CHAPTER SIX

EFFECTS OF DP POSITION ON THE RESIDUAL OMISSION OF DETERMINERS IN ITALIAN L1: A CASE STUDY

IDA FERRARI AND SIMONA MATTEINI

1. Introduction¹

Our work explores the phenomenon of early determiner omission in the spontaneous production of one Italian monolingual child. The topic of article dropping has been extensively investigated in the literature on language acquisition. Previous studies all converge in identifying a period during which children acquiring a language with articles omit determiners in contexts obligatorily requiring them. Several hypotheses have been formulated in order to account for D omission in L1 acquisition. Chierchia et al. (1999) and Guasti et al. (2004) explain the phenomena assuming that the syntax of nouns is governed by the "Nominal Mapping Parameter" (Chierchia 1998) according to which there are three types of languages. In Romance languages, nouns are mapped into Pred and to turn them into arguments, D must be projected and generally filled with an article. In Chinese type languages, nouns are mapped into Arg, thus no article is needed and bare nominals can be used in all argument positions. In the third type (Germanic languages), nouns can be either mapped into Pred or into Arg, a choice that is lexically determined. According to the above mentioned authors, all children first set the "Chinese" option: determiners are thus totally absent from their productions. Then, children run into the "free-variation" phase. This phase shows cross-linguistic variation; children speaking Romance languages attaining earlier target performance than those speaking Germanic ones. Romance shorter free-variation phase is due to the exposure to a full definite-indefinite/singular-plural paradigm of articles, hence children quickly discover that the "German" setting is not target consistent. The fact that children speaking a Germanic language omit articles to a greater extent and for longer than children speaking a Romance language can be attributed to the German setting of the Nominal Mapping Parameter: it has a lexical component and children have to decide noun by noun if it is mapped into Pred or Arg. This decision may take some time.

Other groups of studies have stressed the role played either by prosodic constraints (Gerken 1991 for English L1; Crisma and Tomasutti 2000, Giusti & Gozzi 2006 for Italian L1 a.o.) or by syntactic constraints on early article omission (De Lange et al. 2006 for Dutch and Italian, Caprin & Yoghà 2006 for Italian a.o.). The former group of studies highlights a strict correlation between the prosodic properties of the element preceding and/or following the determiner and article omissions. whereas in the latter group, the focus is mostly on the role played by noun placement. In particular, sentence initial position appears to be more sensitive to determiner omission than if the position is sentence internal. Furthermore, a subject/object asymmetry for the omission of determiner has been reported; children omit more determiners in sentence initial subjects than in sentence internal objects (De Lange et al. 2006; Caprin & Yoghà 2006). Moreover, other studies reveal that once a First Position Effect on determiner omissions is excluded, a subject/object asymmetry remains, but individual variation on the highest rate of omissions in subject/object position is attested (Baauw et al. 2005).

In our work we take into consideration semantic/syntactic properties of nominals (as for instance, number, gender, mass/count distinction) that are crucial for the licensing of determiners in Italian. Overall, the findings suggest that the interaction of syntactic as well as extra-syntactic factors may play a role in early determiner omission². As a matter of fact, an interesting selectivity emerges as far as the non-target patterns are concerned: items involved in the "high" DP structures seem to play a crucial role in defining the conditions under which determiners are dropped in the grammar of the child, thus suggesting that, during the period analyzed, the omission of D is more related to the structural configuration in which nominals occur rather than to other properties of Ns. More generally, we conclude that the DP structure seems to be present from early on in the child under investigation (as also proposed by Giusti & Gozzi, 2006 and by Pannemann & Weerman, 2006 a.o.); we thus speculate that the non-target patterns observed in Sabrina's production are mostly driven by the "Structural Economy Principle" (Rizzi, 1998) rather than reflecting a non-adult DP structure.

The paper is organized as follows: section 2 contains a brief overview of the morphosyntactic properties of articles in Italian; in section 3, we

present the corpus, the criteria adopted for the identification of the utterances relevant to our analysis and the data collected; section 4 is devoted to detailed analyses of the different contexts sensitive to determiner omission and to the development of explanatory proposals for the non-target patterns. In section 5 we conclude the paper with a general discussion of the findings.

2. (Morpho)syntactic properties of the article system in Italian

Italian has a full paradigm of definite and indefinite articles which vary according to gender and number. Furthermore, there are also some allophonic variants of definite and indefinite masculine articles (lo, gli, uno) as well as a reduced form for the definite singular feminine la and masculine lo (both reduced to l^{3}).

With regard to the distribution of determiners, the pattern is quite complex. In general terms, singular count nouns in argumental positions require a determiner:

- (1) Leggo [* (un) libro]_{Obj}
 'I read a book'
- (2) [*(Il) ragazzo]_{Subj} è italiano 'The boy is Italian'
- (3) Vado in vacanza [PP con [*(un) amico]Prepositional Obj] 'I go on holiday with a friend of mine'

Bare plurals are allowed as object of a transitive verb (4), and object of a preposition (5). They encode a non-specific (generic) reading:

- (4) Leggo [libri]_{Obj} 'I read books'
- (5) Vado in vacanza [PP con [amici]Prepositional Obj] 'I go on holiday with friends'

The same does not hold true for the preverbal subject position where a bare plural is ungrammatical. In contrast, bare plurals are grammatical as postverbal subjects with, for example, unaccusative verbs (Longobardi, 2000). Examples (6) and (7) illustrate the contrast:

- (6) [*(I) ragazzi]_{Subj} sono italiani 'The boys are Italian'
- (7) Arrivano [(i) ragazzi] _{Subj} italiani 'Italian boys are arriving'

As for mass nouns, they may be licensed as bare nominals in postverbal subject positions (8) and object positions (9)a-b. They receive a non-specific (partitive) reading:

- (8) Viene acqua giù dal tetto 'Water comes down the roof'
- (9) **a** Bevo [(il) vino]_{Obj} tutti i giorni 'I drink wine every day'
 - **b** Bevo whiskey [PP con [ghiaccio] Prepositional Obj] 'I drink whiskey with ice'

As for the predicative position, only mass nouns and plurals may occur without the determiner⁴:

- (10) Questo è [vino]_{Predicative Nominal}
 'This is wine'
- (11) Questi sono [libri]_{Predicative Nominal}
 'These are books'

Finally, let us conclude this overview on the morphosyntax of the determiner system in Italian focusing on the distribution of articles with proper names and possessive constructions. While the former is subject to dialectal variation, the latter affects all common nouns (count and mass nouns) preceded by a possessive pronoun, regardless of number and gender. Only singular kinship terms introduced by possessive pronouns may be used as bare nominals:

- (12) Cerco la mia borsa_{fm.sg}/i miei libri_{ms.pl}/il mio vino 'I am looking for my bag/my books/my wine'
- (13) Vedo tutti i giorni mia sorella / *(le) mie sorelle 'I see my sister/sisters every day'

Summing up, the distribution of determiners in Italian suggests that different properties of the nominals play a role in determining the condition under which articles are obligatory in standard Italian: (i) the distinction singular vs. plural; (ii) the distinction mass vs. count nouns; (iii) the syntactic configuration. In our research we address the question whether and how such properties of nominals may interact with early determiner omission in Italian L1.

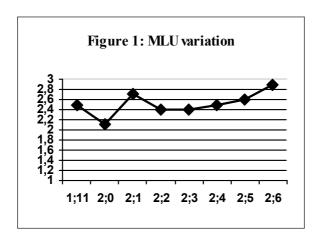
3. The data

3.1 The Corpus and the criteria for the identification of the relevant utterances

We base our study on the analysis of an original corpus consisting of 11 recordings of Sabrina, a female Italian monolingual child living in Tuscany (Italy). The corpus was transcribed in CHAT format following the CHILDES criteria and successively double-checked. Table 1 and Figure 1 show the MLU and the MLU variation during the period analyzed⁵.

Table 6-1

Age	MLU
1;11	2,5
2;0	2,1
2;1	2,7
2;2	2,4
2;3	2,4
2;4	2,5
2;5	2,6
2;6	2,9
Average MLU	2,51



As can be observed, Sabrina's MLU is high from the first recording. Nevertheless, we identified a difference between a first period (1;11-2;2) during which the MLU fluctuates considerably and a second period (2;3-2;6) during which the MLU variation steadily increases.

Concerning the criteria adopted for the identification of the relevant utterances for our analysis, we took as "determiners" definite/indefinite articles and their early manifestations as protosyntactic devices (henceforth PSD)⁶. As PSD, we considered the indistinct vocalic morphemes produced by the child in front of nominals which can be taken as morphophonological placeholders according to Bottari et al. (1993/94)⁷. On the basis of the morphosyntactic properties outlined in section 2, we considered for our analysis count and mass nouns in argumental/predicative position when they obligatorily require a determiner. As argumental positions we included subject/objects of verbs, prepositional objects, nominals produced in isolation as answers to questions about the subject/object of the event. The utterances are exemplified in (14):

(14) **a** CHI: c' è farfallina⁸. there is _ small butterfly 'There is a small butterfly.'

> b CHI: metti a potto libetto? put away _ small book? 'Can you put away the small book?'

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c CHI: dai sapone?
give _ soap?
'Can you give me the soap?'

d CHI: con matello [martello].
with _ hammer
'with the hammer.'

e INV: chi arriva?
'Who is coming?'

CHI: principe
_ prince
'the prince.'

f INV: allora # che disegnamo?
'What should we draw now?'

CHI: pinguino.
_ penguin
'A penguin.'
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As predicative position we included singular count nouns in copular constructions:

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(15) CHI: questa è treno.
this is _ train
'This is the train.'
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(16) INV: guarda un po' # chi è questo qui? 'Look! Who is this?'

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CHI: drago.
__dragon
'A dragon.'
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Crucially, we included in our analysis also mass nouns with a "specific" reading, as they require a determiner in Italian, as, for example, in possessive constructions:

(17) CHI: Questo è il latte mio!

This is the milk my
'This is my milk!'

We excluded all the contexts not requiring a determiner, such as (i) mass nouns and bare plurals with a "non specific" reading in argumental or predicative position; (ii) proper names/kinship terms, since they do not require a determiner in the variety of Italian spoken by the child⁹, (iii) all combinations of nominals and prepositions not requiring a determiner in Italian such as, for example, *andare a casa* (to go home). Relevant examples are given in (18) and (19).

(18) **a** CHI: questo è ciaccino! 'This is (a) bun'

b CHI: vuole mangiare sassolini. want_{3rd.prs.sing} to eat small pebbles 'He wants to eat small pebbles'

c CHI: quelle so' [=? sono] candele. 'Those are candles!'

(19) **a** CHI: dov'è mamma? 'Where is mummy?'

b CHI: dov'è zia Simona? 'Where is aunt Simona'

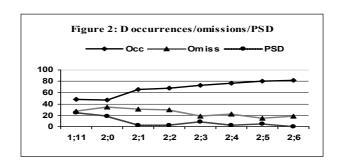
Finally, we excluded: (a) idiomatic expressions and routine sentences containing a nominal; (b) unclear sentences, (c) immediately adjacent complete repetitions of the child's own utterances, (d) corrected initial errors.

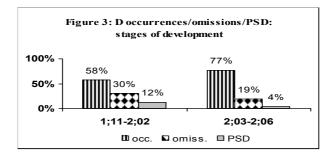
3.2 General observations on the acquisition of determiners in Sabrina

On the basis of the criteria just outlined, we isolated 661 contexts which required a determiner in Sabrina's corpus. In these utterances, the rate of D omissions/occurrences/PSDs were calculated. Table 2 and Figure 2 illustrate the pattern we observed:

Table 6-2: D occurrences/omissions/PSD

Age	Occ	Omiss	PSD
1;11	(49/101)	(27/101)	(25/101)
	48%	27%	25%
2;0	(23/49)	(17/49)	(9/49)
	47%	35%	18%
2;1	(76/114)	(35/114)	(3/114)
	66%	31%	3%
2;2	(55/81)	(24/81)	(2/81)
	68%	30%	2%
2;3	(69/95)	(17/95)	(9/95)
	73%	18%	9%
2;4	(82/108)	(24/108)	(2/108)
	76%	22%	2%
2;5	(44/55)	(8/55)	(3/55)
	80%	15%	5%
2;6	(47/58)	(11/58)	(0/58)
	81%	19%	0%
Total	(445/661)	(163/661)	(53/661)
	67%	25%	8%





Overall, determiner omission ranges between a highest rate of 35% (2;0) and a lowest rate of 15% (2;5), and it follows a developmental path during the period analyzed. As suggested by Figure 2, production of PSD and D omission are noticeable phenomena in the first two recordings. Starting from (2;1) the former strategy drastically decreases, while the latter option decreases steadily. As for D occurrences, they increase gradually from 48% (1;11) to 81% (2;6).

Considering the decrease of D omission, we identified two stages of development: in the first stage (1;11-2;02) the average rate of D omission is about 30% whereas from 2;03 to 2;06 it is attested at about 19% (Figure 3). The analysis shows that since 1;11, D omission is not a predominant strategy for the child under investigation, hence we refer to it as a residual phenomenon¹⁰.

4. Sensitive Contexts for D Omission

In order to identify to which aspect the omission of D may be related, we verified the correlation between the omission of determiners and the following properties of nominals: gender, number, mass distinction. Furthermore, we also considered the position occupied by nominals in the sentence and their functions. Attention has also been paid to the configurations in which nominals are modified by functional/lexical elements (i.e. possessive pronouns and the quantifier *tutto*).

4.1 D omission with [+/- Mass] DPs

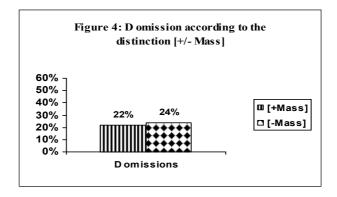
As for the distinction [+/- Mass], the percentage of article omission with [+ Mass] nominals (22% - 13/58) is similar to the one of [-Mass] nominals (24% - 145/603). The difference between the two groups is statistically not significant (Fisher's E. P-Value = 0.87)¹¹.

Table 3 and Figure 4 illustrate the low percentage of D omission with respect to D occurrences in both groups of nominals. This fact suggests that, at this stage of acquisition, the [+/- Mass] distinction does not seem to play a crucial role in the phenomenon under investigation. In fact, the child seems to master the fact that bare mass nouns are grammatical only in specific contexts in Italian, such as copular constructions and object position with a non specific reading (CHI: *E' brodino!* – This is broth! CHI: *Mangio pollo.* – I eat chicken.).

Table 6-3: D omission according to the distinction [+/- Mass]

	D Omissions	D Occurrences		
+ Mass	(13/58)	(45/58)		
	22%	78%		
- Mass (145/603)		(458/603)		
24% 76%				
p = 0.87				

(20) a CHI: c'ho moccico. 'I have snot.'	[+ Mass]
b CHI: pulisci pavimento! 'Clean the floor!'	[- Mass]



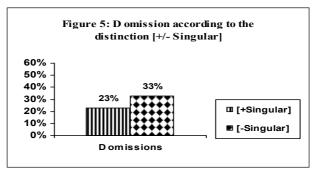
4.2 D omission with [+/- Singular] DPs

Turning to the [+/-Singular] distinction, Table 4 and Figure 5 show a slightly higher percentage of D omissions within [- Singular] contexts. Determiner omission is attested at 33% (27/83) with plural nominals ¹² and at 23% (132/578) with singular ones. This difference is statistically near to the significant threshold (Fisher's E. P-Value = 0,07).

Table 6-4: D omission according to the distinction [+/- Singular]

	D Omissions	D Occurrences
+ Singular	(132/578)	(446/578)
_	23%	77%
- Singular	(27/83)	(56/83)
	33%	67%
p = 0.07		

(21) a CHI: guarda squalo! 'Look at the shark!'	[+Sing.]
b CHI: pulisci tende! 'Clean the curtains!'	[- Sing.]

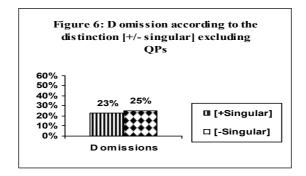


Contrary to the tendency which emerged within [+/- Mass] nominals, the [+/- Singular] distinction seems to play a role in early determiner omission. However, a further analysis of the data reveals that the rate of D omissions in plural contexts is higher only in the configuration in which the nominals are introduced by the quantifier *tutti/e* as in CHI: *Ho macchiato tutte* *(*le*) *paperine* – I soiled all ducks. [QP+D+N: + Sing 25% (1/4) vs – Sing. 90% (9/10)]. Once the nominals introduced by QPs are

excluded from the count, the difference between the rate of D omissions with singular nominals (23% - 131/574) and the one with plurals (25% - 18/73) is statistically not significant (p= 0,76) as illustrated in Table 5 and Figure 6.

Table 6-5: D omissions and occurrences according to +/-Singular distinction of Ns, excluding OPs.

	D Omissions	D Occurrences	
+ Singular	(131/574)	(443/574)	
	23%	77%	
- Singular	(18/73)	(55/73)	
25% 75%			
p = 0.76			



This fact is particularly interesting in that it suggests how article omission may correlate more with DP placement rather than with intrinsic properties of nominals (i.e. number). We will address this issue more in details in section 4.6

4.3 D omission with Feminine/Masculine DPs

As for gender, we observe that the determiner is omitted 26% (100/381) with masculine nouns and 20% (56/280) with feminine ones. This difference is tending towards significance (Fisher's E. P-Value = 0,06).

Table 6-6: D omission according to Gender distinction

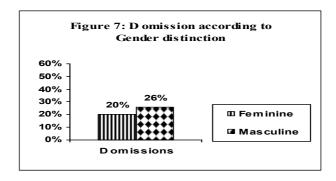
	D Omissions	D Occurrences
Feminine	(56/280)	(224/280)
	20%	80%
Masculine	(100/381)	(281/381)
	26%	74%
p =0,06		

(22) a CHI: aspetta sposa. [Fem.]

'He is waiting for the bride.'

b CHI: dov'è tappeto? [Masc.]

'Where is the carpet?'



This result is not unexpected. Taking into consideration the Italian article paradigm, two facts may account for this finding: (i) only the masculine article shows allomorphic variants in Italian; (ii) the definite masculine singular article il and the definite masculine plural article gli are more complex from a phonetic and a phonological point of view. Hence, the child may be induced to omit determiners more frequently with masculine nouns than with feminine ones.

4.4 DPs placement and D omission

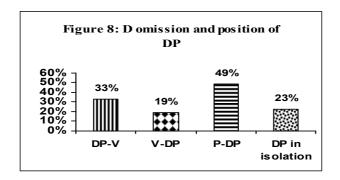
In order to verify a possible correlation between article omissions and the position occupied by DPs in the sentence, four contexts were analyzed: (i) DP-V; (ii) V-DP; (iii) P-DP¹³; (iv) DP in isolation.

As for (i), we considered all DPs preceding a verb. In this pattern we included preverbal subjects, preposed objects and preposed predicative nominals of copular constructions¹⁴. As for (ii), we included all DPs following a verb as post-verbal subjects, post-verbal objects and post-verbal predicative nominals. In (iii) we considered all DPs following a monosyllabic preposition, also when the latter had been omitted. Finally, the pattern in (iv) includes: (a) subject and object DPs uttered in isolation as answers to questions about the subject/object of the action; (b) predicative nominals uttered in isolation as answer to questions.

As it emerges from the data analysis reported in Table 7 and Figure 8 below, the position occupied by nominals in the sentence seems to play a crucial role in D omission.

	•	
	D Omissions	D Occurrences
DP-V	(3/9)	(6/9)
	33%	67%
V-DP	(67/356)	(289/356)
	19%	81%
P-DP	(42/85)	(43/85)
	49%	51%
DP in	(49/211)	(162/211)
isolation	23%	77%

Table 6-7: D omission and position of DP



Indeed, the highest rates of D omission are attested in the contexts P-DP 49% (42/85) and DP-V 33% (3/9)¹⁵, whereas it is considerably lower in the contexts V-DP 19% (67/356), and DP in isolation 23% (49/211). The data show that the most sensitive pattern to D omissions is the prepositional context. A significant difference emerges comparing the P-

DP values and those of V-DP and DP in isolation respectively (Fisher's E. P-Value < 0,0001 in both cases). In contrast, we do not observe a statistically significant difference comparing the V-DP values with the DP in isolation values (Fisher's E. P-Value = 0,23).

The most striking result prompted by these data is that the residual phenomenon of D omission observed in Sabrina seems to be related more to the position occupied by DPs, rather than to other properties of nominals (gender, number, [+/- Mass] distinction)¹⁶. In particular, the study so far identifies PPs structures as a source of difficulty in determiner provision by the child. This aspect has received little attention in the literature. In fact, few studies on language acquisition have focused on D omission in PP contexts. As for Italian L1, Antelmi (1997) has observed that determiners were often omitted when nominals are introduced by a preposition. However, the author does not provide quantitative analysis of the phenomenon. In Leonini (2006), the same tendency has been observed in the acquisition of Italian L2 by German learners (both in an elicited task and in spontaneous production). In the following two sections we will focus on determiner omissions in prepositional contexts and we will formulate some explanatory proposals for the non-target patterns produced by the child.

4.5 Focus on prepositional contexts: a vulnerable domain for D insertion

This section is devoted to the analysis of the child's production of prepositional phrases requiring a determiner as well as to the discussion of some proposals for the non-target patterns observed.

For our analysis, only monosyllabic prepositions were considered¹⁷ and 85 PPs obligatorily requiring a determiner out of 226 PPs were identified¹⁸ in Sabrina's production.

Focusing on these contexts, it emerges that, besides the target form $[P+D+N]^{19}$, three non-target patterns are produced by the child: (a) both the preposition and the determiner are omitted $*[P_D+N]$; (b) only the determiner is omitted $*[P_D+N]$; (c) only the preposition is omitted *[P+D+N]. The relevant patterns are exemplified from (23) to (26):

Target form [P+D+N]
(23) CHI: nella foretta!
'in the forest'

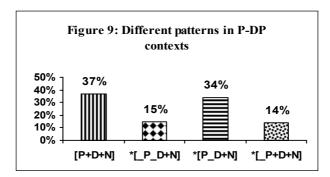
Non-target form *[_P_D + N]
(24) CHI: mette cassettino!
 put _ drawer
 'Put it into the drawer'

Non-target form *[P_D+N]
(25) CHI: con principe.
with _ prince
'with the prince'

Non-target form *[_P+D+N]
(26) CHI: paura la matigna!
fear _ the stepmother
'I am afraid of the stepmother'

Table 6-8: Different Patterns in P-DP contexts

[P+D+N]	*[_P_D+N]	*[P_D+N]	*[_P+D+N]
(31/85)	(13/85)	(29/85)	(12/85)
37%	15%	34%	14%



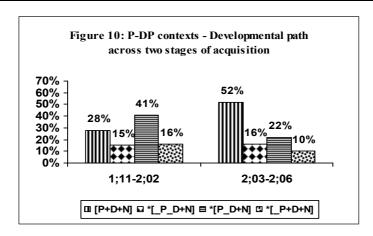
As exemplified in Table 8 and in Figure 9, [P + D] contexts are rather problematic for the child as far as D insertion is concerned. Thus the child resorts to the non-target pattern *[P D+N] to a greater extent (34%).

The non-target patterns involving dropping of the preposition $*[_P+D+N]$ or dropping of both the preposition and the article $*[_P_D+N]$ are less attested. Moreover, a developmental path for the pattern $*[P_D+N]$ is found. In fact, if we consider the two stages of acquisition outlined in section 3.2, the data show an opposite tendency between the

target form [P+D+N] and the *[P_D+N] pattern. The former is attested at 28% in the first period and at 52% in the second one. The latter decreases from 41% in the first stage to 22% in the second one. Table 9 and Figure 10 exemplify the contrast.

Table 6-9: P-DP contexts – Developmental path across two stages of acquisition

	[P+D+N]	*[_P_D+N]	*[P_D+N]	*[_P+D+N]
1;11-2;02	(15/54)	(8/54)	(22/54)	(9/54)
	28%	15%	41%	16%
2;03-2;06	(16/31)	(5/31)	(7/31)	(3/31)
	52%	16%	22%	10%



On the basis of these findings, we propose that two interacting factors may contribute to make the PP context a vulnerable domain for determiner insertion: (A) D and P are in a local configuration and both provide functional structure to the NP. (B) Articulated prepositions show a syncretic form in Italian. Let us now focus on the two proposals more in detail:

Proposal (A) - D omission is favoured by the nature of the two heads involved in this configuration. As a matter of fact, both P and D are heads of the NP functional extended projection and they are both involved in the NP case assignment²⁰. Hence, the child may be induced to omit one head in order to prevent overburdening structures for the still immature

computational and performance system. We speculate that the child simplifies structures in order to alleviate processing or performance problems through the adoption of genuine UG options, even if not attested in the target language, as proposed by Rizzi, (2005).

Thus, following Giusti (1993; 2003) analysis for Romanian simple PPs in which the definite article is ungrammatical with unmodified nominals as objects of prepositions²¹ as in (27):

(27) M'am adus la profesor(*ul)
I am gone to professor (*the)
'I have been to the professor'
(Giusti, 1993)

we suppose that in $*[P_D+N]$ pattern, P is presumably inserted by the child in the highest head (F^{max}) of the extended nominal projection. This position is usually occupied by the determiner as Case marker. Example in (28) illustrates the structure:

(28) [FP1[con][NP principe]] with prince 'With the prince'

The fact that the predominant non-target pattern involves the dropping of D and not the omission of P, could rely on interpretability factors. Whereas features associated with the article may be recoverable from the noun (i.e gender/number) and from the context (definiteness/indefiniteness), thematic roles expressed through prepositions are neither recoverable from other elements of the sentence nor so easily recoverable from the context.

As a consequence of that, a true complementary distribution between D and P should be expected mostly with semantically vacuous prepositions (i.e selected prepositions or pure case assigner ones). Interestingly, such complementarity is found in some of the child's utterances, and mainly involves selected prepositions:

- (29) CHI: quette [=queste] e [=le] metti $\langle i \rangle$ [/] i [=il] drago those them put the dragon 'Those! Put them on to the dragon'
- (30) CHI: e poi si mette # quetta [=questa] seggiolina a tavolo and then one puts this little chair to_table 'And then let's put this little chair at the table'

Proposal (B) - The fact that most prepositions and definite articles show a syncretic form in Italian may raise an additional difficulty for the child. On the assumption that the articulated preposition in Italian undergoes a process of head incorporation, as proposed by Granfeldt (2003) for French²², it might be hypothesized that, through D omission, the child is avoiding the complexity of the syntactic process at work in the derivation of syncretic articulated prepositions in Italian.

Evidence in favour of this hypothesis comes from the fact that determiners are supplied in contexts not requiring a process of head incorporation in Italian, like, for example, prepositions with indefinite articles²³:

(31) CHI: stata a uno [= un] ballo been at a dance 'She went to a dance'

The data so far analyzed do not allow one to clearly discriminate between which of the two factors could be predominant in accounting for the high rate of D omission in PP contexts²⁴. Further studies on corpora of other Italian monolingual children would be desirable in order to verify whether the phenomenon is attested or other strategies are used. Furthermore, a comparison with corpora from languages in which prepositions and articles do not show a syncretic form may shed light on the matter. In particular, it may clarify whether children tend to avoid the complexity of the syncretic form of the articulated preposition or, when facing a configuration in which two functional heads in a local relation share similar properties, produce only one in order to reduce the structure involved in the derivation.

4.6. D omission with quantifier and possessive constructions

A higher rate of determiner omission is not only restricted to prepositional contexts in Sabrina's corpus. We also found a tendency to omit determiners when nominals are introduced by other elements of the extended DP projection, such as the quantifier *tutti/e* and the prenominal possessive pronouns. Both configurations obligatorily require an article in standard Italian and, although occurrences of this kind are very few in the corpus, an analysis of such non-target patterns gives cues to the strategies adopted by the child when other elements interacting with the determiner system are involved in the computation.

As for D omission with the quantifier *tutti/e*, we observed an opposite tendency between singular and plural contexts. D omission is attested at a high rate in the latter but not in the former. Such a contrast is exemplified in Table 10 and in (32) a-b.

Table 6-10: D occurrences/omissions with QPs

	D Omissions	D Occurrences
Singular QPs	(1/4)	(3/4)
	25%	75%
Plural QPs	(9/10)	(1/10)
	90%	10%

(32) **a** CHI: tutta la torre di Mangiafuoco. 'Mangiafuoco's whole tower'

b CHI: Ho macchiato tutte paperine. 'I soiled all ducks'

It is worth noting that in Italian nominals introduced by *tutto/tutti* obligatorily require a determiner regardless of number distinction. The relevant examples are given in (33) a vs b:

(33) **a** Tutta *(la) famiglia di Maria. 'Maria's whole family'

b Tutte *(le) mele. 'all apples'

The asymmetry in Sabrina's production (see 32) recalls the contrast between the "definite"/"indefinite" quantifier as for the property of selecting a full DP. Examples in (34) a-b show the contrast between the "definite" quantifier *tutti* (all) and the indefinite quantifier *molti* (many) in Italian:

(34) a Ho letto tutti *(i) libri.
'I read all books'
b Ho letto molti (*i) libri.
'I read many books'

Following Giusti (1993) and Giusti & Leko (2001), we assume that both quantifiers in (34) a-b are heads of the functional nominal projection, *tutti*

selecting a full DP whereas *molti* not requiring an overt D^{25} . The representations in (35) a-b illustrate this:

The child's tendency to omit D in plural QPs may suggest that she is analyzing *tutti* as an indefinite quantifier which does not require an overt D, as in (35) b.

As for possessive constructions²⁶, we found that the child resorts to the omission of determiners only when the possessor occurs prenominally²⁷. An example of this non-target pattern is given in (36):

On the contrary, determiner omission is excluded when the possessor is in postnominal position. Table (11) and examples (37)-(38) show the contrast between insertion/dropping of determiners according to the position of the possessor:

Table 6-11: D omission with Possessive DPs

	D+Poss+N	*[_D+Poss+N]	D+N+Poss	*[_D+N+Poss]
Total	0/3	3/3	6/6	0/6
%	0%	100%	100%	0%

- (37) CHI: oggi era mio compreanno! 'Today it was my birthday'
- (38) CHI: dov'è il telefono mio? 'Where's my phone?'

The pattern in (37)-(38) suggests that prenominal possessors and determiners are in complementary distribution in Sabrina's early grammar. Such a possibility is subject to variation among languages. In German and English, for example, prenominal possessors do not co-occur with determiners, as in (39) a-b:

(39) **a** Das ist (*das) mein Buch **b** This is (* the) my book

On the contrary, in Spanish, only prenominal possessors are in complementary distribution with determiners, as illustrated by the contrast in (40) a vs b:

(40) **a** mi libro 'my book'

b el/este libro mío

According to Cardinaletti (1998), in determiner-less possessive constructions as in (39) a-b and (40) a, an empty D hosts the raised possessive element (a possessive clitic in Cardinaletti's terms). The derivation in (41) illustrates this fact:

(41) [possessive clitics_i D° [....[
$$_{SpecNP}$$
 t_i[$_{N}$ N]]]]]

Following Cardinaletti's proposal, we assume that, in the ill-formed construction (* $Oggi\ era\ mio\ compreanno$ - Today it was my birthday), the child is probably adopting the option in (41). Although this possibility is restricted only to singular kinship terms in standard Italian ($Questa\ evalueta\ madre$ - This is my mother), the child seems to extend this option to all DPs with a prenominal possessor. Moreover, the asymmetry in (37)-(38) suggests that determiner insertion may be considered by the child a "last resort option" triggered by the necessity to license a full DP when the possessor does not move to $D^{\circ 28}$.

If the analysis of the prenominal possessive constructions produced by the child is on the right track, we should expect that Sabrina recognizes the "functional" status of possessors with respect to other prenominal modifiers. In our corpus we found only a few occurrences of complex DPs containing a prenominal modifier other than possessives which are not in complementary distribution with determiners as reported from (42) to (45):

(42) CHI: Un' atta farfallina $a_{fm.sg} \ other_{fm.sg} \ butterfly_{fm.sg}$ 'another butterfly'

- (43) CHI: Guarda. # Quetta [= questa] <ianda> [=grande] torre! look. # this_{fm.sg} big_{fm.sg} tower_{fm.sg} 'Look. This big tower!'
- (44) CHI: Lunga [/] lunga torre ho <sato> [= fatto] long_{fm.sg} long_{fm.sg} tower_{fm.sg} I made 'I made a long (=high) tower!'
 - (45) CHI: Un' atta cappetta $a_{fm.sg}$ other fm.sg shoe fm.sg 'Another shoe'

In three out of four cases, the complex DPs is introduced by a D element (demonstrative and indefinite article), as required in the target language. Although such evidence cannot strongly confirm the prediction that the child recognizes the "functional" status of possessors, they suggest two important facts: (i) the extended nominal projection seems to be fully in place at this stage of acquisition. The child produces complex DPs of the "Det - AP - N" type; (ii) the child seems to discriminate between functional D elements (i.e demonstratives, indefinite articles, possessives) and other lexical items (i.e modifiers).

5. Conclusion

In this study we focused on early article omission in one Italian monolingual child from 1,11 to 2,6. In analysing Sabrina's corpus, it emerged that the omission of D is a residual phenomenon more related to the structural configurations in which the nominals occur rather than to other factors that are crucial for the licensing of determiners in Italian (i.e. gender, number, +/- mass distinction of nominals). An interesting consideration prompted by our results is that the child shows selectivity as far as the omission of determiner is concerned; functional items involved in the high DP structure (i.e. prepositions and prenominal possessors) play a role in determining "when" and "how" D omission applies.

More generally, we propose that the child resorts to a "D dropping strategy" in order to alleviate difficulties for her still immature processing and performance system. Nevertheless, the child's non-target patterns reflect genuine grammatical options and they may be traced back to the prevailing role that the "Structural Economy Principle" has in children linguistic computation (Rizzi, 1998). We argue that when applying this principle to the DP structure, the child resorts to those grammatical options

which allow the D° position not to be morphologically realized (i.e. the Romanian option for PP contexts, the Spanish option for Possessive DPs).

Our investigation contributes to highlight the role played by structural configurations in the phenomenon of article dropping in Italian L1 acquisition. Further research both from spontaneous and elicited production may provide more robust quantitative data on those structural configurations which are sensitive to the omission of D that have emerged from this case study.

Appendix

Table A

Italian article paradigm							
	definite		indefinite				
	masculine	feminine	masculine	feminine			
singular	il/lo°/l'#	la /l'#	un/uno°	una/un'#			
plural	i/gli°	le	Suppletive form: partitive di				
_	-		dei degli° delle				

The distribution of reduced forms (#) and allophonic variants (°) is restricted to morphophonological constraints:

- (#): before feminine and masculine nouns beginning with vowels: $l'\underline{u}$ omo (the man_{ms.sg}) vs il libro; $l'\underline{a}$ mica (the friend_{fm.sg}) vs la penna (the pen_{fm.sg})
- (°): -before masculine nouns beginning with clusters of consonants such as s + consonant, ps, pn, gn: lo/uno specchio (the/a mirror_{ms.sg}); gli/degli specchi (the mirrors_{ms.pl}); lo psicologo (the psychologist_{ms.sg}); gli/degli gnocchi (the dumplings_{ms.pl})
- -before masculine nouns beginning with z, x, y: lo \underline{x} ilofono (the xilophone_{ms.sg}); lo \underline{y} ogurt (the yogurt_{ms.sg}); gli/degli \underline{z} aini (the knapsack_{ms.pl})
- -before masculine nouns beginning with i + vowel: $lo/gli \underline{iu}$ goslavo/i (the $Jugoslav/s_{ms.sg/pl}$)

Table B

Italian article choice						
	singular	plural				
Definite NP	il gatto/la casa	i gatti/le case				
(Known to the speaker						
and to the hearer-						
Common ground)						
Specific Indefinite NP	un gatto/una casa	dei gatti/delle case				
(Known only to the						
speaker-No common						
ground)						
Non specific Indefinite	un gatto/una casa	dei gatti/delle case				
NP		or				
(Unknown both to the		_gatti/_case				
Speaker and to the						
Hearer-No common						
ground)						

Table C

Monosyllabic Italian Prepositions	Articulated Prepositions	Monosyllabic Italian Prepositions	Articulated Prepositions
di (of)# a (at/to)	+ di + il = del di+ lo = dello di+ l' = dell' di+ la = della di+ i = dei di+ le = delle di+ gli = degli + a + il = al a + lo = allo a + l' = all' a + la = alla a + i = ai a + le = alle a + gli = agli	in (in/at) con (with/by)	+ in + il = nel in + lo = nello in + l' = nell' in + la = nella in + i = nei in + le = nelle in + gli = negli +° con + il = col con + lo = collo con + l' = coll' con + la = colla con + i = coi con + le = colle con + gli = cogli
da (from/to/by)	+ da + il = dal $da + lo = dallo$ $da + l' = dall'$ $da + la = dalla$ $da + i = dai$ $da + le = dalle$ $da + gli = dagli$	su (on) per (for/to) tra (in/between)	+ su + il = sul su + lo = sullo su + l' = sull' su + la = sulla su + i = sui su + le = sulle su + gli = sugli
		fra (in/between)	-

[#] In brackets a roughly corresponding translation is given.

° Both syncretic and non syncretic forms of this articulated preposition are attested in the variety of Italian spoken by the child under investigation.

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Notes

(i)a Questo è (*il) mio vino

'This is my wine'

b Questi sono (*i) libri che vuoi comprare'

'These are the books you want to buy'

c Compro tutto (*il) vino/ tutti (*i) libri

'I buy all wine/all books'

'The prince marries her'

For a different approach on PSD based on purely (phono) prosodic reasons, see Veneziano & Sinclair (2000).

¹ The data contained in sections 3.1-4.5 are reprinted with the permission of Cascadilla Proceeding Project. Previous versions of this work have been presented at Consortium for Linguistics in Taiwan (2007), Galana 3 (2008) and The Romance Turn 3 (2008). We thank the audiences and two anonymous reviewers for insightful comments and suggestions. We are particularly indebted to Adriana Belletti, Giuliano Bocci and Luigi Rizzi for discussions on this work. Usual disclaimers apply.

² On the role that different factors (i.e morphology, phonology, syntax-semantic interface) may play in the acquisition of the determiner system, see also Kupisch & Bernardini (2007).

³ See the appendix (Table A and B) for the Italian article paradigm and article choice

⁴ Once mass nouns and plurals show up with a modifier (AP, sentential modifier, quantifier), the determiner is obligatory:

⁵ The data have been collected and transcribed by Simona Matteini. They have been further double checked by Valentina Chiancianesi, Sara Paolucci, and Ida Ferrari. The corpus is available at Ciscl-University of Siena. We thank Sabrina's family for their kind collaboration given during the collection of the data.

⁶ The nature of the corpus does not allow us to identify without any doubts whether the child intends to assign a definite/indefinite interpretation to nominals according to the semantic/pragmatic contexts in which they are produced. Due to this ambiguity, we decided to adopt "occurrences/omissions of determiners" for definite as well as indefinite articles.

⁷ Bottari et al., 1993/94 base the claim that PSDs have a grammatical function on the fact that they do not occur randomly, they never replace lexical items, but they appear before lexical items of various types and tend to disappear with the emergence of free functional morphemes. An instance of PSD produced by Sabrina that we took into consideration for our analysis is the following:

⁸ Following Moro's (1991) analysis of existential constructions, we adopt the proposal that nominals appearing in sentences of the "esserci" type are subjects of

a small clause selected by the copula *essere* and thus they occupy an argumental position.

⁹ The variety of Italian spoken in Siena (Tuscany). Interestingly, the use of expletive determiners with proper names (and kinship terms) is subject to a high degree of variation among the varieties of Italian spoken in Tuscany as well. Let us take as a case point the contrast between, for example, *Senese* and *Fiorentino*. Proper names and kinship terms are always introduced by a definite article in the latter but not in the former.

¹⁰ For sake of clarity, we use the term "residual" with the intended meaning of a *reduced quantity* which, though a decremental pattern, remains all over the period under investigation.

¹¹ All the data were statistically analyzed using Fisher test. The significance threshold is 0.05.

¹² It is worth pointing out that neither occurrences of suppletive forms of the plural indefinite article, nor singular partitives are attested in Sabrina's corpus during the period under investigation.

PP can occur preverbally, post-verbally or in isolation. Moreover, P can either be selected by nouns or verbs. Our purpose here was to stress the fact that DPs occur after a preposition.

¹⁴ Although ungrammatical in standard Italian, this construction is occasionally produced by the child.

¹⁵ Due to the few occurrences, this pattern will be neither further discussed nor statically analyzed.

¹⁶ The influence of linear order on D omissions has already been reported in the literature (De Lange et al., 2006 for Dutch and Italian; Caprin & Yoghà, 2006 for Italian). Results of these studies converge in indicating the sentence initial position as the most sensitive to D omission. It is worth noticing that the child under consideration produced too few DPs in sentence initial position to have reliable quantitative and qualitative analysis on this topic. Moreover, none of the mentioned studies consider D omissions in P contexts.

¹⁷ See the appendix (Table C) for Italian monosyllabic prepositions and their syncretic articulated forms.

¹⁸ Adverbial use of monosyllabic prepositions (as for instance *da solo/a*) were excluded from the count. Considering PPs in general, it emerges that monosyllabic prepositions are attested in Sabrina's corpus from the first recording (1;11) Specifically, *a, di, con, in,* are used more frequently than *per, su* and *da*. Prepositions *fra/tra* are never found in Sabrina's production. A few cases of wrong selections of prepositions are attested, as in the following example:

(i) INV: di chi hai paura?

'Who are you afraid of?'

CHI: con matigna with stepmother

'Of the stepmother'

For a quantitative and qualitative analysis of monosyllabic prepositions in Sabrina's corpus see Ferrari (2009).

¹⁹ With the notation [P+D] we refer to articulated prepositions produced by the child as: (i) syncretic forms (nella foresta – *in the forest*); (ii) non syncretic forms with definite articles (con la matrigna – *with the stepmother*) or indefinite ones (per un bambino – *for a child*).

²⁰ The functional/lexical status of P is a debated topic in generative grammar. Here we follow Cardinaletti and Starke (1999) which assume that a subset of the Italian monosyllabic prepositions are functional projections of the noun having the function of case markers. See also Baker (2003) and Svenonius (2007) who assume that P is a functional category.

 21 An exception to this pattern is represented by the preposition cu (with): with this preposition, the dropping of the definite article is subject to local variation. Moreover it is worth noticing that, in Romanian, the enclitic article has to be morphologically realized when the object of preposition is modified by an adjective or by a complement as in (i):

(i) M'am adus la profesur *(ul) tau I am gone to professor *(the) your

'I have been to your professor'

²² According to Granfeldt (2003), the determiner in D° adjoins to the head of the PP above the DP projection. An analysis of this kind raise theoretical problems under the assumption that head incorporation is a leftward adjunction (Kayne, 1994). Without entering into technical details, our intention here is to point out that the syncretic form of the articulated preposition may raise to additional difficulties for children's early computational system.

²³ In Italian *uno* is a numeral modifier and the allophonic variant of the indefinite article *un*; its distribution conforms to the same morphophonological constraints imposed on the definite allophonic variant *lo* (see Appendix, Table A). In the utterance (31) *uno* is used instead of the target form *un* requested by the context. Overuse of *uno* is reported by Chini (1995) during the first stages of Italian L1 development; this tendency has been also described by Gozzi (2004) as a "recurrent phenomenon" in the Gaia corpus she analyzed. It would be plausible to hypothesize that, in the first stages of acquisition, only the interpretation of *uno* as a "pure" numeral modifier is available to the child. Following Cinque's analyses (1994, 2005a,b) of numerals as XPs merged in the specifier position of a higher AGR node of the extended DP structure, the process of incorporation would be anyway prevented in this kind of configuration by the fact that *uno* is a maximal projection and not a head.

²⁴ One may question whether D omission in PP contexts can be explained under a

²⁴ One may question whether D omission in PP contexts can be explained under a pure phono-prosodic account. Looking at Sabrina's production of articulated prepositions from the first recording (1;11), it emerges that the non-target pattern involving the dropping of D is not sensitive to the phonological shape of nouns

(i.e. numbers of syllables and stress position), contrary to the results reported for the same period of L1 development by Giusti & Gozzi (2006) who investigate the correlation between the acquisition of prosodic structure and determiner production in one Italian monolingual child (Gaia corpus). Indeed in Sabrina's corpus, D insertion/dropping are attested both with monosyllabic and trysillabic nouns and with several monosyllabic prepositions (CHI: con matigna - with (the) stepmother; CHI: pipì di vaso - (the) piddle of (the) water closet; CHI: dare un bacino a guancia [...] - to give a kiss on (the) cheek [...]). We thus conclude that D omission in PP contexts cannot be explained only in terms of a phono-prosodic account, at least in this particular stage of Sabrina's early grammar. Nevertheless, more generally, the data may suggest that the child seems to have more difficulties when articles cliticize onto P rather than when forming a prosodic unit with N.

²⁵ The same holds true also for the indefinite quantifier "many" in English:

(i) I read many (*the) books.

Other non-target patterns produced by the child in possessive DPs are concerned with (a) the linear order possessor-noun; (b) the omission/replacement of preposition di. As for (a), the utterances in (iii), (iv) illustrate the non-target patterns:

(i) CHI: Ho paura!

(ii) INV: Ma di chi, amore!?

(iii) CHI: i Cenerentola cappetta! of Cinderella shoe 'of Cinderella's shoe'

(iv) CHI: ho paura i Cenerentola e cappetta! Have_{1,ps,sg} fear of Cinderella the shoe 'I am afraid of Cinderella's shoe'

In all cases the possessor precedes the head noun. The construction displays the linear order Poss-N rather than the Italian linear order N-Poss required in Italian possessive constructions containing a non-pronominal possessor. The child utterances mirror the linear order of Germanic possessive construction of the Saxon Genitive-type, where non-pronominal possessors show up in prenominal position. Such option is allowed in Italian only with pronominal possessors (*La sua macchina* vs **la di Gianni macchina*).

Concerning (b), we have observed that the preposition di is sometimes omitted or replaced by the preposition a in front of the possessor.

(v) CHI: l'albero Babbo Natale the tree Santa Claus 'Christmas tree'

(vi) CHI: il gatto Astasia the cat _ Anastasia 'Anastasia's cat'

(vii) CHI: c'ho i chiavi a Picasso

I have got the keys to Picasso

'I have got the keys of the Picasso car'

²⁷ Similar findings have been reported by Bernardini Roest (2003) in bilingual Italian-Swedish and Italian L1 acquisition.

- ²⁸ In standard Italian (and in the variety spoken by the child as well) postnominal pronominal possessors may bear a contrastive stress. Bernstein (2001) has proposed that such elements are realized in a focus position activated in the low DP area. It could be plausible to think that the licensing of postnominal possessors may be forced by informational constraints (i.e. contrastive focus) in the child. As a consequence, the unraised possessor leaves the D position empty. Hence, the 'last resort option' to insert the article.
- ²⁹ Rizzi (1998), in his review on early null subjects, states that two main principles of Economy govern linguistic computations: the Structure Economy Principle applies to the syntactic structure and the Categorial Uniformity Principle concerns the number of different categories which enter the computation. Specifically, the latter states that "the inventory of categories to be used for the syntactic computation will be maximally simple and transparent to semantics". The two principles claim:
 - (1) Structural Economy: "Use the minimum of structure consistent with well-formedness constraints"
 - (2) Categorial Uniformity: "Assume a unique canonical structural realization for a given semantic type"

Rizzi.

1998:33

The author proposes that, the principle in (1) prevails in early grammars in order for the child to cope with the difficulties of a still immature computational and articulatory system, whereas the principle in (2) mainly governs adult native grammars. The Economy of this principle is based on the presence of the fewest possible different elements in the derivation.