

EARLY OMISSION OF ARTICLES IN CHILD ROMANIAN AND THE EMERGENCE OF DP

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1. INTRODUCTION

A frequently observed phenomenon in very young speakers is their tendency to drop elements which are obligatorily required in the target language, such as determiners, among others.

The investigation of the morphological development of children shows that articles do not reach the point of mastery until at a later stage (Radford 1990, Pizzuti & Caselli 1992, Caselli et al. 1993). This fact has been taken as evidence that children initially project NP instead of DP (Radford 1990, de Villiers & Roeper 1995, Perez-Leroux & Roeper 1999) or that early child grammar is underspecified compared to the adult language (Penner & Weissenborn 1996, Hoekstra, Hyams & Becker 1997, Eisenbeiss 2000).

Children acquiring Romanian go through a stage when the indefinite article is always omitted, whereas the definite article seems to be present from the onset of acquisition. There is also an obvious time lapse between the emergence of articles and their adult-like usage: during the early stages of linguistic development, their use may be overextended, they may continue to be randomly omitted, or they may have an erroneous form. However, correct productions and erroneous forms and/or omissions co-exist during the same stage. This developmental pattern shows that the acquisition of Romanian can provide interesting data with respect to the NP/DP status of early nominals, as well as with respect to the causes of the difference between early child grammar and the grammar of the target language.

The remainder of the paper is organized as follows: Section 2 presents the aim of the study and the hypothesis. Section 3 deals with the linguistic analysis of articles in Romanian with a focus on the implications for acquisition. In Section 4 the acquisition data are presented. Section 5 analyses the acquisition data within a minimalist framework which incorporates Uriagereka's (1995) Multiple-Spell-Out derivation hypothesis and Chomsky's Derivation by Phase (1999) model. An explanation for the early omission of articles is put forth. The claim is that the way in which Romanian children cope with articles during the early stages is due to a restricted computational space.

2. AIM AND HYPOTHESIS

The present paper addresses the following questions:

- (i) what developmental patterns characterize the acquisition of Romanian articles?
- (ii) what allows the child to go out of the article omission stage and use articles in an adult-like way?
- (iii) is the identified developmental pattern similar to those identified in the acquisition studies for other languages?
- (iv) how can we account for the identified developmental pattern?

I assume a continuity approach to syntactic development, according to which the child has full access to all the components of UG from the onset of acquisition. What the child has to learn, on the basis of the input, are language-specific features. Once a feature has been selected from the fixed array provided by UG and valued, the information will go straight into the computational system (most probably under the shape of parameter setting) refining it. But the early computational system cannot cope with complex derivations, which imply a heavy computational load, i.e. a multiple Spell-Out derivation (Uriagereka 1995). Avram (in press), assuming Uriagereka's Multiple Spell-Out hypothesis (Uriagereka 1995), according to which the derivation of a command unit may imply successive Spell-Outs, argues that the child begins with single Spell-Out derivations, gradually coping with multiple Spell-Out ones. The proposed explanation for the early omission of articles follows the same line. My hypothesis is that articles are omitted because the derivation of object-naming DPs requires a multiple Spell-Out or a multiple Phase (Chomsky 1999) derivation.

3. ARTICLES IN ROMANIAN: PREDICTIONS FOR ACQUISITION

3.1. Romanian articles in a nutshell

Romanian has two kinds of articles: the definite article is a bound morpheme and always postnominal (1). The indefinite is a free morpheme and always prenominal (2):

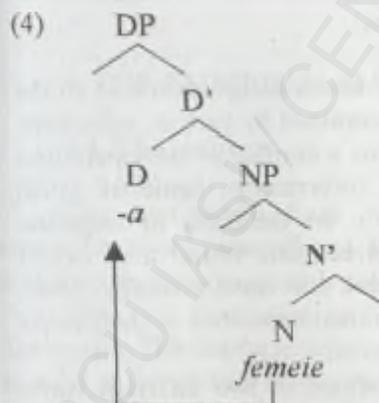
- (1) a. *femeia*
 woman-the_{FEM.SG}
- b. *omul*
 man-the_{MASC.SG}

- (2) a. **o** femeie
 ¹a_{FEM.SG} woman
 b. **un** om
 a_{MASC.SG} man

The form of the article is morphologically dependent on the head noun for gender (feminine, masculine, and neuter), number (singular/plural), and case (with a productive opposition between Nominative/Accusative and Genitive/Dative). The form of the article also changes according to the class of the noun stem. For example, the masculine singular article can be *-l* or *-le*:

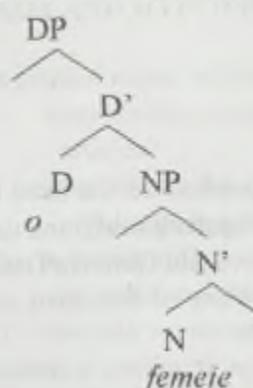
- (3) a. omul
 man-the_{MASC.SG}
 b. soarele
 sun-the_{MASC.SG}

The enclitic nature of the definite article has been analysed as the result of the movement of the Noun to the left-side of the article (Dobrovie-Sorin 1987) or of head movement from N to D (Grosu 1988). But one can also interpret this movement simply as a result of Lasnik's (2000) Stranded Affix Filter, according to which a bound morpheme needs a morphologically realized host. When the DP is headed by a definite article, i.e. a bound morpheme, N raises, in an Enlightened self interest type of movement to D. Movement would be, in this case, required only by rules of the PF level and would take place after Spell-Out:



The indefinite article is a free morpheme, occurring to the left of N:

(5)



It requires no overt movement of N to D; only Merge applies in this case.

3.2. Predictions for acquisition

From the perspective of acquisition, these data offer a challenging opportunity to test previous hypotheses with respect to the availability/non-availability of functional projections in early grammar as well as with respect to the availability of movement. The definite and the indefinite articles evince different properties, one of the most important being that the presence of the definite article triggers the overt movement of N, whereas the indefinite does not. Merge has been defined as the simplest or the 'cheapest' operation, requiring the least amount of computational load, whereas Move is a more complex operation, defined as a set of sub-operations that includes Merge:

(6) Move = Copy + Merge (+ Delete) (+Form chain).

Move is also motivated by some feature that needs to be identified in the derivation as a trigger of movement and may be constrained by various principles. Thus Move is more costly not only because it contains a number of sub-operations but also because it implies many other pieces of information, some of which language specific, i.e. they can be determined only on the basis of linguistic experience. If this comparison of derivations is correct, one would then expect children to prefer Merge over Move, i.e. to choose the lowest energy route, avoiding those structures which force their computational capacities to their limits (Weissenborn 1994, Roeper 1996).

The 'lowest energy route', though, can be defined in two different ways, according to the analysis of definite DPs one adopts. According to the analysis which assumes that the enclitic nature of the definite article is the result of the movement of N to D before Spell-Out, we would expect Romanian children to use

the indefinite article first, 'avoiding' the definite one, which implies Move, a complex operation, until at a later stage. But, as we are going to see, the empirical data clearly point towards a different acquisition sequence in the Romanian nominal domain.

According to the Stranded Affix Filter analysis, one would expect no significant difference in terms of complexity during the earliest stages. The child would be required to learn, on the basis of the input, the idiosyncratic properties of the two types of article, i.e. that the definite one is a bound affix, whereas the indefinite one is free. According to this approach, we would expect the two types of article to be mastered during the same stage, with a possible insignificant delay of the definite article.

The most important difference between the two articles is, in this case, related to their morpho-phonological status: bound vs. free. Previous acquisition studies (see, for example, Caselli et al. 1993) suggested that this distinction is relevant for acquisition. This hypothesis relies on empirical data from languages such as Italian (in the domain of verbal morphology) or Swedish. In Swedish the definite postnominal article, which is a bound morpheme, is used from the early stages, while the indefinite article, which is a free prenominal morpheme, is omitted during the early stages (Bohnacker 1997):

- (7) a. *bilen*
car-the
- (8) b. *en bil*
a car

The data from child Romanian can confirm/disconfirm this hypothesis, since Romanian, just like Swedish, has two kinds of determiners: free and bound.

4. THE EMPIRICAL DATA

4.1. The subjects

The two longitudinal corpora comprise weekly recordings of natural unstructured conversations of Romanian children (B. 1;3 - 2;4 and A.1;9 - 2;6) with their mother (or another relative) and an investigator.

The two Romanian children (B. and A.) are monolingual speakers of Romanian. The database consists of approximately 60 minute samples recorded weekly, at the child's home, by one investigator. The records include situations of free interactions with the mother and the investigator and, occasionally, especially in the case of B., with other adults in the family or family friends. The range of samples investigated covers ages 1;5 - 2;4 for B. and 1;10 - 2;6 for A. The first

sessions in the B. corpus, comprising ages 1;3-1;4, were not examined. The child either does not answer (in a verbal way) or simply repeats words when required to do so. The data were collected and transcribed by Larisa Avram. Some of the recordings have been transcribed in CHILDES format (MacWhinney & Snow 1985).

It is important to mention that the two children illustrate different acquisition styles. B.'s style is an instantiation of the analytic approach, with clear one-word-at-a-time utterances. During the early sessions, B. uses language mainly to name things. Her early vocabulary consists (almost) entirely of nouns. A., on the other hand, illustrates the so-called *gestalt* approach, with a focus on phrases rather than on individual words. His early vocabulary contains not only nouns, but also verbs and adjectives. The *gestalt* approach goes, in his case, hand in hand with an extremely deficient phonology, which lags well behind syntactic and lexical development.

It is also important to mention that the type of input which the two children receive is totally different: the input which B. receives could be defined as an instantiation of Romanian motherese, with clearly uttered words, even syllable-by-syllable sometimes, repetitions, a tendency to simplify language either by resorting to onomatopoeia or simply shortening the words. One can also notice some syntactic properties which could be associated with Romanian motherese, such as a great number of *yes/no* questions or the overuse of the definite article in "naming" situations, illustrated in (8) below:

- (8) a. Uite, leu(l).
Look, lion-the.
b. Ce e asta? Fata.
What is this? Girl-the.

The input which A. receives cannot be qualified as an instantiation of Romanian motherese. A.'s mother rarely uses short sentences, diminutives, never tries to speak slowly or simplify the input in any way. She never uses the definite article in "naming" contexts.

These two facts together (different acquisition styles and different types of input) enhance the relevance of an otherwise small corpus, making it more representative than it might seem at first sight.

The age difference between the first recording session for the two children will be reflected in the data, showing how important it is to start the recordings as early as possible, and that any longitudinal corpus that is begun at a later stage may miss short but extremely important stages in the linguistic development of the child and, consequently, it can be misleading.

I analysed in detail samples which were recorded approximately one month apart from one another. A total of 24 samples (i.e. 15 hours from the B. corpus and 9 hours from the A. corpus) were investigated.

The number of files examined and the age of each child are given in Table 1:

Table 1. Data used in the analysis

Child	Number of files	Age
B.	15	1;5-2;4
A.	9	1;9-2;6

4.2. Methodology

Every utterance containing a noun was considered. Common nouns, proper names and early nominalized onomatopoeia were taken into account. Words denoting family relations, like *mami/mama* 'Mother' or *tati/tata* 'Father', were treated as proper nouns.¹ Onomatopoeia counted as nominalized only when clearly used in a nominal context, as shown in (9)-(10):

- (9) Adult: *Și aicea cine e?*
 'And who is here?'
 Child: *mee*. [=sheep] (B. 1;9.03)
- (10) *dan-danu(l)* (B.)

In (10) the nominalized form is a child onomatopoeic creation for 'ball'.

Some nouns whose phonological forms do not allow a clear analysis, such as *pis* or *piși* for *pisică* 'cat', *croco* for *crocodil* 'crocodile' (B.) or *mono* for Moș Crăciun 'Santa Claus' (A.) were not counted, being treated as unclassifiable. Also, in the case of A., many nouns were unclassifiable for phonological reasons. This can partially explain the relatively smaller number of nouns in the A. samples. Another reason is that A. uses more verbs, adjectives, and adverbs than B., whose early lexicon contains mainly nouns.

A clear distinction was made between the spontaneous use of a noun and repetitions/imitations as well as formulaic uses. Those nouns that the child was explicitly or implicitly required to repeat were excluded from the counting, though not neglected in the qualitative analysis of the data. Those situations when the adult asked the child to repeat a particular noun counted as "explicitly" required repetitions. The "implicitly" required repetitions represented those situations when the mother pointed to some object, named it and the child obediently repeated the noun. The situations when the child used a noun that was uttered in the previous turn by an adult did not count as repetitions, since it was difficult to decide in an

¹ With one of the children (B.), the word *bunica* 'Grandmother' was not treated as a proper name, because she uses a different term to address her own grandmother.

objective way whether the child was simply parroting it or using the word freely. Words in formulaic expressions, poems or songs were also left out. Importantly, tokens, not types were counted.

When possible, correct productions were distinguished from erroneous ones. However, I encountered a methodological problem with respect to the cases of omissions. Adults can use either a DP containing an indefinite article or a bare noun when asked "What is this?". Consider the two possible answers to this question in (11):

(11) Question: Ce e asta?

'What is this?'

- Answers:
- | | | |
|----|----------|--------|
| a. | o carte. | a book |
| b. | carte. | book |

When the child used a bare noun, it was very often the case that one could not identify it as either an omission of the indefinite article or as an appropriately used bare form. This is why omissions of indefinite articles were not actually counted. In the qualitative analysis of the data, though, I signal situations when the child clearly omitted the indefinite article, even in repetitions.

Another methodological problem was related to definite masculine nouns with which the definite article is *-l*. In adult speech, the definite form is often pronounced with the final consonant omitted, as in : *omu(l)* 'man-the', *leu(l)* 'lion-the'. The only marker of definiteness is the epenthetic vowel *u*. As will be shown in the analysis, in many cases it is difficult to decide whether the form ending in *-u* is indeed a definite form or whether the child uses *u* as an ending for phonological reasons. Though Tables 1 and 2 in the Annex can offer a general overview of the number of definite nominals which were found in the two corpora, one should take the quantitative data concerning the definite nouns with a grain of salt. As the analysis will reveal, a mere quantitative evaluation of the data is certainly misleading. This is why the focus was mainly on the *qualitative* analysis, in particular on evaluating whether the various types of DP (definite/indefinite/bare nouns) were used in an adult-like fashion. In addition to this I decided on a non-standard, unusual measure of linguistic development: in each corpus I identified the first child's utterance that contained two or more free morphemes. When the child is able to freely create a two or a three morpheme utterance this means that his/her computational system is able to deal with such computations and, consequently, that the child has reached the two- or three- word stage. Imitations were obviously excluded. The rationale underlying this non-orthodox measure was that during the registration sessions I noticed how input driven the child's MLU may be. The MLU heavily relies on the adult's strategies of engaging in conversation with the

child, on the one hand, as well as on the disposition of the child of engaging in conversation on one particular occasion. Also, in the case of A., who often "compresses" two (occasionally more) free morphemes into a phonological word the MLU would be completely misleading.

4.3. Results

Table 1 in the Annex presents the number of DPs with a definite determiner, an indefinite determiner and bare nouns across all the B. samples which have been examined. Table 2 gives an overview of the same type of data from the A. corpus.

The analysis of the data leads to the conclusion that children go through three (qualitative) stages, defined as follows:

Stage 1 (B. 1;5-1;10 // A. ??) (utterance length: less than 3 words)

For this early stage the data come exclusively from the B. corpus. A. was 1;9 when the registration sessions began; at this age, he was already past this stage.

During this first stage, the definite article seems to be present from the beginning, but it is not used in an adult-like way; it is extended to contexts where the indefinite article and bare nouns are used by adults:

- (12) Adult: Are **ușă** casa asta?
 has door house-the this / 'Does this house have a
 door?'
 Child: da, **ușa**.
 yes, door-the. (B. 1;10)

At first sight, this fact may be related to the input which B. receives. But the overextension of the definite article continues during the following stage, when it is found in the A. corpus as well; and the input which A. receives does not contain definite nouns in the "naming" context. The only safe conclusion which one can reach on the basis of the available data is that what seems to be the definite article is actually an 'impostor' during this stage (see also Eisenbeiss 2000 for similar conclusions with respect to the acquisition of the DP in German).

One should point out that the definite article is not overextended to proper nouns, which are appropriately used, nor to mass terms, which are always used in their bare form.

The indefinite article is totally absent.

Stage 2 (B. 1;10 - 2;4 // A. 1;9 - 2;4) (utterances: over 3 words)

During this stage, one can notice that the definite article continues to be overused in non-adult contexts. These contexts are more varied now. The child may choose to use the definite form even when an indefinite DP was used by the adult in the same conversation turn:

- (13) a. Adult: E o cheie roșie?
is a key red / 'Is this a red key?'
Child: **Cheia.**
key-the (A.1;10)
- b. Adult: o lingură.
A spoon.
Child: **lingură.** (B. 1;11.26)
spoon.

The definite article is incorrectly used when the DP is the complement of a preposition. One should mention that in Romanian the nominal inside a PP cannot have a definite article (14b), unless modified (14c) (with the exception of the PPs headed by *cu* 'with');

- (14) a. L-a pus pe masă.
It-3RD PERS.SG. ACC has put on table
'She/he has put it on the table'.
- b. L-a pus pe *masa.
It-3RD PERS.SG. ACC has put on table-the
- c. L-a pus pe masa din colț.
It-3RD PERS.SG. ACC has put on the table in corner
'She/he has put it on the table in the corner.'

As the examples in (15) below show, children occasionally use the definite article inside PPs:

- (15) a. Adult: unde te joci?
'where are you playing?'
Child: (în) patu(l).
(in) bed-the (A. 2;2)
- b. sub patu(l)
under bed-the (A. 2;3)
- c. pe vulpița (B. 2;3)
on fox-the

When the noun is preceded by a numeral, it cannot co-occur with an article. In early child Romanian, the use of the definite article is overextended to this context as well:

- (16) doi caii
two horse-the -MASC. PL. (A. 2;2)

The definite article can encliticize on pre-nominal adjectives. But it cannot encliticize on *alt/altă* 'other'. Consider (17) below, where the child encliticizes the article on the adjective in a non-adult like fashion:

- (17) altu(l) tren
 other-the train (A. 2;3)

It is also during this stage that the corpus provides instances of definite article omission, even in repetitions:

- (18) a. Adult: Le strigăm : bilele!
 We call them: balls-the
 Child: bile!
 Balls (B. 1;11).
- b. Adult: și caii.
 and horses-the
 Child: cai.
 horses (A. 2;2)
- c. Bagă bene casă. [vs. bagă mașinile în casă.]
 put cars house (A. 2;2)

The definite article is omitted inside DPs which contain the quantifier adjective *tot* 'all'; in adult Romanian, the noun which co-occurs with *tot* must be definite. Consider the examples below, where the article is omitted in this context in child Romanian:

- (19) a. toate bene(le) [= toate mașini(le)] [vs. toate mașinile]
 all cars vs. all cars-the (A. 1;11)
- b. toate kikii(le) [= toate jucării (le)] [vs. toate jucăriile]
 all toys vs. all toys-the (A. 2;0.11)

Non-adult like cases of "double" determiners have also been recorded:

- (20) altu(l) ciocanu(l)
 other-the hammer-the (A. 2;3)

The child may choose the definite and the bare form in an identical context, during the same session, i.e. the child may choose a licit or an illicit DP:

- (21) a. Adult: ce-i asta?
 'What's this?'
 Child: casa.
 house-the
- b. Adult: ce-i asta ?
 'What's this ?'
 Child: vacă.
 cow. (B. 1 ;11)

- c. Adult: ce-i ăla?
'What is that?'
Child: tancu(l).
tank-the (A. 1;11)
- d. Adult: ce-i ăla?
What is that?'
Child: tanc.
tank. (A. 1;11)

At first sight, one might relate the presence of the definite article to phonological factors. Since it is easier to pronounce words ending in a vowel, the presence of the epenthetic /u/ together with the absence of the article -l can indicate that the child uses the vowel for phonological reasons, i.e. its presence cannot be taken to necessarily indicate that the definite article is used. Consider the phonologically deviant nouns in the A. corpus, which all end in a vowel (irrespective of the ending of the standard form):

- (22) a. bena = mașina 'car'
kikia = jucăria 'toy'
b. kopou = cuptor 'oven'
kibau = cuibar 'nest'
kekena = câțel 'dog'
aba = fotbal 'football'
- (23) Adult: asta ce e? 'What is this?'
Child: păpușă. [păpută] 'doll'
Adult: cum spui tu păpușă? 'how do you say doll?'
Child: păpușă. [păpută] 'doll-the'(A. 2;3)

This hypothesis is reinforced by the omission of -le during the first part of the stage. See, for example, (18a), (18c), (19a), and (19b) above.

However, the hypothesis is significantly weakened by two empirical facts. Firstly, mass terms are used as bare nouns in an appropriate way, regardless of their ending:

- (24) a. Adult: ce ai mâncat? 'what did you eat?'
Child: supă. 'soup'(B. 1;10)
- b. Adult: ce e ăla?
'what is that?'
Child: compot.
'juice' (A. 1;11)

Secondly, bare feminine nouns end in a vowel; on a phonological account, the child would have no reason to choose the definite over the bare form.

A significant and obvious change is the emergence of the indefinite article during Stage 2. The indefinite article is a free morpheme, so its emergence can be easily noticed in the corpus. But one can notice the existence of a time lapse between the emergence and the mastery of the indefinite article. After its first occurrence (B.1;10/ A.1;9), one can still find cases of random omission:

- (25) a. Adult: un băț.
 a stick
 Child: un băț.
 A stick
 Adult: ce ți-a adus Moș Crăciun?
 'What did Santa Claus bring you?'
 Child: băț.
 stick (A. 1;11)
- b. Adult: o mîncare.
 a dish
 Child: mîncare.
 dish (B. 2;1)

In free constructions, the two children often use a non-adult like form:

- (26) a. Adult: ce e asta?
 'What is this?'
 Child: *un carte.
 a-MASC. SG. book-FEM.SG.(B. 2;1)
- b. *Un fată (B;2; 0.21)
 a- MASC. SG. girl- FEM.SG.
- c. Adult: ce-ai mîncat la creșă?
 what have_{2ND SG.} eaten at nursery
 Child : *un pilaf.² (B. 2; 2)
 a MASC SG. pilaf_{MASS TERM}

As the examples in (26) show, B. uses the masculine singular form of the definite article with all the nouns, irrespective of their gender. The example in (c) illustrates an overextension of the indefinite article to mass terms. Remember that during Stage 1, mass terms are correctly used as bare forms.

A. resorts to a different strategy. He uses the pronoun *unu(l)/una* 'one' instead of the indefinite article:

² Such recategorizations are possible in adult grammar, when *un pilaf* 'a pilaf' is interpreted as a type of pilaf. But one cannot interpret this DP as an instance of recategorization in the B. corpus.

- (27) a. unu țințar
 one-MASC.SG. mosquito (A. 1;10)
 b. Adult: ce vrei să facem, un camion sau o sanie?
 'What do you want us to make, a lorry or a sleigh?'
 Child: una sanie. (A. 1;11)
 one-FEM.SG. sleigh

Omissions and erroneous productions co-exist with the correct production of the same element, sometimes during the same recording session:

- (28) Adult: ăsta cred că e un câine rău.
 'This one is a bad dog, I guess'
 Child: un câine rău.
 'a bad dog'
 Ăla câine rău.
 that (one) bad dog
 Unu câine rău.
 one-MASC.SG. dog bad (A. 2;0.11)

The data indicate that both children found an "interim solution" first: they resorted to a place holder to mark the syntactic position of the indefinite article (see also Penner & Weissenborn 1996 for a similar conclusion with respect to child German).

The obvious question which arises at this point is whether one can reach the conclusion that the indefinite article emerges before the definite one. So far, the data have been taken to indicate that the definite article is used as an 'impostor' during the first stage, and that the indefinite article emerges during Stage II, when children resort to an 'interim place holder'. A qualitative analysis of the data suggests that the two articles emerge during the same stage.

In what follows, I will discuss the evidence that the definite article emerges during Stage 2 as well. Since, as already discussed above, it is difficult to identify all the instances of definite nouns for phonological reasons, we have to look at other factors which can indicate whether the definite article emerges during this stage. One such factor is illustrated in (15) – (20) above. All these examples show that the use of the definite article is overextended to a greater variety of contexts. It is also during this stage that the form *-le* begins to be (rarely) used. In the B. corpus, some of the nominalized onomatopoeia are used with a definite article:

- (29) chiț-chițu(l) (B. 2;4)

Definite and indefinite articles emerge during the same stage. With both types of article one notices a time lapse between emergence and mastery. During this time lapse, the child may resort to interim forms. Articles can be randomly omitted or used in non-adult-like contexts.

Stage 3 (A. 2;4 – 2;9/ B. ? // late multiword stage):

For this stage we have data coming only from the A. corpus.³ The available data show that during this stage both the definite and the indefinite article are used in an adult-like way:

- (30) a. Asta e o mașină.
 'This is a car.' (A. 2;6)
- b. A băgat mașinile în tunel.
 has put cars-the in tunnel
 'S/he has put the cars in the tunnel'. (A. 2;6)

The examination of the two longitudinal corpora of child Romanian point to the following developmental pattern in the acquisition of articles: there is an early stage, when both the definite and the indefinite article are omitted. What seems to be the definite article, is actually an 'impostor'. Both articles emerge during the same developmental stage, but there is a time lapse between emergence and mastery; articles are used in a non-adult-like fashion during this stage. In particular, they can be omitted, have a non-adult-like form or occur in contexts which disallow the use of articles in the target grammar.

5. A POSSIBLE EXPLANATION

5.1. DPs and 'phases'

The present analysis assumes the Derivation by Phase (Chomsky 1999) or the Multiple Spell-Out hypotheses⁴ (Uriagereka 1999, 2002). The core idea is that the derivation of a linguistic object may imply successive Spell-Outs/ "phases". A phase is determined by a sub-array of the linguistic array in the Numeration, placed in "active memory" (Chomsky 1999:9). The most important properties of a phase are the following: (i) it is "propositional" and (ii) it has a degree of phonetic independence. Cyclic Spell-Out of linguistic objects proceeds via "phases", such as vP and CP (Chomsky 1999).

In what follows I will try to argue that, by analogy with the Spell-Out of clauses, one can also detect two possible "phases" in the nominal domain: NP and DP.

³ Further analysis of the data will be able to confirm if the developmental pattern is the same in the B. corpus; the registration sessions continue.

⁴ The differences between the two hypotheses are irrelevant for the present discussion.

Longobardi (1994, 2001) argues that in Romance movement of N-to-D is obligatory for proper nouns, which are object-naming items by definition. They are inherently DPs and, consequently, can project only as DPs. For proper names, then, DP is the only available "phase". With bare nouns, N-to-D is impossible. Bare nouns are kind-naming items by definition and have no reason to move to D. This suggests that bare nouns can project as NPs. With such nouns, NP is a possible phase.⁵ Empty determiners are allowed on certain conditions, i.e. if they receive an indefinite interpretation corresponding to an existential quantifier unspecified for Number. But, in accordance with the Economy of Projection (Speas 1993), if the determiner is empty and nothing has moved to the Specifier, there is no reason to postulate the existence of the projection.

If this analysis, in which I reinterpreted the hypothesis in Longobardi from a Derivation by Phase perspective, is on the right track, we can reach the conclusion that there are two phases in the nominal domain: NP and DP. But nothing has been said so far about object-naming nouns. In Romance, they must raise to D overtly. They come as N from the lexicon and move to D in the derivation, because they need to define their meaning with respect to Number. This time the DP is created in the derivation.

We are now in a position to formulate a more comprehensive conclusion. The derivational analysis of nominals shows that there are two possible phases in the nominal domain: NP and DP. NPs denote whole kinds, while DPs denote single individual objects. DPs seem to fall into two classes: (i) DPs which come as such from the lexicon (this is the case of proper names) and (ii) DPs created in the derivation (this is the case of object-naming nouns).

5.2. Early DPs and 'phases'

An interpretation of the acquisition data from this perspective reveals that during Stage 1, both NPs and DPs are attested. Bare nouns occur in the corpus and are used correctly. At the same time, proper names are also attested in the corpus and they are used in an adult-like fashion. These data suggest that one cannot take the absence of overt articles (or other determiners) as evidence that the DP is absent. Both NPs and DPs are attested.

What one can say, though, on the basis of the data, is that during this stage only one single Spell-Out or one single phase nominals are attested in the corpus.

During the next stage, the emergence of the definite and of the indefinite articles points to the fact that the child knows, on the basis of the input, that D has to be overtly filled with object-naming nouns. Remember that A. begins with a

⁵ "An indefinite nonspecific nominal phrase [...] that enters into scopal interactions must be a pure NP, not DP with null D". (Chomsky 1998)

pronoun that could also be interpreted as a numeral. Object-naming nouns move to D because they need to have their meaning defined with respect to Number. But filling D with an appropriate element takes time. The fact that the article can be used and omitted during one and the same stage suggests that the child still vacillates between "one single phase" derivations and "multiple phase" derivations (see also Avram *in press*, where similar conclusions are reached with respect to the omission of object clitics in child Romanian). The early omission of articles reflects a restricted derivational space: the child begins with a "one phase" derivation, then vacillates between "one phase" and "multiple phase" derivations, which require more than one single application of Spell-Out. The fact that one article is a free morpheme and the other one a bound one does not play an important part. Both articles emerge during the same stage, irrespective of their morpho-phonological properties. What seems to be relevant is derivational complexity. The child begins with linguistic objects whose derivation requires a single application of Spell-Out. During Stage 3, the computational strength allows Multiple Spell-Out derivations. The child begins to use DPs created in the derivation in an appropriate way.

The way in which Romanian children cope with the definite and the indefinite article provides evidence in favour of the Derivation by Phase /Multiple Spell-Out models. It also shows that computational complexity is relevant for the acquisition of language.

ANNEX

Table 1. The number of determiners (per type: definite/indefinite/zero) in the B. samples across ages.

Age	N+Def. Art.	Indef. Art. +N	Bare Noun
1;5 (1.122)	45	0	13
1;6 (1.056)	40	0	50
1;7	50	0	39
1;8.13	77	0 ⁶	87
1;9 (1.350)	62	0	65
1;10.01 (1.091)	53	0	25
1;10.29	84	3	32
1;11.19 (MWS)	35	2	112
2;0.21	64	1	65
2;01.22	56	12 (*9) ⁷	49
2;2	47	10 (*9)	48
2;2.13	86	2(*1)	44
2;3.13	52 (*)	3(*1)	46
2;4.11	46 (*4)	45 (*13)	70

⁶ The file contains one DP with an indefinite article, but in a poem which B. recites.

⁷ The starred numbers represent the (obvious) non-adult-like instances of indefinite articles.

Table 2. The number of determiners (per type: definite/indefinite/zero) in the A. samples across ages.

Age	N+Def. Art.	Indef. Art. +N	Bare Noun
1;9(73')	60	2 ⁸	55
1;11 (63')	36	1 ⁹	55
2;0.11	38	6 ¹⁰	40
2;1.08	71	2 ¹¹	84
2;2.15	63	24 (*24)	96
2;3.14	64	6(*2)	63
2;4.10	52	37 (*2)	57
2;5.14	103	17	107
2;6.10	45	23	105

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⁸ A. uses *unu* (the numeral) as a filler for the indefinite article on two occasions: *unu finjar* 'one mosquito' and *unu turnu(l)* 'one tower-the'. Both DPs are ungrammatical.

⁹ The sample contains one instance of **una sanie* 'one-FEM sleigh'. On one occasion, A. uses the indefinite article but in repetition:

- (i) Adult: *un băț* 'a stick'
Child: *un băț*.

The fact that in (i) the indefinite article is a mere imitation of the input is supported by an immediate answer, where the indefinite article could have been used with the same noun but the child uses the bare noun instead:

- (ii) Adult: *Ce îți-a adus Moș Crăciun?*
Child: *băț*.

¹⁰ This sample contains an indefinite article used in imitation and 6 instances of *unu câine* 'one-MASC. dog'

¹¹ A. uses twice a DP which contains the pronoun/ numeral *one*: *una cojița* 'one-fem.sg. crust-the' and *una jucăria* 'one-fem.sg toy-the'. Notice that the definite article is also present.

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