference or individuation. They simply spell-out the *phi*-features of the NP complement. They are not restricted to either [+ human] or [+ animate] antecedents. Their antecedent, whose features they inherit, can be either a nominal or a pronoun. They are not inherently definite either. Their antecedent can be both definite and indefinite. In Romanian, this property may be said to be reflected not only in the compatibility of 3rd person ACs with both definite and indefinite antecedents (Dobrovie-Sorin 1994) but also in the contemporary paradigm, which contains clitics identical both to the definite and to the indefinite article:

Table 4. Article - 3rd person ACs homophony

		Singular		plural	
		masc	fem	masc	fem
article	Indefinite		o		
	Definite	-l		-i-	-le
3rd person Acc clitic		-l-	o	-i-	-le-

Unlike 1st/2nd person ACs, D-clitics lack a Person/participant feature. We therefore assume that 3rd person ACs do not project a Person Phrase. They inherit the *phi*-features of the so-called antecedent in the derivation. This is in line with the deficiency of clitics in Uriagereka (1995) and Cardinaletti and Starke (1999). Since they can have a lexical DP as an antecedent and lexical DPs can only be 3rd person, D-clitics, which spell out the features of the antecedent, are interpreted as 3rd person by default. But they enter the derivation as $\varnothing$, whose feature values are, via inheritance, those of the NP complement.

Following Uriagereka (1995), we assume that 3rd person ACs enter the derivation as the D (without a Person domain) of a null complement (see 25 above). When D takes an overt NP as its complement, it is used as an article. If its NP complement is covert, as in (25) above, it is used pronominally.

We adopt a movement analysis for the Romanian ACs; ACs are base-generated in post-verbal position. The antecedent, overt or null, is placed in the Specifier of a TopicP position, at the left periphery (for details, see Avram and Coene 2009)[13]. On such an analysis, all clitic constructions (single clitic, clitic doubling, clitic left dislocation structures) are treated in a uniform way (see also Delfitto 2002). This captures the uniform interpretive property of clitics across all the structures in which they are obligatory: they all have a D-linked antecedent.

5.3.3. Types of clitics and intervention effects

As we have said, 3rd person/Determiner-clitics, base-generated as heads of a DP, enter an Agree relation with a null NP. The D-clitic is a "copy" of the null NP, whose *phi*-features must be retrieved from a (clausal or discourse) antecedent. The antecedent may be an overt clause-mate (as in clitic left

dislocation or topicalization structures) or null, in which case it was mentioned in previous discourse. It is precisely this Agree (at a distance) operation which is argued to give rise to difficulties with Determiner-clitics. The feature Agree operation involves a chain which includes the antecedent and the null complement across the subject DP:

(30) $[_{FP}$ antecedent F $[_{IP}$ **DP$_i$** I $[_{VP}$ t_i V $[_{DP}$ D-*null NP*]]]]

As can be seen in (30), the null complement in post-verbal position must "recover" the features of its antecedent over possible "inheritable" *phi*-features, i.e. the *phi*-features of the DP subject: {person, gender, number}[14]. The difficulty arises when the *phi*-features in the intervening cluster are identical to those of the antecedent, as in (31) below:

(31) $[_{FP}$ (antecedent$_{\underline{\text{FEM SG}}}$) F $[_{IP}$ DP$_{\underline{\text{F EMSG}}}$ V-T/Agrs$_{3\text{rd sg}}$ $[_{VP}$ t_i V $[_{DP}$ D-*null NP*]]]

The structure in (31) has the flavour of Relativized Minimality configurations (Rizzi 1990), where a local relation between X and Y is disturbed when Z, a potential candidate for the local relation, intervenes. In this case, feature matching between X and Y is disturbed when Z, a feature cluster which is a potential "matcher", intervenes. In (31) the intervention (-like) effects of the *phi*-features of the subject DP may affect the Agree relation between the null complement and its antecedent, adding to the computational load. (see also Coene and Avram 2011). This is what makes 3rd person ACs difficult. And since their difficulty is associated with computational load, we expect clitic omission as well as agreement errors to be found with children, but also, occasionally, with adults. Our prediction is borne out by the data. As we saw, Romanian children omit 3rd person ACs and rare agreement errors are also attested. Occasional clitic omission or agreement errors are found with adults, especially when clitics are part of more complex structures.

As one reviewer points out, this proposal also makes the prediction that the clitic should not be omitted when the features of the intervening subject have values different from those of the antecedent. Indeed, according to our proposal, the feature make up of the configuration can give rise to stronger or weaker intervention effects. For example, one would expect a lower rate

of clitic omissions in configurations like the ones in (32) below, where the antecedent of the clitic and the intervening subject have a different feature make up (as in 32a) or different feature values (as in 32b):

(32) a. *(Pe Maria)* *o* *desenez eu.*
pe Maria fem sg clitic 3RD FEM SG ACC draw I
'Maria, I draw.'
b. *(Pe Maria)* *o* *desenează elevii*.
pe Maria fem sg clitic 3rd fem sg ACC draw students-the masc pl
'Maria, the students draw.'

On the other hand, one would expect a higher clitic omission rate in configurations like the one in (33) (which illustrates clitic omission in the B. corpus), where there is *identity of feature values* between the antecedent and the intervening subject:

(33) *că* *doare burta* *(pe Bianca)*
because hurts tummy-the fem sg *pe* Bianca fem sg
'Because Bianca has a tummy ache.' [B. 2;2,13]

This prediction, for obvious reasons, is difficult (if not impossible) to test against early longitudinal data. In the B. corpus, however, over a very short period of time (2;1-2;2), 1st person ACs are used instead of 3rd person ACs in clauses with a 1st person subject:

(34) Adult: *Ce-ai făcut cu cartea?*
'What have you done to the book?'
Child: ****M-*** *am pus la Kiki*.
clitic 1st sg ACC have put at Kiki
'I have put it on Kiki.' [B. 2;2,06]

This indicates that intervention effects may arise, during the early stages, even when the feature make up of the antecedent and of the intervening subject is different.

Data coming from experimental studies also show that this prediction is borne out. Avram and Coene (2010) discuss Accusative clitic production in Romanian in a task which elicited the use of 3rd person and 2nd person ACs. The results reveal a discrepancy between 2nd and 3rd person contexts: no omission was attested with 2nd person clitics. With 3rd person clitics the

omissions were attested only in constructions with a 3rd person subject, i.e. when there was feature value identity between the antecedent and the intervening subject:

(35) *Pentru că Vasile (l-)* *a lovit.*
because Vasile clitic 3rd masc sg ACC has hit
‘Because Vasile has hit him.’

Gender errors were attested when the features of the antecedent and of the intervening subject had the same make up (number, gender) but not the same values. In (36) below, the clitic does not spell out the gender feature of the antecedent, which is masculine, but the gender feature of the intervening subject, which is feminine:

(36) *Vasile rîde* *pentru că Anca* ****o** gîdilă*
Vasile masc is laughing because Anca fem **her** tickles
‘Vasile is laughing because Anca is tickling her.’

These results are also backed up by data coming from Italian and French. Tedeschi (2006, 2007) reports that Italian children (age 2;6–6;5) have problems linking the clitic to its antecedent in an elicitation task using a 3rd person subject: object clitics occasionally agree with the subject (instead of the object), which indicates that children treat the Accusative clitic as a sort of reflexive. Pîrvulescu and Belzil (2008) used an acting task with tangible objects in which they elicited ACs in structures with the 2nd person *tu* ‘you’ instead of 3rd person in subject position. The 3-5 year old French children who participated in this task used the clitic almost 100%, while in a task using a 3rd person subject children omitted the clitic 30-50%.

Summing up, we argue that what makes 3rd person ACs difficult is the fact they are part of a feature Agree chain which can be affected by feature intervention (see also Friedmann, Belletti and Rizzi 2009, Adani, van der Lely, Forgiarini and Guasti 2009, where intervention effects are argued to be the main reason of the delay in the acquisition of (some) direct object relative clauses or Guasti, Arosio and Branchini 2008, for the role of intervention in the acquisition of *wh*-questions).

1st/2nd person ACs, on the other hand, enter the derivation specified for Person and they are licensed by an operator in the C-domain (Sigurðsson 2005), or via licensing by functional projections in one or several Person fields, as suggested by Bianchi (2006) or Ciucivara (2009). There are no

feature interveners between a 1st/2nd person clitic and their C-domain operator.

5.3.4. Types of clitics and movement

One further important difference between the two types of ACs is related to movement. As already stated, we are adopting a movement analysis of clitics for Romanian, according to which ACs are base-generated in post-verbal position and surface in the left-periphery of the clause. According to Uriagereka (1995:93), the person deficiency of clitics motivates their movement to a projection in the C-domain, which he calls F, a projection higher than IP, which allows attribution of reference, i.e. a projection where they are referentially indexed. The associated null complement can only be licensed if the clitic is assigned referentiality in FP. But, if what drives movement to FP is referentiality, i.e. deficiency with respect to Person, Uriagereka's analysis implies that only 3rd person ACs move there for referentiality reasons. Since 1st/2nd ACs are specified for Person, an interpretable feature on DPs on minimalist assumptions, the motivation of movement to FP, attribution of reference, can no longer apply. Uriagereka proposes that these clitics move as phrases via adjunction scrambling (p. 114) to FP or another projection (the adjunction site being subject to cross-linguistic variation).

Romanian ACs have been analysed as markers of topicality and d-linking (Avram and Coene 2009, for example, argue that they are markers of d-linked topicality); their movement to the left-periphery is associated with information structure effects. If one follows Uriagereka's proposal, one could say that 3rd person ACs move for referentiality reasons and, possibly, also in order to check a topic feature[15]. 1st/2nd person ACs, on the other hand, are not referentially deficient. They move exclusively to check a topic feature. What both structures have in common is the interpretive effect of movement. One reviewer asks whether it is not precisely this added interpretive feature, more obvious in clitic left dislocation and in clitic doubling constructions, which makes clitics difficult to acquire, and not the intervention effect of the features of the subject. However, there is cross-linguistic evidence that children are sensitive to information structure properties at a very early stage (de Cat 2002). In Romanian as well displaced topics are attested early (Avram and Coene 2006). Chomsky (2000: 120–121) mentions two types of interpretive principles: (i) what he

calls deep interpretive principles, which include action-event structure or predicate-argument relations and (ii) interpretive principles which are discourse-oriented, such as topic-comment, new-old information, focus. The former can also be found in language-like systems, but the latter are claimed to be specific to human language. It comes as no surprise that children show sensitivity to these principles at a very early age. In answer to the question we started from, we would say that rather than being a source of difficulty, the interpretive property of clitic constructions may actually have a bootstrapping effect, leading to the early acquisition of ACs.

The intervention effect account also receives support from the analysis of clitics in structures with an overt antecedent, where retrieval of the *phi*-features of the antecedent is easier. Though the number of such clitic structures in the examined longitudinal data is very low, one can notice, nevertheless, that the production rate is higher than in single clitic constructions with a covert antecedent: 76% in the B. corpus, 83.7% in the I. corpus, and 78% in the A. corpus.

Summing up, we propose that the developmental asymmetry between $1^{st}/2^{nd}$ person ACs and 3^{rd} person ACs can be accounted for in terms of the different categorial status of the two types of ACs. 3^{rd} person ACs are D-pronouns, with the feature make-up of determiners, whereas the other ACs are Person Phrases. This suggests that the reason for which one finds an asymmetry in their acquisition is rooted in their different feature make up reflected in their syntactic properties. One should mention at this point that the analysis of ACs which we are proposing may be both language specific and type of clitic specific. For example, no such asymmetry need exist with DCs, which are always referential, usually human and definite (Farkas 1978). The fact that the asymmetry can be accounted for in terms of morphological make up allows for cross-linguistic variation.

5.4. No $1^{st}/2^{nd}$ vs. 3^{rd} person clitic asymmetry with DCs

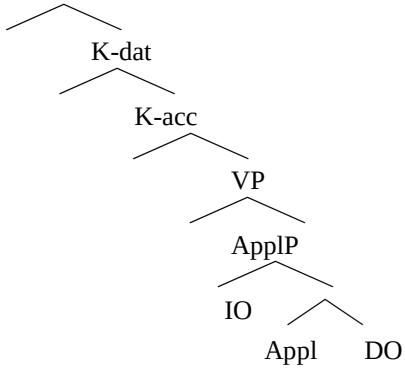
The investigation of our longitudinal data reveals that there is significant $1^{st}/2^{nd}$ person vs. 3^{rd} person clitic asymmetry with ACs but not with DCs. We propose that this difference is due to the fact that in Romanian DCs have the same feature make-up as $1^{st}/2^{nd}$ person ACs. In particular, they are not specified for gender, not even with 3^{rd} person, i.e. they do not have the *phi*-features of non-pronominal DPs. 3^{rd} person DCs are prototypically

associated with a [+animate] [+affected] feature[16], unlike their accusative counterpart. This indicates that DCs are uniformly pronominals; there is no Determiner-pronoun (with deficient referentiality) vs. pronominal distinction within this clitic class.

We found one difference, though, between the acquisition of ACs and DCs in two corpora: DCs were the only ones which were substituted. Both B. and I. make case substitution errors; they use ACs in DC contexts. But they only do it with 1st and 2nd person clitics. We propose that the case errors which were found can be accounted for in terms of movement.

Ciucivara (2009) also adopts a movement analysis of clitics; she argues that Romanian dative and accusative clitics are base-generated in post-verbal position, as in (38) below; the indirect object (IO) is generated above the direct object (DO) in the Specifier of a light applicative verb. Both the IO and the DO clitic undergo movement to a Kase field and a Person field in the functional domain. What is relevant for our discussion is the fact that clitics move to a Kase field in which Dative case is assigned in a projection higher than the one where Accusative case is assigned:

(38)



According to Ciucivara (2009), a Dative clitic (an IO) moves to K-dat after the DO has moved to K-acc. We propose that if the K-acc position, closer to the applicative VP, has not been taken by an AC, the child will opt for shortest Move: the IO will move only as high as K-acc. This will result in a case substitution error: an AC instead of a DC. The fact that case substitution can be accounted for in terms of shortest Move finds support in the lack of case errors in clitic clusters, where the K-acc position has already been 'taken' by the AC, forcing the DC to move to the higher available case assigning position.

Importantly, we found case substitution errors only with 1st/2nd person DCs, most probable because they have the same status (i.e. they are pronominal clitics) and the same feature make-up (in particular, they are specified for Person) as 1st/2nd person ACs. Third person ACs are actually Determiner-pronouns.

5.5. RCs vs. DCs vs. ACs

In child Romanian, RCc are used adult-like shortly after emergence. The omission rate is lower than the one of DCs and ACs. It has been argued in the literature that RC constructions cannot be analysed on a par with non-reflexives; the derivation of reflexive structures differs from the standard derivation of transitive structures in more than one respect. Dobrovie-Sorin (1998), for example, argues that reflexives are base-generated in pre-verbal position, from where they can feature match with the subject DP. On such an analysis, RCs do not involve movement and there are no intervention effects of potential identical feature clusters. Reflexivity *is* feature identity. If both movement and feature intervention effects are computationally costly, this might explain why RCs are acquired faster as well as why there is no 1st/2nd vs. 3rd person developmental asymmetry in their case.

6. Conclusions

We investigated the acquisition of reflexive and non-reflexive object clitics in Romanian, on the basis of longitudinal data. The analysis revealed a difference between 1st/2nd person ACs and 3rd person ACs only with respect to non-reflexive ACs: 3rd person ACs emerge slightly later but are not target-like from the very beginning. In spite of very early emergence, they continue to be omitted at a stage when 1st/2nd ACs are used in an adult-like manner. The production rate of 1st/2nd person ACs is significantly higher than the one of 3rd person ACs. No such person asymmetry has been found in the case of DCs or RCs.

We argued that the observed facts can be accounted for in terms of a distinction among the various types of clitics depending on their specification of person, number and gender, reflected in their categorial status, in conjunction with an approach to feature intervention effects rooted in Rizzi's Relativized Minimality (1990). Third person ACs were

argued to be the only object clitics which are Determiner pronouns; they are not inherently specified for person, and they inherit the number and gender features of the antecedent. Since they are base-generated in post-verbal position as the D of a null direct object, the Agree relation between this null object and its antecedent "crosses" over the intervening *phi*-features of the subject DP. This increases the computational complexity of those configurations where there is identity between the *phi*-features of the antecedent and those of the intervening DP subject.

No feature intervention effects arise with clitics other than 3rd person ACs. 1st/2nd ACs and all DCs were argued to be pronominal and they were analyzed as Person Phrases/DPs, licensed by an operator in the C-domain, like any deictic category. For RCs we adopted an analysis according to which they are generated in pre-verbal position from where they feature match with the subject DP.

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Notes

1. The I. corpus was recorded and transcribed by Ioana Stoicescu, University of Bucharest, whom we thank for generously sharing her data with us.
2. One reviewer recommends that the data should also be analyzed according to the type of construction in which the clitic is attested: with an overt clause-mate antecedent, as in clitic left dislocation and clitic doubling structures, or with a null clause-mate antecedent, as in single clitic constructions. Though this might indeed open the path to important findings in relation to the potential difficulties according to type of clitic construction, the goal of the present study is to investigate a potential person asymmetry in the acquisition of clitics, irrespective of the type of structure in which the clitic is used. Besides, a uniform analysis of ACs might be desirable both from a descriptive (see also Sportiche 1996, Delfitto 2002) and from an explanatory point of view. In terms of description, a unifying analysis would have the advantage of identifying what clitics have in common, irrespective of the type of structure in which they occur. From the point of view of acquisition, identifying the "obligatory clitic context" might lead to the identification of what the child

has to "see" in the input in order to be able to acquire ACs. But we took the reviewer's suggestion into account and counted the clitics in structures with an overt clause-mate associate separately. The analysis is, unfortunately, less relevant for the person asymmetry under discussion, due to the low number of ACs attested in such structures. The attested ACs in the three corpora appear mainly in single clitic constructions. For example, in the B. corpus, in the files analysed for the present study, only 11.9% of the attested ACs are in clitic left dislocation and clitic doubling structures; as expected, they are mostly 3rd person clitics. This seems to weaken the strength of the analysis from the point of view of the person asymmetry. These data have been used in the qualitative analysis (see section 4.3).

3. Because of this methodology, the data reported in this paper for the A. and the B. corpus may differ from what was presented in previous studies (Avram and Coene 2006, 2007).
4. One reviewer asks why accusative reflexives and non-reflexives have been treated as different classes. Besides the standard differences between these two types of pronominals, such as binding, for example, one important difference is related to optionality. In Romanian, only 3rd person non-reflexive ACs are optional; reflexive clitics are always obligatory. Optionality has been argued to be a potential important factor in acquisition. Also, Romanian 3rd person accusative reflexives are, unlike their non-reflexive counterpart, neutral with respect to number (behaving in this respect as well as reflexives in other Romance languages). If one takes morphological make-up to have consequences for syntactic behavior, this difference might turn out to be relevant for the developmental path of clitics. The same reviewer also suggests reflexives in unaccusative structures should be excluded from the analysis because they carry aspectual features, unlike the other reflexives. However, treating reflexives as aspectual markers or identifying different classes of reflexive clitics on the basis of aspectual features is not uncontroversial. Moreover, for the purpose of the present study, the relevant property, which is shared by all the reflexives which we took into account in the analysis, is the nature of the relation between the clitic and the subject of the sentence. Zesiger et al. (2010), for example, propose that reflexives differ from non-reflexives in that they do not give rise to crossing chains, as in non-reflexive constructions, where the object chain crosses the subject chain. Reflexive clitic constructions contain nested chains of subjects and objects.
5. During the period 2;0,03–2;0,21 the only clitic used is the feminine clitic *o* 'her', placed in post-verbal position, irrespective of the gender feature of the antecedent. It is at 2;1 that ACs other than *o* 'her' are attested.
6. At the time when we analyzed the data, we had no access to the recordings of child I. for the period 2;3–2;8.

7 . There is no similar stage attested in the I. corpus.

8. There is one single 1st person plural AC found in the examined files in the B. corpus. This is why the data only compare the use of 1st/2nd AC vs. 3rd person AC in the singular. However, this does not mean that the plural form with 1st/2nd person is absent from the child's grammar; plural forms other than 3rd person are attested in RC contexts, and they are homophonous with the Accusative non-reflexive form.

9. The same analysis is assigned to French clitics, uniformly, by Déchaine and Wiltschko (2002).

10 This projection could be argued to encode individuation, i.e. features which are independent of the discourse (Bianchi 2006).

11. Lexical DPs cannot be 1st or 2nd person (Baker 2008).

12. The only exception is that of the 3rd person feminine singular AC which is identical in form to the indefinite article.

13. Our analysis departs here from the one in Uriagereka (1995) or from the "big DP analysis" where the double is placed in the Specifier of the DP.

14. The intervention effects are not affected by the position in which the subject surfaces (pre- or post-verbally) since the Agree relation is between the antecedent in SpecTopP and the null NP in post-verbal position, before the D-clitic moves to the left-periphery, i.e. it is always across the intervening subject. If the subject is null, i.e. *pro*, it still has *phi*-features and it will also count as an intervener.

15. One reviewer mentions that clitic doubling constructions in Romance languages may involve a focus interpretation (as argued, for example, by Isac 2003 for Romanian), while clitic left dislocation is associated with a topic interpretation. However, as shown by Dobrovie-Sorin (1994), Cornilescu (2001, 2002), Alboiu (2000), Isac (2003), in Romanian clitic left dislocation structures can be associated both with a topic and a focus interpretation. What requires the use of the clitic is not a topic or a focus feature, but the d-linked property of the direct object whose *phi*-features the clitic spells out (Avram and Coene 2009). Since Romanian is a focus *in situ* language (Cornilescu 2001), (contrastive) focus can be expressed in any syntactic position, provided it receives appropriate stress; the double of a clitic, in a clitic doubling construction, can but need not be associated with focus. In Romanian, the DPs in the Topic Phrase can have interpretations ranging from topic, to links and informational focus (Cornilescu 2001, 2002).

16. A reviewer draws our attention that in some constructions 3rd person DCs can have a [-animate] associate, as in part-whole constructions like:

    (i) *I-* *am rupt piciorul (mesei).*
    clitic DAT 3RD SG. have broken leg.the (table.the DAT)
    'I have broken the leg of the table.'

This is indeed the case. As mentioned in the text, we take the prototypical DC to be associated with both animacy and affectedness. In constructions like the one in (i), it might be the affectedness feature, in conjunction with the part-whole (possession) interpretation, which allows the use of a DC. It seems that a DC can be more freely used in such constructions if the indirect object is interpreted as affected. When the indirect object cannot be interpreted as affected, some adjustment of the context may be needed. Compare (i) above to:

(ii)? *I-* *am privit piciorul (mesei).*
clitic DAT 3RD SG have looked leg.the (table.the DAT)
'I looked at the leg of the table.'

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