The acquisition of reference: a cross-linguistic study
Rozendaal, M.I.

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5 The acquisition of morphosyntactic forms for person and object reference

5.1 Introduction
Before the interaction between the morphosyntax and pragmatics of reference can be studied, it is necessary to examine whether the children use nouns and determiners, pronouns and proper names in language. In this chapter, the timing of acquisition of the different morphosyntactic forms per child and per age point will be discussed. Differences in the timing of acquisition between Dutch, English and French will also be examined, since these differences will be used to shed more light on the early interaction of morphosyntax and pragmatics (see §1.2.1 and §3.5).

In §3.2, it has already been pointed out that researchers have used different measures to establish whether or not a structure is acquired. The term acquired as it will be applied in the current study, is defined first in §5.2. The following sections report on the acquisition of nouns with different types of determiners (§5.3) and pronouns and proper names (§5.4). These results serve first of all as background information to the central analyses in Chapters 7 and 8. Secondly, the results in this chapter are important, since few studies have systematically compared the acquisition of several morphosyntactic devices cross-linguistically.

5.2 Criteria for acquisition
Acquisition criteria for morphosyntax are a recurrent issue in first language acquisition research and are crucial for interpreting results on the acquisition of morphosyntactic forms. This section discusses the criteria for acquisition that
will be applied in the current study. Brown (1973) introduced the 90-percent-criterion of correct use of a morpheme in obligatory morphosyntactic contexts of the adult language (§2.2.1) as a measure for the acquisition of a form. In this research, Brown’s method will be used to determine the developmental path of the category of determiners as a whole for individual children and to compare determiner development across the three languages studied (§5.3.2). Moreover, it will be used to establish points of comparable determiner development between different children and languages (§7.5). If the level of determiner production is similar, but the children differ in age, the influence of the speed of acquisition on the interaction between morphosyntax and pragmatics can be studied (§1.2.1 and §3.5).

A detailed picture of the acquisition of individual determiners, pronouns or proper names cannot be obtained by using Brown’s criterion of use in obligatory contexts. There certainly are syntactic contexts that require the use of pronouns or specific types of determiners. For example, the use of pronouns is governed by the binding principles (Chomsky, 1981). Also, the Dutch existential construction with er in (1a) is only correct if it is followed by an indefinite determiner. It is incorrect with a definite determiner, as in (1b).

(1) Existential construction in Dutch
   a. Er loopt een meisje op straat.
      ‘There walks a girl on the street’
   b. Er loopt *het meisje op straat.
      ‘There walks *the girl on the street’

In many syntactic contexts, however, a definite determiner is syntactically as well formed as an indefinite determiner or a definite noun is as well formed as a pronoun. Morphosyntactic contexts of obligatory use can thus be established for the category of determiners as a whole, but are difficult to determine for different types of determiners and pronouns. There are, of course, pragmatic constraints on the use of individual types of determiners and of pronouns as opposed to nouns and proper names, for example, whether a referent is new/given in discourse, mutually known or perceptually available for the interlocutors (§2.4.1). The way children deal with these pragmatic restrictions is, however, precisely the topic of the current study and cannot be used as a criterion for acquisition, for reasons of circularity. Therefore, other criteria for acquisition are needed to define the acquisition of individual determiners and pronouns in this research.
The child’s ability to productively use a form is therefore taken as the starting point for the analysis of acquisition here. Productive use is defined as the ability to use a form spontaneously in diverse contexts, that is, not as an imitation of an adult’s utterance and not as an unanalyzed string. To establish whether a child has analyzed a form, both quantitative and qualitative measures will be used.

Quantitative analyses examine the frequency of use of a form. The rationale behind frequency is that the more often the form is used, the more productive it will be. Frequency alone does not give enough information about productivity as it is defined here, since an increase in the number of forms in the data does not necessarily guarantee that the form is used in diverse contexts. Variation of use and contrastive use can be applied as qualitative criteria of productivity (Boland, 2006). In this study, variation means that a determiner type (e.g. definite or possessive) is used in combination with more than one noun and that a specific pronoun or proper name is used in more than one clause or phrase. Contrastive use means that the same noun or verb occurs with different types of determiners, pronouns or proper names respectively. Pine and Lieven (1997) found little support for the contrastive use of the definite and indefinite determiner in the first 400 multiword utterances of 11 English-speaking children between 1;0 and 3;0. The definite determiner was produced with different nouns than the indefinite and there was hardly any overlap. It is, however, important to realize that this result might have been influenced by the relatively small sample size per child. Within the 400 utterances investigated, there might have been not enough topic diversity to stimulate the use of a particular noun more than once in different pragmatic contexts. This might have resulted in the repeated use of the same determiner-noun combination. This problem also holds for the data in the present study. Contrastive use of forms can therefore only be analyzed reliably in dense databases, in which more recordings of the child are made within a shorter period of time, thus capturing more of the child’s language production in different contexts (Tomasello & Stahl, 2004). Because of the limitations imposed by the current data, only variation of use is employed as a qualitative criterion here.

1 There is an additional problem with examining only frequency of use. This study investigates whether pragmatic factors/functions influence the morphosyntactic form that children use. If this turns out to be the case, the frequency of use of different forms might be influenced by the frequency of pragmatic functions. Some forms, for instance pronouns, will be more frequent than others if a particular pragmatic function, for instance discourse-given-maintenance, often occurs in the data. Especially the comparison between the children will be unbalanced in that case. Children that make more use of a certain form-function combination would seem to have acquired the relevant form faster.
In order to establish productivity and thus availability of different types
of determiners, pronouns and proper names, it was decided to employ a
combination of frequency and variation of use as in (2). The threshold for
productive use was arbitrarily set at three:

(2) **Criteria for availability and productive use of a morphosyntactic form**

(a) The first three non-imitative appearances of the morphosyntactic form in which
there is evidence of variation of use.

(b) Variation of use: a determiner must be used with three different nouns. A pronoun
or proper name must be used in three different clauses or verb phrases.

It is important to note that this measure of productivity does not imply that the
child has an adult-like, abstract representation of the grammatical categories
of ‘determiner’ and ‘pronoun’. Current proposals on the development of
grammatical categories assume that children build up these categories
gradually over a number of years (Pine & Lieven, 1997; Kemp, Lieven &
Tomasello, 2005; Pannemann, 2007). Children start out with lexical specific
knowledge about the use of determiners and pronouns in combination with
other parts-of-speech. Increasing experience with the target language in
combination with pattern-finding skills may lead to the detection of abstract
patterns of use of these grammatical items, leading finally to full, adult-like
knowledge of grammatical categories.

In the remainder of this chapter, the analysis will show the productive use
of different types of determiners, different types of pronouns and proper names
for each of the data points per child. The frequency of forms in the input will
also be reported. For the productivity analysis of these forms in the children’s
language, the following data were used. Firstly, all morphosyntactically
analyzable references to persons and objects at each of the data points per child
were evaluated (§4.3.2). Some of these forms will turn out to be pragmatically
ambiguous and therefore not analyzable (§4.5.1 and Chapter 6). For example,
the form *this* in (3) cannot be analyzed pragmatically, because the previous
utterance is partly unintelligible. A morphosyntactic analysis of *this* in (3)
is, however, not problematic and therefore the form is included to establish
morphosyntactic productivity.

(3) **Pragmatically non-analyzable, but morphosyntactically analyzable form**

**CHI:** Broke this # it goes # screw out # xxx # xxx.

**CHI:** Screw # this.
Secondly, the absence of a particular form at one of the analyzed data points is not proof that the child cannot use that form. Thus, if there were no, or less than three different, uses of a form in the data at 2;0, the available samples from earlier ages in the child’s corpus were searched to see whether productivity as defined in (2) could be established on the basis of those earlier samples. If this was the case, productivity was set as being present at 2;0. The data points analyzed (§4.2) were used as the fixed points here. This method was chosen to get a clear overview of the availability of different forms at various points in the data and also to compare this availability easily between the children. If a form did not occur (often enough) at 2;0, nor in the samples before that age, the form was considered to be not productive at 2;0. Subsequently, the data at 2;3 were examined to see if the form was used productively in those data. If not, additional samples between 2;0 and 2;3 were analyzed etc.. The method is exemplified in (4) for the productive use of the possessive determiner by the Dutch child Abel. He does not use possessive determiners at 2;0, nor in the additional samples before that age. The possessive determiner is used once in the data at 2;3 and two times in the additionally available sample at 2;2. The productivity measure of three different uses of the possessive determiner is thus achieved and productivity of this form is set at 2;3 for Abel. The English-speaking child Peter uses the (neuter) personal pronoun with at least three different verbs in the data at 2;0 (see 5). Additionally available earlier samples were therefore not investigated: productive use of personal pronouns was set at 2;0 for this child.

(4) Productive use of possessive determiner (Abel, Dutch, from 2;3 onwards)

a. chI: Wil me trui aan. (2;3)
   ‘Want my sweater on’

b. chI: Nee, mijn potlood. (2;2)
   ‘No, my pencil’

c. chI: Jouw trein niet. (2;2)
   ‘Not your train’

(5) Productive use of personal pronoun (Peter, English, from 2;0 onwards)

a. chI: Put it there. (2;0)

b. chI: Turn it off # there. (2;0)

c. chI: Fix it. (2;0)

It is important to remember that the analysis in this chapter serves as background information for the remainder of this thesis. Therefore, this chapter only reports on
the productive use of the morphosyntactic forms that were described in §4.4 and that are the focus of the form-function analyses in Chapters 7 and 8. Only those forms that occur more than ten times throughout all the data for a particular child will be analyzed for productivity. In addition to that, only forms that are frequent enough in the data of all children, that is, which were analyzed for productivity, will be taken into account in the form-function analyses in Chapters 7 and 8. If a form hardly occurs in the overall data, it is impossible to reliably evaluate the child’s use of this form for different pragmatic functions in further analyses. Finally, the morphosyntactic forms studied can be marked for case, number or gender in Dutch, English and French (§2.2). How these specific features are acquired will, however, not be reported, since the influence of these features on reference is not investigated in this thesis (§2.2 and §4.4). Incorrect use of the determiner or pronoun forms in terms of these features does not therefore influence the productivity analysis.

On the basis of earlier research (§3.2.1) it is expected that the children acquiring Dutch, English or French will at first mainly use (grammatical and ungrammatical) bare nouns for person and object reference. The earliest determiner-like elements will be filler syllables before nouns. Indefinite, definite, demonstrative and possessive determiners are expected to be productively used around 2;6. The percentage of determiners before nouns in obligatory contexts is expected to steadily increase between 2;0 and 3;3. From earlier research (§3.2.1.4), it appears that French children acquire determiners faster than Dutch and English children. It is therefore expected that the French children studied here also use individual determiners productively at an earlier age than the Dutch and English children. Moreover, the French children are expected to have reached Brown’s 90-percent-criterion at an earlier age. For pronominal forms, it is expected that demonstrative pronouns, proper names and third person pronouns will be amongst the first referential expressions to be productively used in all languages studied.

The next section reports on the acquisition of nouns and determiners: both productive use of different types of determiners (§5.3.1) and the percentage of use of determiners in obligatory morphosyntactic contexts are described (§5.3.2). The productive use different types of pronouns and of proper names is described in §5.4.

5.3 Acquisition of nouns and determiners for person and object reference
The data on the acquisition of nouns and determiners are discussed per language and per child. At the end of each language description, there is a short summary
of the acquisition of these forms in that language. The timing of acquisition of determiners according to both measures will also be compared between the Dutch, English and French children (§5.3.1.4 and §5.3.2.4).

5.3.1 Frequency and productivity of nouns and determiners

The following sections report per child on the productive use of different types of determiners, that is, the first three non-imitative uses of a determiner with three different nouns. The frequency of use of these forms in the input will also be reported. The data per language are dealt with in separate sections. At the end of each language section, a short summary is given on differences or similarities in the acquisition of productive use of determiners by the children acquiring this language.

5.3.1.1 Dutch

Abel

At 2;0, the MLEU of Abel is 1.5 (§4.2.1). At this age, he already uses nouns to refer to persons and objects. Up to 2;9 however, many of his nominal references are ungrammatical bare nouns, grammatical bare nouns or nouns with fillers as proto-determiners (Table 5.1). Examples (6) and (7) show that Abel nevertheless uses the indefinite and definite determiner productively at 2;0.

(6) Productive use of indefinite determiner (Abel, Dutch, from 2;0 onwards)
   a. chi: Kijk, een viss
      ‘Look, a fish’
   b. chi: Ik wil een boterham
      ‘I want a slice of bread’
   c. chi: Ik ook een kleurboek kopen
      ‘I also (want to) buy a coloring book’

(7) Productive use of definite determiner (Abel, Dutch, from 2;0 onwards)
   a. chi: ++ de olifant
      ‘++ the elephant’
   b. chi: De auto
      ‘The car’
   c. chi: De [?] trein
      ‘The train’

2 The [?] after the determiner indicates that this form is ‘the best guess’ according to the transcriber. In §4.4.1, it has been argued that these best guesses are treated as true realizations of the intended form, because the transcribers of the different corpora studied seem to have used this indication to varying degrees: in some corpora the form often occurs, whereas it is hardly used in others.
Table 5.1. Frequency of different types of bare nouns and nouns with different types of full determiners in raw numbers per age point (and as a percentage of the total number of nominal references per age point) for Abel and input to Abel (Dutch)

<table>
<thead>
<tr>
<th>Age</th>
<th>Nmsart</th>
<th>Nflr</th>
<th>Nbare</th>
<th>Nind-pl</th>
<th>Nind-sg</th>
<th>Ndef</th>
<th>Ndem</th>
<th>Npos</th>
<th>Ngnt</th>
<th>Nnum</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td>63</td>
<td>6</td>
<td>23</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>2;3</td>
<td>47</td>
<td>19</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>93</td>
</tr>
<tr>
<td>2;6</td>
<td>64</td>
<td>4</td>
<td>18</td>
<td>5</td>
<td>15</td>
<td>2</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>122</td>
</tr>
<tr>
<td>2;9</td>
<td>26</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>18</td>
<td>12</td>
<td>9</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>3;0</td>
<td>17</td>
<td>0</td>
<td>6</td>
<td>5</td>
<td>20</td>
<td>26</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>83</td>
</tr>
<tr>
<td>3;3</td>
<td>23</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>46</td>
<td>16</td>
<td>10</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>129</td>
</tr>
<tr>
<td>Input 2;3</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>21</td>
<td>33</td>
<td>9</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>73</td>
</tr>
<tr>
<td>Input 3;3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>42</td>
<td>49</td>
<td>17</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>31</td>
</tr>
</tbody>
</table>

Notes. Nmsart = ungrammatical bare noun (missing article); Nflr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Ngnt = genitive construction; Nnum = numeral determiner and noun.

At 2;3, Abel also uses the possessive and demonstrative determiner productively (see examples 8 and 9). The possessive determiner is only used in its first and second person form at this age.

(8) Productive use of possessive determiner (Abel, Dutch, from 2;3 onwards)

a. chi: Wil me trui aan. (2;3)
   ‘Want my sweater on’

b. chi: Nee, mijn potlood. (2;2)
   ‘No, my pencil’

c. chi: Jouw trein niet. (2;2)
   ‘Not your train’

(9) Productive use of demonstrative determiner (Abel, Dutch, from 2;3 onwards)

a. chi: Deze bal. (2;3)
   ‘This ball’

b. chi: Deze koffie [?] voor jou. (2;3, outside analyzed sample)
   ‘This coffee for you’

3 The demonstrative is analyzed as a determiner here and not as a pragmatic operator that signals naming (see §4.4.2 and Van Kampen, 2005). The preceding context, in which the interlocutor explicitly asks the child which ball he wants to have, favors a determiner analysis instead of a pronominal analysis.
the acquisition of morphosyntactic forms for person and object reference

Finally, the numeral determiner is only used four times by Abel and the genitive construction is not used at all in the data. Therefore, these forms are not further investigated. A comparison between the age of productive use and frequency of forms in the input shows that the determiner forms that are most frequent in the input data (i.e. indefinite and definite) are also the first ones to be productively used by Abel.

Matthijs

At 2;0, the mluw in Matthijs’ speech is 1.5 (§4.2.1). At this stage in language development, he refers to persons and objects with ungrammatical or grammatical bare nouns (Table 5.2). Matthijs also uses proto-determiners productively at 2;0 (more instances of fillers before nouns are found in the sample at 1;11, examples are not given here).

At 2;3, the first full determiner has become productive: the definite determiner (see 10). The indefinite and demonstrative determiner are productively used with at least three different nouns by 2;6 and the possessive determiner by 3;0 (see 11-13). It takes until 2;9 however, before determiner-noun combinations become more frequent in Matthijs’ data (Table 5.2).

(10) Productive use of definite determiner (Matthijs, Dutch, from 2;3 onwards)

a. chI: De pus [= puzzel].
   ‘The puzzle’
   (2;3)

b. chI: leke ligt (in) de box.
   ‘Ieke lies (in) the play pen’
   (2;3)

c. chI: De trein rijden.
   ‘The train go’
   (2;1)

(11) Productive use of indefinite determiner (Matthijs, Dutch, from 2;6 onwards)

a. chI: ∅n garage.
   ‘A garage’
   (2;6)

b. chI: ∅n mannetje.
   ‘A little man’
   (2;6)

c. chI: ∅n bloemkool.
   ‘A cauliflower’
   (2;6)

The examples of the indefinite determiner given in (11) are all transcribed with a schwa-like sound, but also with an /n/ at the end, indicating that the determiner type has been clear (§4.4.1.1).
(12) Productive use of demonstrative determiner (Matthijs, Dutch, from 2;6 onwards)

a. **chi**: Die brandweerauto kopen daar kopen. (2;6)
   ‘Buy that fire engine there, buy’

b. **chi**: Die auto moet ∂ ook kopen. (2;6)
   ‘That car must ∂ also buy’

c. **chi**: Die mensjes kunnen in. (2;5)
   ‘Those people can go inside’

(13) Productive use of possessive determiner (Matthijs, Dutch, from 3;0 onwards)

a. **chi**: (Kroko)dil moet ∼ moet ook in ∼ jouw bil bijten! (2;9)
   ‘(Croco)dile must also bite in your bottom!’

b. **chi**: Ja, dat is mijn zusje. (2;10)
   ‘Yeah, that’s my little sister’

c. **chi**: Gaat in jouw hoekje. (2;11)
   ‘Goes into your corner’

Table 5.2. Frequency of different types of bare nouns and nouns with different types of full determiners in raw numbers per age point (and as a percentage of the total number of nominal references per age point) for Matthijs and input to Matthijs (Dutch)

<table>
<thead>
<tr>
<th>Age</th>
<th>Nmsart</th>
<th>Nflr</th>
<th>Nbare</th>
<th>Nind-pl</th>
<th>Nind-sg</th>
<th>Ndef</th>
<th>Ndem</th>
<th>Npos</th>
<th>Ngnt</th>
<th>Nnum</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td>93 (78%)</td>
<td>2 (2%)</td>
<td>22 (18%)</td>
<td>3 (3%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>120</td>
<td>100%</td>
</tr>
<tr>
<td>2;3</td>
<td>134 (78%)</td>
<td>13 (8%)</td>
<td>13 (8%)</td>
<td>11 (6%)</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>173</td>
<td></td>
</tr>
<tr>
<td>2;6</td>
<td>78 (44%)</td>
<td>48 (27%)</td>
<td>16 (9%)</td>
<td>16 (9%)</td>
<td>4</td>
<td>2</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>176</td>
<td></td>
</tr>
<tr>
<td>2;9</td>
<td>61 (36%)</td>
<td>46 (26%)</td>
<td>16 (9%)</td>
<td>20 (11%)</td>
<td>11</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>176</td>
<td></td>
</tr>
<tr>
<td>3;0</td>
<td>26 (20%)</td>
<td>5 (4%)</td>
<td>3 (2%)</td>
<td>22 (17%)</td>
<td>29</td>
<td>34</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>132</td>
<td></td>
</tr>
<tr>
<td>3;3</td>
<td>20 (20%)</td>
<td>4 (4%)</td>
<td>16 (16%)</td>
<td>7 (7%)</td>
<td>12</td>
<td>19</td>
<td>15</td>
<td>5</td>
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<td>99</td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>6 (7%)</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>40</td>
<td>10</td>
<td>11</td>
<td>0</td>
<td>85</td>
</tr>
<tr>
<td>Input</td>
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<td>0</td>
<td>7</td>
<td>2</td>
<td>17</td>
<td>22</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>64</td>
</tr>
</tbody>
</table>

Notes. Nmsart = ungrammatical bare noun (missing article); Nflr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Ngnt = genitive construction; Nnum = numeral determiner and noun.

The numeral and genitive are both used fewer than ten times by Matthijs and are therefore not further investigated. As for Abel, there is a large overlap between the determiner types frequently used in the input and the age at which different determiner types have become productive in the child’s speech.
Sarah
Sarah’s M1UW at 2;0 is 1.6 (§4.2.1). At this age, she mainly uses grammatical bare nouns, ungrammatical bare nouns and nouns preceded by fillers to refer to persons and objects (Table 5.3). The indefinite and definite determiner are also productively used from 2;0 onwards (see 14 and 15). Three spontaneous uses in different contexts of the possessive determiner are found by 2;3 (see 16).

Table 5.3. Frequency of different types of bare nouns and nouns with different types of full determiners in raw numbers per age point (and as a percentage of the total number of nominal references per age point) for Sarah and input to Sarah (Dutch)

<table>
<thead>
<tr>
<th>Age</th>
<th>Nmsart</th>
<th>Nflr</th>
<th>Nbare</th>
<th>Nind-pl</th>
<th>Nind-sg</th>
<th>Ndef</th>
<th>Ndem</th>
<th>Npos</th>
<th>Ngnt</th>
<th>Nnum</th>
<th>Total 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td>108</td>
<td>20</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>142</td>
</tr>
<tr>
<td>2;3</td>
<td>114</td>
<td>14</td>
<td>14</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>161</td>
<td></td>
</tr>
<tr>
<td>2;6</td>
<td>53</td>
<td>10</td>
<td>6</td>
<td>11</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>97</td>
<td></td>
</tr>
</tbody>
</table>

Notes. Nmsart = ungrammatical bare noun (missing article); Nflr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Ngnt = genitive construction; Nnum = numeral determiner and noun.

(14) Productive use of indefinite determiner (Sarah, Dutch, from 2;0 onwards)
   a. cH:i:  En een hond.
     ‘And a dog’ (2;0)
   b. cH:i:  Datơ nog een vis.
     ‘That another fish’ (2;0)
   c. cH:i:  Een bad.
     ‘A bath’ (1;9)

(15) Productive use of definite determiner (Sarah, Dutch, from 2;0 onwards)
   a. cH:i:  Weg de koffietje.
     ‘Gone the small coffee’ (2;0)
   b. cH:i:  Zegơ niet, de auto.
     ‘Don’t say, the car’ (2;0)
c. CHI: Ook in de buik. (1;11)
   ‘Also in the stomach’

(16) Productive use of possessive determiner (Sarah, Dutch, from 2;0 onwards)

a. CHI: In je zak. (2;0)
   ‘In your pocket’

b. CHI: Mammie, me [: mijn] sokken! (2;1)
   ‘Mummy, my socks!’

c. CHI: Vliegen op m(ijn) hand. (2;3)
   ‘Flies on my hand’

Productive use of the demonstrative and numeral determiner is established at 2;6 (see examples 17 and 18). From 2;9 onwards, determiners become generally more frequent in Sarah’s data. The genitive construction is, however, used infrequently at all age points. Only one instance was found in the analyzed data at 2;9. This form is therefore not further investigated. Again, the order in which different determiner forms become productively used closely mirrors the frequency of determiners in the input from Sarah’s mother.

(17) Productive use of demonstrative determiner (Sarah, Dutch, from 2;6 onwards)

a. CHI: (I)k wil dese [: deze] (s)pelletje. (2;3)
   ‘I want this game’

b. CHI: Die hondje ook bad. (2;1)
   ‘That doggie also (in) bath’

c. CHI: Die kont is kapot. (2;6)
   ‘That bum is broken’

(18) Productive use of numeral determiner (Sarah, Dutch, from 2;6 onwards)

a. CHI: Vijf(f), vier vogel(t)je(s). (2;3)
   ‘Five, four birdies’

b. CHI: Ik gooi vier, vijf (s)tokjes. (2;5)
   ‘I throw four, five sticks’

c. CHI: Twee (s)tukjes. (2;6)
   ‘Two pieces’

Summary: acquisition of determiners in Dutch

The Dutch children first use grammatical bare nouns or ungrammatical bare nouns and also nouns preceded by a filler syllable for person and object reference. The indefinite, definite, and demonstrative determiner are productively used by all three children at 2;6 (Table 5.4).
Table 5.4. Age points of earliest productive use in the data of different types of determiners per child (Dutch)

<table>
<thead>
<tr>
<th>Type of Determiner</th>
<th>Abel</th>
<th>Matthijs</th>
<th>Sarah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indefinite determiner</td>
<td>2;0</td>
<td>2;6</td>
<td>2;0</td>
</tr>
<tr>
<td>Definite determiner</td>
<td>2;3</td>
<td>2;3</td>
<td>2;0</td>
</tr>
<tr>
<td>Demonstrative determiner</td>
<td>2;3</td>
<td>2;6</td>
<td>2;6</td>
</tr>
<tr>
<td>Possessive determiner</td>
<td>2;3</td>
<td>3;0</td>
<td>2;3</td>
</tr>
<tr>
<td>Numeral determiner</td>
<td>na</td>
<td>na</td>
<td>2;6</td>
</tr>
<tr>
<td>Genitive construction</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>

Notes. na = not analyzed for productive use because of no or too few occurrences in the data.

This was also expected on the basis of earlier research (§3.2.1.1). The possessive determiner is productively used by Abel and Sarah at 2;3 and at 3;0 by Matthijs. Generally, determiners are infrequent in the data from the Dutch children until 2;9. Statistical analyses of form-function use can therefore only be carried out from this age onwards (see Chapter 7). Moreover, the genitive construction is very infrequent at all age points in the Dutch data: it occurs fewer than ten times in the data for all three children. The numeral determiner is infrequent in the data of Abel and Matthijs. Given their infrequent use, the genitive construction and numeral determiner will not be investigated individually for form-function use in Chapter 7.

There is individual variation between the children in building up the system of different determiners (Table 5.4). Abel already uses most determiner types productively at 2;3. Sarah has all determiners available for productive use at 2;6. Matthijs is in general slower than the other two children, but by 3;0, he uses all determiner types investigated productively. Differences in the timing of determiner acquisition between the three Dutch children are further discussed in §5.3.2.1, where the use of the general category of determiners in obligatory morphosyntactic contexts is presented.

5.3.1.2 English

Adam

For Adam, it is not possible to track back the productivity of the forms prior to 2;3, since this is the earliest available sample in the corpus (§4.2.2). At 2;3, Adam’s mluw is 2.1. He uses mostly grammatical or ungrammatical bare nouns for reference at this age (Table 5.5).

The indefinite and definite determiner are not very frequent in the sample
analyzed at 2;3, but examples (19) and (20) show that he can use these forms productively at this age.

Table 5.5. Frequency of different types of bare nouns and nouns with different types of full determiners in raw numbers per age point (and as a percentage of the total number of nominal references per age point) for Adam and input to Adam (English)

<table>
<thead>
<tr>
<th>Age</th>
<th>Bare noun types</th>
<th>Nouns with full determiners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nmsart</td>
<td>Nflr</td>
</tr>
<tr>
<td>2;0</td>
<td>no data available</td>
<td>no data available</td>
</tr>
<tr>
<td>2;3</td>
<td>165 (84%)</td>
<td>0</td>
</tr>
<tr>
<td>2;6</td>
<td>153 (77%)</td>
<td>7</td>
</tr>
<tr>
<td>2;9</td>
<td>133 (72%)</td>
<td>7</td>
</tr>
<tr>
<td>3;0</td>
<td>49 (27%)</td>
<td>13</td>
</tr>
<tr>
<td>3;3</td>
<td>21 (13%)</td>
<td>3</td>
</tr>
<tr>
<td>Input 2;3</td>
<td>8 (9%)</td>
<td>2</td>
</tr>
<tr>
<td>Input 3;3</td>
<td>2 (3%)</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes. Nmsart = ungrammatical bare noun (missing article); Nflr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Ngnt = genitive construction; Nnum = numeral determiner and noun.

(19) Productive use of indefinite determiner (Adam, English, from 2;3 onwards)

a. CHI: I like a bulldozer. (2;3)

b. CHI: See a [?] truck. (2;3)

c. CHI: Yeah # a [?] man # yeah. (2;3)

(20) Productive use of definite determiner (Adam, English, from 2;3 onwards)

a. CHI: Hit the [?] ball. (2;3)

b. CHI: Write the [?] paper. (2;3)

c. CHI: Find [?] the bum(ble) bee. (2;3, outside analyzed sample)

The possessive determiner is only used in its first person form at 2;3. At this age, the possessive form most likely functions as a non-nominative subject, as in (21a), or as an operator indicating that the child wants to have the object referred to with the following noun, as in (21b). From 2;6 onwards, there
is evidence for the productive use of possessive determiners and also of demonstrative determiners by Adam (see examples 23 and 22). The numeral determiner and genitive construction occur fewer than ten times in Adam’s data and are therefore not further investigated. In general, determiners remain infrequent up to 2;9 in Adam’s speech. In the input, nouns with an indefinite or definite determiner are the forms used most frequently for nominal reference.

(21) Possessive pronouns as non-nominative subject (a) or operator (b) (Adam, English)
   a. chi: Ride that # my. (2;3)
   b. chi: My pillow my. (2;3)

(22) Productive use of possessive determiner (Adam, English, from 2;6 onwards)
   a. chi: Dat’s a my pencil. (2;6)
   b. chi: Dat’s a your car. (2;6)
   c. chi: Hurt your elbow. (2;6)

(23) Productive use of demonstrative determiner (Adam, English, from 2;6 onwards)
   a. chi: I get that brush # that brush. (2;3)
   b. chi: Put dat (pa)jama(s) on. (2;3, outside analyzed sample)
   c. chi: Ride dat a blue one. (2;6)
      ‘Ride with that blue one’

Nina
At 2;0, Nina has an MLUw of 2.2 (§4.2.2) and she uses several different nominal forms for person and object reference (Table 5.6). In addition to grammatical and ungrammatical bare nouns, Nina also uses indefinite, definite, demonstrative and possessive determiners and the genitive construction. The productivity of these forms is evident from at least three different uses in the data at 2;0 (see 24-28). The numeral determiner is not further investigated due to too few occurrences. In the input to Nina, nouns with an indefinite or definite determiner are most frequently used. In the input sample at 3;3, the possessive determiner is extremely frequent (33%). Nina and her mother are playing with puppets and the mother often refers to the puppets’ body parts and clothes.
### Table 5.6. Frequency of different types of bare nouns and nouns with different types of full determiners in raw numbers per age point (and as a percentage of the total number of nominal references per age point) for Nina and input to Nina (English)

<table>
<thead>
<tr>
<th>Age</th>
<th>Nmsart</th>
<th>Nflr</th>
<th>Nbare</th>
<th>Nind-pl</th>
<th>Nind-sg</th>
<th>Ndef</th>
<th>Ndem</th>
<th>Npos</th>
<th>Ngnt</th>
<th>Nnum</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td>64 (37%)</td>
<td>0</td>
<td>0</td>
<td>15 (9%)</td>
<td>33 (19%)</td>
<td>23 (13%)</td>
<td>8 (5%)</td>
<td>13 (11%)</td>
<td>20 (11%)</td>
<td>1 (1%)</td>
<td>175</td>
</tr>
<tr>
<td>2;3</td>
<td>36 (13%)</td>
<td>4</td>
<td>7 (2%)</td>
<td>33 (25%)</td>
<td>84 (31%)</td>
<td>28 (10%)</td>
<td>36 (13%)</td>
<td>3 (1%)</td>
<td>0</td>
<td>269</td>
<td></td>
</tr>
<tr>
<td>2;6</td>
<td>13 (6%)</td>
<td>5</td>
<td>22 (9%)</td>
<td>110 (47%)</td>
<td>36 (15%)</td>
<td>13 (6%)</td>
<td>4 (2%)</td>
<td>2 (1%)</td>
<td>235</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;9</td>
<td>7 (5%)</td>
<td>14</td>
<td>21 (14%)</td>
<td>32 (21%)</td>
<td>43 (29%)</td>
<td>11 (7%)</td>
<td>19 (13%)</td>
<td>2 (1%)</td>
<td>1 (1%)</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>3;0</td>
<td>11 (4%)</td>
<td>23</td>
<td>15 (8%)</td>
<td>51 (33%)</td>
<td>87 (31%)</td>
<td>30 (11%)</td>
<td>57 (21%)</td>
<td>2 (1%)</td>
<td>2 (1%)</td>
<td>278</td>
<td></td>
</tr>
<tr>
<td>3;3</td>
<td>11 (5%)</td>
<td>17</td>
<td>16 (7%)</td>
<td>38 (16%)</td>
<td>35 (15%)</td>
<td>36 (16%)</td>
<td>70 (30%)</td>
<td>6 (3%)</td>
<td>3 (1%)</td>
<td>252</td>
<td></td>
</tr>
</tbody>
</table>

### Notes.

Nmsart = ungrammatical bare noun (missing article); Nflr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Ngnt = genitive construction; Nnum = numeral determiner and noun.

(24) Productive use of indefinite determiner (Nina, English, from 2;0 onwards)

a. **chI**: A lady’s on it.  
   (2;0)

b. **chI**: A fox.  
   (2;0)

c. **chI**: Holding a basket.  
   (2;0)

(25) Productive use of definite determiner (Nina, English, from 2;0 onwards)

a. **chI**: In the little house.  
   (2;0)

b. **chI**: Here # on the horsie.  
   (2;0)

c. **chI**: That the doctor.  
   (2;0)

(26) Productive use of demonstrative determiner (Nina, English, from 2;0 onwards)

a. **chI**: Animals # that truck fall down.  
   (2;0)

b. **chI**: Read this book.  
   (2;0)

c. **chI**: That monkey crying.  
   (2;0)

(27) Productive use of possessive determiner (Nina, English, from 2;0 onwards)

a. **chI**: Head # his head around.  
   (2;0)

b. **chI**: Lie down my hand.  
   (2;0)

c. **chI**: On my ear.  
   (2;0)
(28) Productive use of genitive construction (Nina, English, from 2;0 onwards)

- **a.** CHI: On mommy’s hand. (2;0)
- **b.** CHI: That’s Leila’s monkey. (2;0)
- **c.** CHI: Clap monkey’s hand. (2;0)

**Peter**

At 2;0, Peter produces the indefinite, definite, possessive and numeral determiner in addition to both grammatical and ungrammatical bare nouns for nominal reference (Table 5.7). At this age, his MLUW is 2.3 (§4.2.2). Examples (29)–(31) show that the indefinite, definite and numeral determiner are used productively in the data at 2;0, although the numeral determiner is restricted to the number ‘two’.

<table>
<thead>
<tr>
<th>Age</th>
<th>Bare noun types</th>
<th>Nouns with full determiners</th>
<th>Total 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nmsart</td>
<td>Nfr</td>
<td>Nbare</td>
</tr>
<tr>
<td>2;0</td>
<td>45 (60%)</td>
<td>0 (5%)</td>
<td>4 (1%)</td>
</tr>
<tr>
<td>2;3</td>
<td>30 (26%)</td>
<td>0 (4%)</td>
<td>9 (8%)</td>
</tr>
<tr>
<td>2;6</td>
<td>10 (6%)</td>
<td>9 (5%)</td>
<td>5 (3%)</td>
</tr>
<tr>
<td>2;9</td>
<td>15 (10%)</td>
<td>21 (14%)</td>
<td>6 (4%)</td>
</tr>
<tr>
<td>3;0</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
</tr>
<tr>
<td>3;3</td>
<td>11 (5%)</td>
<td>4 (2%)</td>
<td>21 (10%)</td>
</tr>
<tr>
<td>Input 2;3</td>
<td>3 (4%)</td>
<td>1 (1%)</td>
<td>3 (4%)</td>
</tr>
<tr>
<td>Input 3;3</td>
<td>2 (2%)</td>
<td>0 (2%)</td>
<td>2 (5%)</td>
</tr>
</tbody>
</table>

**Notes.** Nmsart = ungrammatical bare noun (missing article); Nfr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Ngnt = genitive construction; Nnum = numeral determiner and noun.

(29) Productive use of indefinite determiner (Peter, English, from 2;0 onwards)

- **a.** CHI: That’s a mouse? (2;0)
- **b.** CHI: A new piece? (2;0)
- **c.** CHI: Here (i)s a donkey? (2;0)
(30) Productive use of definite determiner (Peter, English, from 2;0 onwards)
   a. CHI: Open # buttons # open the buttons. (2;0)
   b. CHI: Peter has the cow. (2;0)
   c. CHI: What's that there # on the shelf # what's that there shelf. (2;0)

(31) Productive use of numeral determiner (Peter, English, from 2;0 onwards)
   a. CHI: Two pens. (2;0)
   b. CHI: Two trucks. (2;0)
   c. CHI: Two dogs. (2;0)

The other determiner types are not yet productively used by Peter at 2;0. At 2;3, the possessive determiner has become available for productive use (see 32), as has the genitive construction (see example 33). Demonstrative determiners are not used in the data at 2;3. The use of this form in the samples between 2;0 and 2;3 (see 34), however, provide evidence for productivity at 2;3. In the input, a strong preference is found for the use of nouns with an indefinite or definite determiner in nominal reference. This is in line with what was found in the input addressed to the other children acquiring English.

(32) Productive use of possessive determiner (Peter, English, from 2;3 onwards)
   a. CHI: It’s my fish. (2;3)
   b. CHI: My cookie in there. (2;1)
   c. CHI: Pick up my cup. (2;1)

(33) Productive use of genitive construction (Peter, English, from 2;3 onwards)
   a. CHI: It’s mommy’s pencils. (2;3)
   b. CHI: That’s Patsy’s cookie. (2;2)
   c. CHI: Going to Nana’s house to see Nana. (2;2)

(34) Productive use of demonstrative determiner (Peter, English, from 2;3 onwards)
   a. CHI: Me move that thing off. (2;1)
   b. CHI: Gi(ve) me that screwdriver # thank you. (2;2)
   c. CHI: I take this bag. (2;3, outside analyzed sample)

Summary: acquisition of determiners in English
The English-speaking children use many grammatical and ungrammatical bare nouns for person and object reference at the early ages. By 2;6 however, all three children are able to use indefinite, definite, demonstrative and possessive determiners productively (Table 5.8). There is variation between the children in the ages of productive use. Nina uses all different types of
the acquisition of morphosyntactic forms for person and object reference

determiners studied productively at 2;0, Peter at 2;3, whereas it takes Adam until 2;6 to productively use all the different determiner types.

Table 5.8. Age points of earliest productive use in the data of different types of determiners per child (English)

<table>
<thead>
<tr>
<th></th>
<th>Adam</th>
<th>Nina</th>
<th>Peter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indefinite determiner</td>
<td>2;3</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Definite determiner</td>
<td>2;3</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Demonstrative determiner</td>
<td>2;6</td>
<td>2;0</td>
<td>2;3</td>
</tr>
<tr>
<td>Possessive determiner</td>
<td>2;6</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Numeral determiner</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Genitive construction</td>
<td>na</td>
<td>2;0</td>
<td>2;3</td>
</tr>
</tbody>
</table>

Notes. na = not analyzed for productive use because of no or too few occurrences in the data. Italics indicate that the age point given is the earliest age point for which data could be analyzed, if different from 2;0.

Differences in the timing of determiner acquisition between the children are further discussed in §5.3.2.2, where the use of the general category of determiners in obligatory morphosyntactic contexts is presented. On the basis of the results on productive use reported on in this section, the investigation of form-function combinations of nouns and determiners can start around 2;3 (Chapter 7). The use of numeral determiners will not be further investigated, since this form is infrequent in the speech of two of the three children.

5.3.1.3 French

There are differences between French and the other two languages in the types of determiners that are available in referential expressions (§2.2.1). French makes use of an indefinite plural determiner and partitive determiner. Moreover, the genitive construction does not occur in French.

Anne

At 2;0, Anne has an mluw of 2.3 (§4.2.3). She uses ungrammatical bare nouns and nouns preceded by a filler syllable for nominal reference (Table 5.9). In addition, she uses the indefinite plural, indefinite singular and definite determiner productively (see 36 and 37). Between 2;0 and 2;3, Anne starts to use the possessive determiner productively, although mainly in its first person form (see 38). The partitive determiner is also productively used at this age (see 39). The demonstrative determiner is acquired for productive use at 2;6 (see 40).
Table 5.9. Frequency of different types of bare nouns and nouns with different types of full determiners in raw numbers per age point (and as a percentage of the total number of nominal references per age point) for Anne and input to Anne (French)

<table>
<thead>
<tr>
<th>Age</th>
<th>Bare noun types</th>
<th>Nouns with full determiners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nmsart Nflr Nbare</td>
<td>Nind-pl Nind-sg Ndef Ndem Npos Nprt Nnum Total</td>
</tr>
<tr>
<td>2;0</td>
<td>31 (43%) 10 o 0 2 (1%) 10 (14%) 20 o o o o</td>
<td>73</td>
</tr>
<tr>
<td>2;3</td>
<td>28 9 o (23%) 0 (1%) 8 (7%) 8 (14%) 26 2 o</td>
<td>124</td>
</tr>
<tr>
<td>2;6</td>
<td>35 4 o (19%) 0 (2%) 13 (2%) 13 (7%) 108 2 31 2 o</td>
<td>189</td>
</tr>
<tr>
<td>2;9</td>
<td>8 (6%) 3 (2%) 1 (1%) 21 (17%) 25 (20%) 48 o 17 (14%) 2 o</td>
<td>125</td>
</tr>
<tr>
<td>3;0</td>
<td>4 (3%) o o 0 (1%) 21 (17%) 36 (28%) 54 1 54 o o</td>
<td>130</td>
</tr>
<tr>
<td>3;3</td>
<td>4 o o (5%) 0 (1%) 12 (9%) 18 (13%) 59 8 26 7 1 (1%)</td>
<td>135</td>
</tr>
<tr>
<td>Input 2;3</td>
<td>o o o (1%) 0 (1%) 12 (11%) 31 (14%) 34 (13%) 42 (13%) 1 (1%) 78</td>
<td></td>
</tr>
<tr>
<td>Input 3;3</td>
<td>o o o (1%) 0 (1%) 10 (11%) 17 (12%) 34 2 10 5 0 (6%)</td>
<td>91</td>
</tr>
</tbody>
</table>

Notes. Nmsart = ungrammatical bare noun (missing article); Nflr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural determiner and noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Nprt = partitive determiner and noun; Nnum = numeral determiner and noun.

(35) Productive use of plural indefinite determiner (Anne, French, from 2;0 onwards)

a. chi: (Ga)ëtan dessine des nuages alors. (2;0)
   ‘So, Gaëtan is drawing clouds’

b. chi: Des petits pois. (2;0)
   ‘Peas’

c. chi: e des belles chaussures. (1;11)
   ‘Nice shoes’

(36) Productive use of singular indefinite determiner (Anne, French, from 2;0 onwards)

a. chi: Un (pe)tit canard. (2;0)
   ‘A little duck’

b. chi: (J’) ai fait un (hip)popotame. (2;0)
   ‘(I) have made a hippopotamus’

c. chi: Baleine, je (des)sine une balein(e). (2;0)
   ‘Whale, I am drawing a whale’

(37) Productive use of definite determiner (Anne, French, from 2;0 onwards)

a. chi: (Elle) est partie, la dame. (2;0)
   ‘Has left, the lady’

b. chi: Le bébé, il(I) pleure. (2;0)
   ‘The baby, he cries’
c. **ChI:** Le petit pull alors.  
   ‘The small pullover then’  
   \(2;0\)

(38) **Productive use of possessive determiner** (Anne, French, from 2;3 onwards)

a. **ChI:** Et ma voiture, (el)le est où?  
   ‘And my car, where is it?’  
   \(2;3\)

b. **ChI:** (l) est où, mon [/] # mon [/] mon [=? ma] cass(er)ole?  
   ‘Where is it, my pan?’  
   \(2;3\)

c. **ChI:** Ma chaise.  
   ‘My chair’  
   \(2;3\)

(39) **Productive use of partitive determiner** (Anne, French, from 2;3 onwards)

a. **ChI:** (On mange) de la soupe.  
   ‘(We eat) soup’  
   \(2;3\)

b. **ChI:** Du jus e pomme.  
   ‘Apple juice’  
   \(2;2\)

c. **ChI:** Du pain.  
   ‘Bread’  
   \(2;2\)

(40) **Productive use of demonstrative determiner** (Anne, French, from 2;6 onwards)

a. **ChI:** Ce placard, (l) est bien, ce placard.  
   ‘This poster, it’s nice, this poster’  
   \(2;6\)

b. **ChI:** xx cette culotte, elle one tient pas.  
   ‘These shorts, they don’t stick’  
   \(2;6, \text{outside analyzed sample}\)

c. **ChI:** Ce gâteau yy dans la boîte, # voilà.  
   ‘Here you are, this cake, in the box’  
   \(2;4\)

There is only one instance of a numeral determiner in Anne’s speech. This form is therefore not further investigated for productive use. In the input, indefinite, definite and possessive determiners are used most frequently for nominal reference. The demonstrative determiner is infrequent, also compared to the use of this form in the Dutch and some of the English input.

**Grégoire**

At the age of 2;0, Grégoire’s Mluw is 2.1 (§4.2.3). At that stage of language development, he uses mainly ungrammatical bare nouns and nouns preceded by filler for nominal reference. Nouns with full determiners are infrequently used (Table 5.10). He is, however, able to use the definite determiner productively at 2;0 (see 41). Other determiner types become productively used only at later age points, such as the indefinite singular determiner and possessive determiner.
at 2;3 (see 42 and 43). For the indefinite plural, demonstrative and partitive determiners, the productivity criterion of at least three uses with different nouns is reached by 2;6 (see 44 and 45).

Table 5.10. Frequency of different types of bare nouns and nouns with different types of full determiners in raw numbers per age point (and as a percentage of the total number of nominal references per age point) for Grégoire and input to Grégoire (French)

<table>
<thead>
<tr>
<th>Age</th>
<th>Bare noun types</th>
<th>Nouns with full determiners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nmsart</td>
<td>Nflr</td>
</tr>
<tr>
<td>2;0</td>
<td>42 (38%)</td>
<td>59 (53%)</td>
</tr>
<tr>
<td>2;3</td>
<td>37 (27%)</td>
<td>20 (20%)</td>
</tr>
<tr>
<td>2;6</td>
<td>1 (1%)</td>
<td>16 (9%)</td>
</tr>
<tr>
<td>Input 2;3</td>
<td>1 (1%)</td>
<td>0</td>
</tr>
</tbody>
</table>

Notes. Nmsart = ungrammatical bare noun (missing article); Nflr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural determiner and noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Nprt = partitive determiner and noun; Nnum = numeral determiner and noun.

(41) Productive use of definite determiner (Grégoire, French, from 2;0 onwards)

a. chi: La table. (2;0)  
   ‘The table’

b. chi: Il a cassé le ballon. (2;0)  
   ‘He has smashed the balloon’

c. chi: Met les lunettes. (2;0)  
   ‘Put on the glasses’

(42) Productive use of singular indefinite determiner (Grégoire, French, from 2;3 onwards)

a. chi: Un chat. (1;10)  
   ‘A cat’

b. chi: Une petite tétine. (2;0)  
   ‘A little pacifier’

c. chi: Sur un canapé. (2;3)  
   ‘On a couch’

(43) Productive use of possessive determiner (Grégoire, French, from 2;3 onwards)

a. chi: Et mon [?] nounours. (2;0)  
   ‘And my teddy bear’

b. chi: Où y’est mes voitures? (2;3)  
   ‘Where is it, my cars?’
c. CHI: Lève pas mes chaussures. ‘Don’t pick up my shoes’ (2;3)

(44) Productive use of plural indefinite determiner (Grégoire, French, from 2:6 onwards)

a. CHI: Des motos fait du bruit. ‘Motors make noise’ (2;1)
b. CHI: Pour chercher des voitures. ‘To seek cars’ (2;3)
c. CHI: Le tracteur il prend des cailloux. ‘The tractor takes the cabbages’ (2;6)

(45) Productive use of demonstrative determiner (Grégoire, French, from 2:6 onwards)

a. CHI: Ces monstres i sont là. ‘These monsters, they are there’ (2;3)
b. CHI: Victor, il m’a prêté ce camion rigolo. ‘Victor, he has lent me this funny truck’ (2;6)
c. CHI: Je vais faire de la musique avec ce harmonica. ‘I am going to make music with this accordion’ (2;6)

(46) Productive use of partitive determiner (Grégoire, French, from 2:6 onwards)

a. CHI: A cheté du pain maman? ‘Buy bread Mummy?’ (2;0)
b. CHI: C’est du thym? ‘Is that thyme?’ (2;1)
c. CHI: J’ai donné du yaourt aux chevaux. ‘I gave yogurt to the horsies’ (2;6)

Numeral determiners do not occur in Grégoire’s data. This form is therefore not further investigated for this child. Nouns with an indefinite singular, definite or possessive determiner are the most frequent forms for nominal reference in the input.

Léa

Léa’s language is investigated between 2:9 and 3:3 (§4.2.3). At 2:9, she has an MLUW of 4.1 and hardly uses ungrammatical bare nouns (Table 5.11). Most determiner types, that is, the definite, indefinite, possessive and partitive, are already used productively at the start of the investigation of Léa’s data (see examples 47-51).
Table 5.11. Frequency of different types of bare nouns and nouns with different types of full determiners in raw numbers per age point (and as a percentage of the total number of nominal references per age point) for Léa and input to Léa (French)

<table>
<thead>
<tr>
<th>Age</th>
<th>Nmsart</th>
<th>Nflr</th>
<th>Nbare</th>
<th>Nind-pl</th>
<th>Nind-sg</th>
<th>Ndef</th>
<th>Ndem</th>
<th>Npos</th>
<th>Nprt</th>
<th>Nnum</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>2;9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>60</td>
<td>14</td>
<td>4</td>
<td>0</td>
<td></td>
<td></td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>(6%)</td>
<td>(18%)</td>
<td>(58%)</td>
<td>(14%)</td>
<td>(4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3;0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>43</td>
<td>15</td>
<td>15</td>
<td>1</td>
<td></td>
<td></td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>(13%)</td>
<td>(25%)</td>
<td>(35%)</td>
<td>(12%)</td>
<td>(12%)</td>
<td>(1%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3;3</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>37</td>
<td>16</td>
<td>12</td>
<td>0</td>
<td></td>
<td></td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>(5%)</td>
<td>(7%)</td>
<td></td>
<td>(18%)</td>
<td>(40%)</td>
<td>(17%)</td>
<td>(13%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>11</td>
<td>36</td>
<td>1</td>
<td>14</td>
<td>9</td>
<td>0</td>
<td>93</td>
</tr>
</tbody>
</table>

Notes. Nmsart = ungrammatical bare noun (missing article); Nflr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural determiner and noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Nprt = partitive determiner and noun; Nnum = numeral determiner and noun.

(47) Productive use of singular indefinite determiner (Léa, French, from 2;9 onwards)

a. CHI: Alors je mange une baguette.
   ‘So, I eat a baguette’ (2;9)

b. CHI: Comment tu as appuyé sur un bouton?
   ‘How have you pushed a button?’ (2;9)

c. CHI: Mais mais avec une chaise.
   ‘But but, with a chair’ (2;9)

(48) Productive use of plural indefinite determiner (Léa, French, from 2;9 onwards)

a. CHI: Tu vois, il y a des chiques oranges ici.
   ‘You see, there are orange chiques (= sweets) here’ (2;9)

b. CHI: Oui j(e) en mange souvent, des &Ber des Betterfood.
   ‘Yes, I often eat Betterfoods (= cookies)’ (2;9)

c. CHI: J(e) ai des perles dans ma main.
   ‘I have beads in my hand’ (2;8)

(49) Productive use of definite determiner (Léa, French, from 2;9 onwards)

a. CHI: Alors aller alors enlève l’appareil!
   ‘So go, so take the machine away’ (2;9)

b. CHI: Je vais chercher après la flèche.
   ‘I am going to look for the arrow’ (2;9)

c. CHI: Et avec les jouets # de Maman.
   ‘And with the toys of Mummy’ (2;9)

(50) Productive use of possessive determiner (Léa, French, from 2;9 onwards)

a. CHI: Non non, c(e) est vrai, dans son lit.
   ‘No no, it’s true, in his bed’ (2;9)
b. CHI: Avec mes briques # et ses briques.  (2;9)
   ‘With my blocks and his blocks’

c. CHI: Ben c(e) est mon petit chien.  (2;9)
   ‘Well, that’s my little dog’

(51) Productive use of partitive determiner (Léa, French, from 2;9 onwards)

a. CHI: Je bois # aussi # euh de l’ eau, aussi.  (2;9)
   ‘I also drink, eh water, also’

b. CHI: Mais en plus il y a du sucre dedans.  (2;9)
   ‘But furthermore, there is sugar inside’

c. CHI: C(e) est du sel qu’ il y a dedans.  (2;9)
   ‘There is salt inside’

The numeral and demonstrative determiner only occur once in the data. The age point at which these forms are productively used is therefore not further investigated. In the input, indefinite singular, definite and possessive determiners are most frequent. The demonstrative determiner is infrequent in the input, just as in Léa’s speech.

Philippe

The investigation of Philippe’s language starts at 2;3. His mluw at this age is 3.6 (§4.2.3). The number of ungrammatical bare nouns in Philippe’s speech is relatively low compared to the frequency of this form in the data of Anne and Grégoire (Table 5.12). Philippe does not produce fillers as proto-determiners. It might be the case that he has already passed through this stage at the start of the investigation. In contrast, he already uses most determiner types productively with at least three different nouns from 2;3 onwards (see examples 52-56).
Table 5.12. Frequency of different types of bare nouns and nouns with different types of full determiners in raw numbers per age point (and as a percentage of the total number of nominal references per age point) for Philippe and input to Philippe (French)

<table>
<thead>
<tr>
<th>Age</th>
<th>Nmsart</th>
<th>Nflr</th>
<th>Nbare</th>
<th>Nind-pl</th>
<th>Nind-sg</th>
<th>Ndef</th>
<th>Ndem</th>
<th>Npos</th>
<th>Nprt</th>
<th>Nnum</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>2;0</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
</tr>
<tr>
<td>2;3</td>
<td>17 (7%)</td>
<td>0</td>
<td>1 (0.4%)</td>
<td>16 (7%)</td>
<td>53 (22%)</td>
<td>118 (50%)</td>
<td>1 (0.4%)</td>
<td>8 (3%)</td>
<td>23 (10%)</td>
<td>0</td>
<td>237</td>
</tr>
<tr>
<td>2;6</td>
<td>11 (7%)</td>
<td>0</td>
<td>0</td>
<td>18 (11%)</td>
<td>19 (12%)</td>
<td>85 (53%)</td>
<td>18 (11%)</td>
<td>5 (3%)</td>
<td>3 (2%)</td>
<td>1 (1%)</td>
<td>160</td>
</tr>
<tr>
<td>2;9</td>
<td>1 (1%)</td>
<td>0</td>
<td>0</td>
<td>10 (5%)</td>
<td>45 (25%)</td>
<td>85 (46%)</td>
<td>18 (10%)</td>
<td>13 (7%)</td>
<td>8 (4%)</td>
<td>4 (2%)</td>
<td>184</td>
</tr>
<tr>
<td>3;0</td>
<td>0</td>
<td>0</td>
<td>11 (5%)</td>
<td>62 (28%)</td>
<td>94 (42%)</td>
<td>10 (5%)</td>
<td>26 (13%)</td>
<td>16 (8%)</td>
<td>3 (1%)</td>
<td></td>
<td>222</td>
</tr>
<tr>
<td>3;3</td>
<td>0</td>
<td>0</td>
<td>19 (9%)</td>
<td>67 (33%)</td>
<td>72 (35%)</td>
<td>12 (6%)</td>
<td>21 (10%)</td>
<td>7 (3%)</td>
<td>5 (3%)</td>
<td></td>
<td>203</td>
</tr>
<tr>
<td>Input 2;3</td>
<td>0</td>
<td>0</td>
<td>6 (6%)</td>
<td>15 (15%)</td>
<td>60 (40%)</td>
<td>4 (4%)</td>
<td>9 (9%)</td>
<td>6 (6%)</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Input 3;3</td>
<td>0</td>
<td>0</td>
<td>2 (3%)</td>
<td>11 (16%)</td>
<td>36 (51%)</td>
<td>5 (7%)</td>
<td>14 (20%)</td>
<td>1 (1%)</td>
<td>1 (1%)</td>
<td></td>
<td>70</td>
</tr>
</tbody>
</table>

Notes. Nmsart = ungrammatical bare noun (missing article); Nflr = filler and noun; Nbare = grammatical bare noun; Nind-pl = indefinite plural determiner and noun; Nind-sg = indefinite singular determiner and noun; Ndef = definite determiner and noun; Ndem = demonstrative determiner and noun; Npos = possessive determiner and noun; Nprt = partitive determiner and noun; Nnum = numeral determiner and noun.

(52) Productive use of singular indefinite determiner (Philippe, French, from 2;3 onwards)

a. chi: Un croissant pour papa. (2;3)
   ‘A croissant for daddy’

b. chi: Là un monsieur, un monsieur là. (2;3)
   ‘There a man, a man there’

c. chi: Prendre une chaise. (2;3)
   ‘Take a chair’

(53) Productive use of plural indefinite determiner (Philippe, French, from 2;3 onwards)

a. chi: C’est des grands garçons? (2;3)
   ‘Those are big boys?’

b. chi: Tu connais encore des animaux? (2;3)
   ‘Do you know any more animals?’

c. chi: Je porte des jouets. (2;3)
   ‘I carry toys’

(54) Productive use of definite determiner (Philippe, French, from 2;3 onwards)

a. chi: Roule bien le camion. (2;3)
   ‘Drives well the truck’

b. chi: Elle est cassée la vitre. (2;3)
   ‘It is broken, the window’

c. chi: Fait rouler les voitures dans le jardin. (2;3)
   ‘Make the cars drive in the garden’
(55) Productive use of possessive determiner (Philippe, French, from 2;3 onwards)

a. CHI: Un camion perdu sa roue.  (2;3)
   ‘A truck (has) lost its wheel’

b. CHI: Enlever son pneu.  (2;3)
   ‘Remove its tire’

c. CHI: Où elle est ma flûte?  (2;3)
   ‘Where is it, my flute?’

(56) Productive use of partitive determiner (Philippe, French, from 2;3 onwards)

a. CHI: On met encore du sable?  (2;3)
   ‘We put sand once more?’

b. CHI: Je veux encore du chocolat.  (2;3)
   ‘I want more chocolate’

c. CHI: A fait boire de l’eau la petite fille.  (2;3)
   ‘(She) has made (me) drink water, the little girl’

The demonstrative determiner is only used once in the data, at 2;3. Productivity of this form at this age, however, arises from diverse uses in earlier samples (see 57). The same holds for the productive use of the numeral determiner (see 58).

(57) Productive use of demonstrative determiner (Philippe, French, from 2;3 onwards)

a. CHI: Faisait cette dame à l’école?  (2;3)
   ‘(What) did that woman do at school?’

b. CHI: Qu’est-ce c’est ce petit animal?  (2;1)
   ‘What is it, that little animal?’

c. CHI: Trop petit ce morceau.  (2;2)
   ‘Too small this piece’

(58) Productive use of numeral determiner (Philippe, French, from 2;3 onwards)

a. CHI: Deux petites filles elles s’appellent.  (2;1)
   ‘Two little girls, they are called’

b. CHI: A deux montres, papa.  (2;2)
   ‘Has two watches, Daddy’

c. CHI: Il en a deux triangles.  (2;2)
   ‘He’s got two triangles of it’

Summary: acquisition of determiners in French

The three children whose language covers the early age points (Anne, Grégoire and Philippe) use nouns with determiners frequently for reference from 2;3 onwards, in addition to ungrammatical bare nouns and nouns preceded by a filler. These children are able to use the different determiner types studied productively at 2;6 (Table 5.13). On the basis of the data reported here, the investigation of form-function combinations for nouns and most determiner types can start around 2;3 (Chapter 7).
Table 5.13. Age points of earliest productive use in the data of different types of determiners per child (French)

<table>
<thead>
<tr>
<th>Type of Determiner</th>
<th>Anne</th>
<th>Grégoire</th>
<th>Léa</th>
<th>Philippe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indefinite determiner</td>
<td>2;0</td>
<td>2;3</td>
<td>2;9</td>
<td>2;3</td>
</tr>
<tr>
<td>Indefinite determiner plural</td>
<td>2;0</td>
<td>2;3</td>
<td>2;9</td>
<td>2;3</td>
</tr>
<tr>
<td>Definite determiner</td>
<td>2;0</td>
<td>2;0</td>
<td>2;9</td>
<td>2;3</td>
</tr>
<tr>
<td>Demonstrative determiner</td>
<td>2;6</td>
<td>2;6</td>
<td>na</td>
<td>2;3</td>
</tr>
<tr>
<td>Possessive determiner</td>
<td>2;3</td>
<td>2;3</td>
<td>2;9</td>
<td>2;3</td>
</tr>
<tr>
<td>Numeral determiner</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Partitive determiner</td>
<td>2;3</td>
<td>2;6</td>
<td>2;9</td>
<td>2;3</td>
</tr>
</tbody>
</table>

Notes. na = not analyzed for productive use because of no or too few occurrences in the data. Italics indicate that the age point given is the earliest age point for which data could be analyzed, if different from 2;0.

There are individual differences between the French-speaking children in building up the system of different determiners. Philippe already uses all determiner types at the earliest sample available for him (2;3). Anne acquires most determiner types for productive use between around 2;0 and 2;3. A large part of Grégoire’s determiner development takes place between 2;3 and 2;6. The investigation of Léa’s data starts at 2;9 and at this age, she has all determiner types available for productive use. Numeral determiners are used infrequently in the French data. This form will therefore not be investigated separately for form-function use in Chapter 7.

5.3.1.4 Cross-linguistic comparison

The children acquiring each of the three languages generally have most of the determiner types available for productive use before 2;6 (Table 5.14). The indefinite and definite determiner are usually productive at 2;0 or 2;3, whereas demonstrative and possessive determiners are either productively used simultaneously or about three months later in all three languages.

The numeral determiner is used fewer than ten times in the data of most children. The use of this form for pragmatic functions will therefore not be further investigated in Chapter 7. The genitive construction is only productive for two of the English children and does not occur (often enough) in the Dutch children’s data. This form will therefore not be examined for form-function use either. The absence of the genitive construction in the Dutch children’s data might be related to the fact that the genitive does not occur in the input data (§5.3.1.1). In adult Dutch, periphrastic constructions as het boek van Jan ‘the book of John’ or Jan z’n boek ‘John his book’, involving a possessive determiner, are more frequently used to express possession (see §2.2.1.4).
On the basis of earlier research, it appeared that French children acquire determiners faster than Dutch and English children (§3.2.1.4). It was therefore expected that productive use of different determiners would be evidenced earlier for the French than for the Dutch or the English children (§5.2). This expectation cannot however be confirmed on the basis of these data. There are no large differences between the Dutch, English and French children in the productive use of the indefinite, definite, demonstrative or possessive determiner from 2;0 onwards. It is, however, important to note that there might be a difference in the productive use of these forms before 2;0. This could not be investigated in this research. There were usually more than three different occurrences of especially the indefinite and definite determiner for the French and English children in the data at 2;0, whereas for the Dutch children additional samples had to be investigated to reach the productivity criterion. This might be an indication that determiners are more frequently used in English and French than in Dutch at this age. Whether this is indeed the case will be examined in the next section.

### 5.3.2 Frequency of use of determiners in obligatory morphosyntactic contexts

There are no large differences between the children in the moment at which individual determinant types are productively used. In all three languages, most children studied have all determinant types available for productive use before 2;6 (§5.3.1). However, the extent to which children use determiners in obligatory morphosyntactic positions also gives information about the rate of determiner development (Brown, 1973). In this section, the use of morphosyntactic devices in obligatory contexts will be analyzed.
for the Dutch, English and French children (§5.3.2.1-§5.3.2.3). On the basis of earlier research (§3.2.1.4), it is expected that the development of determiner use in obligatory contexts proceeds faster for the French children than for the Dutch and the English children.

It is important to note that all determiner-like elements that precede nouns are analyzed as determiners here. This includes indefinite singular, definite and demonstrative determiners, but also possessive and numeral determiners, as well as the indefinite plural and partitive determiners in French and genitives in English and Dutch. Filler syllables before nouns are included as determiners in Dutch and French to facilitate the cross-linguistic comparison in §5.3.2.4, since in English no distinction can be made between a filler syllable and the indefinite determiner. The filler syllable has the same phonological form as the indefinite determiner in this language (§3.2.1 and §4.4.1). Similarities or differences in determiner production rates between the children within and across languages will also be used as a linguistic basis to compare the children’s use of morphosyntactic forms for pragmatic functions (§7.5).

5.3.2.1 Dutch

Figure 5.1 presents the production of overt determiners and fillers by the Dutch children as a percentage of all contexts that require a determiner in the adult language. Grammatical bare nouns (mass and indefinite plural nouns) are not included in this analysis.

![Figure 5.1. Percentage of use of determiners and fillers in obligatory morphosyntactic contexts per child per age point (Dutch)](image_url)
As expected, the percentage of determiners and fillers in obligatory contexts increases between 2;0 and 3;3 for all three children. There are some significant differences between the children in the production of (proto-) determiners at a few age points. Abel produces significantly more (proto-) determiners than Matthijs at 2;0 ($\chi^2=11.87$, df=1, $p=0.001$, $C=0.26$) and 2;3 ($\chi^2=22.58$, df=1, $p<0.001$, $C=0.30$). Abel also produces more (proto-) determiners than Sarah at 2;3 ($\chi^2=13.56$, df=1, $p<0.001$, $C=0.25$). Sarah produces more (proto-determiners) than Matthijs at 2;0 ($\chi^2=16.91$, df=1, $p<0.001$, $C=0.26$) and 2;9 ($\chi^2=13.61$, df=1, $p<0.001$, $C=0.21$). The acquisition of the determiner system thus starts somewhat later for Matthijs than for the other two children. This picture also emerged from the analysis of determiner productivity (§5.3.1.1) and the development of the mluw (§4.2.1).

At the end of the period investigated, none of the three children has yet reached Brown’s 90-percent-criterion (1973). This is in accordance with results from earlier literature. Schaeffer (2000) found that a group of 13 Dutch children with a mean age of 3;6 only produced 78% of determiners before nouns in object position (§3.2.1.1).

### 5.3.2.2 English

There is large variation between the three English-speaking children in the speed of determiner acquisition in terms of Brown’s criteria (Figure 5.2). Nina and Peter reach the 90-percent-criterion at 2;6, whereas Adam is still just below the criterion at 3;3. This individual variation is also obvious from statistic comparisons between pairs of children.

![Figure 5.2. Percentage of use of determiners and fillers in obligatory morphosyntactic contexts per child per age point (English)](image-url)
Nina produces significantly more determiners in obligatory positions than Adam at all ages investigated: 2;3 (\(\chi^2=262.84\), df=1, \(p<0.001\), C=0.61), 2;6 (\(\chi^2=232.68\), df=1, \(p<0.001\), C=0.61), 2;9 (\(\chi^2=137.20\), df=1, \(p<0.001\), C=0.57), 3;0 (\(\chi^2=56.45\), df=1, \(p<0.001\), C=0.36) and 3;3 (\(\chi^2=7.26\); df=1, \(p=0.006\), C=0.14). Peter also produces significantly more determiners than Adam at all ages: 2;3 (\(\chi^2=121.51\), df=1, \(p<0.001\), C=0.55), 2;6 (\(\chi^2=194.72\), df=1, \(p<0.001\), C=0.60), 2;9 (\(\chi^2=124.53\), df=1, \(p<0.001\), C=0.54) and 3;3 (\(\chi^2=5.64\), df=1, \(p=0.014\), C=0.13). The acquisition of determiners for Nina and Peter is quite alike. Only at 2;0 (\(\chi^2=11.52\), df=1, \(p=0.001\), C=0.22) and 2;3 (\(\chi^2=12.00\), df=1, \(p=0.001\), C=0.18) does Nina produce significantly more determiners than Peter. The productivity analysis in §5.3.1.2 already showed that Adam is slower than Peter and Nina in determiner acquisition. The current analysis, however, shows this difference more clearly. The differences in rate of determiner acquisition between the children acquiring English offer the possibility to investigate the influence of speed of determiner development on the use of these forms for pragmatic functions within this language (§7.5.2).

The levels of determiner production in obligatory positions of the three children can be compared with those found in 17 English-speaking children investigated by Abu-Akel and Bailey (2000) (§3.2). This group has attained a 40%-50% production level by 2;0. At 3;3, they produced 87% of the determiners in obligatory contexts. It thus seems that Adam acquires determiners more slowly than these English-speaking children, but that he has caught up by 3;3. Conversely, Nina and Peter have already reached the 90-percent-criterion at 2;6. They appear to be faster in determiner acquisition than the group of children in Abu-Akel and Bailey’s study.

### 5.3.2.3 French

There are significant differences between the French children in the production of (proto-) determiners, especially at the early age points (Figure 5.3). At the earliest age point 2;0, Anne and Grégoire produce (proto-) determiners in more than 50% of obligatory positions. Philippe and Léa already produce determiners in more than 90% of the obligatory contexts (Brown’s criterion) at the start of their data analysis (2;3 and 2;9 respectively).
Anne produces fewer determiners than Grégoire at 2;6 ($\chi^2=32.46$, df=1, $p<0.001$, $C=0.29$). Anne also produces fewer determiners than Léa at 2;9 (two-sided Fisher’s exact, $p=0.007$, $C=0.17$) and than Philippe at all age points: 2;3 ($\chi^2=17.57$, df=1, $p<0.001$, $C=0.22$), 2;6 ($\chi^2=10.27$, df=1, $p=0.001$, $C=0.17$), 2;9 (two-sided Fisher’s exact, $p=0.004$, $C=0.17$), 3;0 (two-sided Fisher’s exact, $p=0.018$, $C=0.14$) and 3;3 (two-sided Fisher’s exact, $p=0.025$, $C=0.13$). Furthermore, Philippe produces more determiners than Grégoire at 2;3 ($\chi^2=24.62$, df=1, $p<0.001$, $C=0.26$) and than Léa at 3;3 (two-sided Fisher’s exact, $p=0.003$, $C=0.13$). However, Philippe produces fewer determiners than Grégoire at 2;6 ($\chi^2=9.49$, df=1, $p=0.002$, $C=0.19$).

In sum, the French-speaking children have started to use determiners before 2;0 and they have reached Brown’s 90-precent-criterion at or before 2;9. For Léa, there are no data available before 2;9. At that age she uses determiners in 100% of the obligatory contexts. The acquisition of determiners proceeds a little slower for Anne than for the other three children. Philippe, however, seems to be acquiring the determiner system faster than Anne and Grégoire, given his higher rate of determiner production at 2;3. Philippe’s faster language development is confirmed by his higher $\text{mlu}_w$ at the early age points (§4.2.3). This difference in determiner development between the French children offers the possibility of
investigating the influence of speed of determiner development on form-function use within this language (§7.5.2).

The speed of determiner acquisition by the four French-speaking children studied is in line with other reports in the literature (§3.2.1.3). Bassano, Maillochon and Mottet (2008) found that a group of 20 French-speaking children uses (proto-) determiners in 78% of the obligatory contexts at 2;6 and in 96% of the contexts at 3;3. Research with far fewer children reports even faster acquisition rates, that is, (proto-) determiner production rates of around 80% for three children already at 2;0 (Van der Velde, Jakubowicz & Rigaut, 2002).

5.3.2.4 Cross-linguistic comparison

By comparing the results from the previous sections, it appears that the French children use more determiners in obligatory positions than at least some of the Dutch and English children. To facilitate the cross-linguistic comparison, the data of the children are pooled per language in Figure 5.4.

Figure 5.4. Cross-linguistic comparison of the percentage of use of determiners and fillers in obligatory morphosyntactic contexts per age point in child Dutch, English and French

Firstly, the French children use determiners significantly more frequently than the Dutch children at all ages investigated here (2;0: \( \chi^2 = 115.84, df = 1, p < 0.001, \)

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This section also appears in Rozendaal & Baker (2008a).
the acquisition of morphosyntactic forms for person and object reference

C=0.44; 2;3: χ^2=365.55, df=1, p<0.001, C=0.56; 2;6: χ^2=246.02, df=1, p<0.001, C=0.47; 2;9: χ^2=140.88, df=1, p<0.001, C=0.39; 3;0: χ^2=98.57, df=1, p<0.001, C=0.33; 3;3: χ^2=68.99, df=1, p<0.001, C=0.30).

Secondly, the English children use determiners significantly more frequently than the Dutch children at almost all age points, except 2;9 (2;0: χ^2=92.37, df=1, p<0.001, C=0.38; 2;3: χ^2=140.43, df=1, p<0.001, C=0.37; 2;6: χ^2=59.73, df=1, p<0.001, C=0.25; 3;0: χ^2=4.53, df=1, p=0.03, C=0.08; 3;3: χ^2=26.54, df=1, p<0.001, C=0.18).

Finally, there is also a difference in determiner use between French and English. The French children use significantly more determiners than the English children at most ages (2;3: χ^2=87.33, df=1, p<0.001, C=0.28; 2;6: χ^2=86.27, df=1, p<0.001, C=0.27; 2;9: χ^2=158.98, df=1, p<0.001, C=0.40; 3;0: χ^2=66.15, df=1, p<0.001, C=0.27; 3;3: χ^2=16.91, df=1, p<0.001, C=0.13).

As expected, the French children use more determiners in obligatory positions between 2;0 and 3;3 than the Dutch and English children. Additionally, the English children use more determiners in obligatory positions between 2;0 and 3;3 than the Dutch children do. As discussed in §4.2, the language levels of the children included in this study are comparable to a norm group on the basis of MLUw. The differences found here can therefore not be due to any of the subjects being extremely delayed or advanced in their overall linguistic level. If an input-driven model of language acquisition is assumed, the frequency and consistency of determiner use in the input may impact on the speed of determiner development (§1.2.1, §2.2.1 and §3.2.1.4). That is, the more frequent determiners are, the more salient and reliable the frames offered for determiner use.

An analysis of the input was therefore carried out to investigate whether the differences in determiner development reported can be traced back to the input. From Table 5.15 it is clear that the French input is more consistent in the use of nouns with determiners (almost 100%) than the English (90%) and Dutch (86%) input. The differences between the language pairs are significant: Dutch-English (χ^2=5.35, df=1, p=0.02, C=0.07), Dutch-French (χ^2=78.06, df=1, p<0.001, C=0.27) and English-French (χ^2=52.18, df=1, p<0.001, C=0.21). The input thus reflects the same variation as the children’s acquisition rate and input patterns seem to play a highly relevant part in explaining the differences in the rate of acquisition of determiners across these languages.
Table 5.15. Frequency of bare nouns and nouns with a determiner in the input per language as a percentage of the total number of nominal references per language (and in raw figures)

<table>
<thead>
<tr>
<th>Language</th>
<th>Ungrammatical bare nouns</th>
<th>Grammatical bare nouns</th>
<th>Nouns with determiner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dutch</td>
<td>5% (27)</td>
<td>9% (43)</td>
<td>86% (423)</td>
</tr>
<tr>
<td>English</td>
<td>2% (16)</td>
<td>8% (48)</td>
<td>90% (591)</td>
</tr>
<tr>
<td>French</td>
<td>0.2% (1)</td>
<td>0% (0)</td>
<td>99.8% (532)</td>
</tr>
</tbody>
</table>

In sum, there are differences between the children acquiring Dutch, English and French in the speed of acquisition of the general category of determiners. These differences can be related to the frequency of determiners in the input. The differences between the languages offer possibilities of investigating the extent to which the earlier acquisition of morphosyntactic forms influences the pragmatic use of these forms (see §7.5.1).

5.4 Acquisition of pronouns and proper names for person and object reference

In contrast to determiners, the acquisition of pronouns cannot be easily analyzed in terms of obligatory morphosyntactic contexts (§5.2). In the current section therefore, only the productive use of different types of pronouns and proper names will be discussed. Productive use is defined as at least three non-imitative uses of a particular pronoun in at least three different clauses or verb phrases. Strong and weak forms of personal pronouns are analyzed jointly: both are seen as evidence for productive use of a particular pronominal form (§2.2.2). Again, additional data were analyzed if the data from the fixed data points did not offer enough evidence for productive use of a form. Moreover, forms were not analyzed for productive use if they occurred fewer than ten times in the data for a particular child. It is important to bear in mind that pronoun use need not be correct in terms of the gender of the referent in the current analysis. Gender assignment is an important part of (the acquisition of) reference, but it is not specifically investigated in this study.

The data of the three Dutch children will be presented first, followed by the English and French data. The frequency of forms in the input is also included in the tables. At the end of each language section, there is a short summary of the similarities or differences in the acquisition of the different types of pronouns and proper names between the children acquiring this language. In
§5.3.1.4, the productivity of different types of pronouns and proper names will be compared across the three languages.

5.4.1 Frequency and productivity of pronouns and proper names in Dutch

Abel

As Table 5.16 indicates, Abel already uses proper names at 2;0 to refer to various third person entities, as in (59). He also uses demonstrative pronouns productively at this age (see 60). At 2;3, Abel has started to use the personal pronoun productively, mainly in its masculine form (see 62). The feminine, neuter and plural form of the third person personal pronoun only occur at the later age points and in far lower frequencies in the analyzed sample. Abel uses numerals productively from 2;6 onwards in the data (see 61).

(59) Productive use of proper name (Abel, Dutch, from 2;0 onwards)
   a. chi: Mama # foifie # weg.  (2;0)
      ‘Mummy coffee gone’
   b. chi: Ikke Josse.  (2;0)
      ‘Me Josse (= friend)’
   c. chi: Arjen hallo.  (2;0)
      ‘Arjen hello’

(60) Productive use of demonstrative pronoun (Abel, Dutch, from 2;0 onwards)
   a. chi: Deze ook.  (2;0)
      ‘This one also’
   b. chi: Die doet: poeh.  (2;0)
      ‘That one goes: puh’
   c. chi: Dit niet (aan)komen.  (2;0)
      ‘This one (do) not touch’
Table 5.16. Frequency of proper names and different types of (third person) pronouns in raw numbers per age point (and as a percentage of the total number of pronouns per age point) for Abel and input to Abel (Dutch)

<table>
<thead>
<tr>
<th>Age</th>
<th>Proper Name</th>
<th>Pprs</th>
<th>Pdem</th>
<th>Ppos</th>
<th>Pnum</th>
<th>Prlt</th>
<th>Prfl</th>
<th>Total Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td>8</td>
<td>o</td>
<td>15</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>15</td>
</tr>
<tr>
<td>2;3</td>
<td>o</td>
<td>9</td>
<td>33</td>
<td>o</td>
<td>5</td>
<td>o</td>
<td>o</td>
<td>47</td>
</tr>
<tr>
<td>2;6</td>
<td>7</td>
<td>5</td>
<td>51</td>
<td>o</td>
<td>3</td>
<td>o</td>
<td>o</td>
<td>59</td>
</tr>
<tr>
<td>2;9</td>
<td>13</td>
<td>39</td>
<td>81</td>
<td>i</td>
<td>7</td>
<td>i</td>
<td>o</td>
<td>122</td>
</tr>
<tr>
<td>3;0</td>
<td>14</td>
<td>19</td>
<td>30</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>o</td>
<td>36</td>
</tr>
<tr>
<td>3;3</td>
<td>40</td>
<td>27</td>
<td>23</td>
<td>2</td>
<td>3</td>
<td>o</td>
<td>o</td>
<td>56</td>
</tr>
<tr>
<td>Input 2;3</td>
<td>5</td>
<td>28</td>
<td>19</td>
<td>o</td>
<td>1</td>
<td>o</td>
<td>o</td>
<td>48</td>
</tr>
<tr>
<td>Input 3;3</td>
<td>0</td>
<td>17</td>
<td>26</td>
<td>1</td>
<td>o</td>
<td>1</td>
<td>o</td>
<td>45</td>
</tr>
</tbody>
</table>

Notes. Pprs = personal pronoun; Pdem = demonstrative pronoun; Ppos = possessive pronoun (attributive and predicative); Pnum = numeral; Prlt = relative pronoun; Prfl = reflexive pronoun.

(61) Productive use of personal pronoun (Abel, Dutch, from 2;3 onwards)

a. **chi**: Hij kan dat niet. (2;3)
   ‘He cannot do that’

b. **chi**: Hij past óf niet, varken op. (2;3)
   ‘He does not fit on (it), piggy’

c. **chi**: Hé, daar komt je aan. (2;3)
   ‘Look, there he comes’

(62) Productive use of numerals (Abel, Dutch, from 2;6 onwards)

a. **chi**: Nog óf een. (2;2)
   ‘Another one’

b. **chi**: Ik ook óf twee. (2;3)
   ‘Me also two’

c. **chi**: En nog een. (2;6)
   ‘And another one’

Possessive pronouns can be used predicatively, but also attributively, as a determiner (§2.2.2 §4.4.2). Abel only uses attributive third person possessive pronouns. From 2;9 onwards, three instances were found in the data. Given its infrequent occurrence (fewer than 10 instances, see §5.2), the possessive pronoun is not further studied. The same applies to the relative and reflexive pronoun, which also occur fewer than ten times in the
data. Demonstrative and personal pronouns are the most frequently used pronominal forms in the input.

Matthijs

Examples (63) and (64) show that at 2;0, Matthijs already uses proper names and demonstrative pronouns productively to refer to third person referents. Other types of pronouns are not yet used by Matthijs at 2;0, nor at 2;3 (Table 5.17).

Table 5.17. Frequency of proper names and different types of (third person) pronouns in raw numbers per age point (and as a percentage of the total number of pronouns per age point) for Matthijs and input to Matthijs (Dutch)

<table>
<thead>
<tr>
<th>Age</th>
<th>Proper Name</th>
<th>Pprs</th>
<th>Pdem</th>
<th>Ppos</th>
<th>Pnum</th>
<th>Prlt</th>
<th>Prfl</th>
<th>Total Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td></td>
<td>20</td>
<td></td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;3</td>
<td></td>
<td>33</td>
<td>20</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>44</td>
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<td></td>
<td></td>
<td>47%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;6</td>
<td></td>
<td>17</td>
<td>63</td>
<td>4</td>
<td></td>
<td></td>
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<td>79%</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;9</td>
<td></td>
<td>19</td>
<td>56</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>77</td>
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<td></td>
<td></td>
<td>76%</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3;0</td>
<td></td>
<td>31</td>
<td>96</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>130</td>
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<td></td>
<td></td>
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<td>73%</td>
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<td></td>
</tr>
<tr>
<td>3;3</td>
<td></td>
<td>10</td>
<td>55</td>
<td>8</td>
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<td></td>
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<td></td>
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<td>67%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Input 2;3</td>
<td></td>
<td>22</td>
<td>34</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>47%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input 3;3</td>
<td></td>
<td>19</td>
<td>26</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>47</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>53%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes. Pprs = personal pronoun; Pdem = demonstrative pronoun; Ppos = possessive pronoun (attributive and predicative); Pnum = numeral; Prlt = relative pronoun; Prfl = reflexive pronoun.

(63) Productive use of proper name (Matthijs, Dutch, from 2;0 onwards)

a. **chi**: Harry deken, Harry deken! (2;0)
   ‘Harry blanket, Harry blanket!’

b. **chi**: Mee, mama mee! (2;0)
   ‘Along, Mummy (must come) along’

c. **chi**: Papa niet. (2;0)
   ‘Not Daddy’

(64) Productive use of demonstrative pronoun (Matthijs, Dutch, from 2;0 onwards)

a. **chi**: Deze, deze, hier. (2;0)
   ‘This one, this one here’

b. **chi**: Die opruimen. (2;0)
   ‘Clear up that one’
By 2;6, the personal pronoun has become productive in Matthijs’ speech (see 65). At first, it is mainly used in its masculine form. This was also found in Abel’s data. The feminine, neuter and plural form are generally used infrequently by Matthijs, but some instances are found in the data from 2;9 onwards. From 2;6 onwards, Matthijs also uses the numeral ‘one’ productively in at least three different linguistic contexts (see 66).

(65) Productive use of personal pronoun (Matthijs, Dutch, from 2;6 onwards)

a. chi: Komt+ié, komt+ié, komt+ié! (2;3)
   ‘He comes, he comes, he comes’

b. chi: Daar gaat ié weer. (2;6)
   ‘There he goes again’

c. chi: Auto zo # op d rijdt ié. (2;6)
   ‘Car, like this, he drives on (it)’

(66) Productive use of numeral (Matthijs, Dutch, from 2;6 onwards)

a. chi: Nog een. (2;3)
   ‘Another one’

b. chi: Das een voor Evelien. (2;6)
   ‘That’s one for Evelien’

c. chi: Thijs ook een. (2;6)
   ‘Thijs also one’

Third person possessive pronouns, relative pronouns and the reflexive pronoun are infrequent or used not at all by Matthijs (Table 5.17). These forms are therefore not further investigated. There is a clear parallel between the child and input language in the use of pronominal forms. Demonstrative and personal pronouns are the most frequently used pronominal forms by both the child and the adult.

Sarah

At the start of this investigation (2;0), Sarah uses proper names and demonstrative pronouns productively for third person reference (see examples 67 and 68). The other pronominal forms are not yet (productively) used at this age (Table 5.18).
By 2;3, Sarah has started to use the personal pronoun productively (see 69). As was found for the other Dutch children, she starts to use personal pronouns in their singular masculine form. The feminine, neuter and plural form occur occasionally in the data analyzed for later age points, that is, from 2;6 or 2;9 onwards. Numerals are used from 2;3 onwards in the data (Table 5.18).
However, this form is, at first, either produced as single-word utterance or in a construction with *nog*, as in (70a). Between 2;6 and 2;9, Sarah uses numerals in more diverse constructions. Productivity of the numeral can therefore be set at 2;9.

(69) **Productive use of personal pronoun (Sarah, Dutch, from 2;3 onwards)**

a. *Chi*: Hij is weg. \((2;3)\)
   ‘He’s gone’

b. *Chi*: <Jij, jij>[/j] jij hoef hem niet. \((2;3)\)
   ‘You, you, you don’t need him’

c. *Chi*: Hij (i)s weggelopen. \((2;1)\)
   ‘He ran away’

(70) **Productive use of numeral (Sarah, Dutch, from 2;9 onwards)**

a. *Chi*: Heb nog eentje. \((2;6)\)
   ‘Have another one’

b. *Chi*: Die heb zo (ee)n. \((2;6)\)
   ‘That one has one like that’

c. *Chi*: Ik wil ook de een. \((2;8)\)
   ‘I also want one’

There are only seven instances of third person possessive pronouns in Sarah’s data. Relative and reflexive pronouns do not occur at all in the data. Because of the low frequency of these types of pronominal forms, they are not further investigated. In the input, demonstrative pronouns are used most frequently, followed by personal pronouns. This pattern is similar to what is found in Sarah’s language.

**Summary: acquisition of pronouns and proper names in Dutch**

The Dutch children use proper names and demonstrative pronouns productively to refer to third person entities already at age 2;0 (Table 5.19). The personal pronoun is the next pronominal form to become productive, around 2;3 or 2;6. Numerals are at first often produced as single-word utterances or in a *nog*+numeral-construction. Productivity of this form can be set around 2;6 or 2;9. Possessive, relative and reflexive pronouns are infrequent in their third person form and were therefore not further investigated.
Table 5.19. Age points of earliest productive use in the data of proper names and different types of (third person) pronouns per child (Dutch)

<table>
<thead>
<tr>
<th></th>
<th>Abel</th>
<th>Matthijs</th>
<th>Sarah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper names</td>
<td>2:0</td>
<td>2:0</td>
<td>2:0</td>
</tr>
<tr>
<td>Demonstrative pronoun</td>
<td>2:0</td>
<td>2:0</td>
<td>2:0</td>
</tr>
<tr>
<td>Personal pronoun</td>
<td>2:3</td>
<td>2:6</td>
<td>2:3</td>
</tr>
<tr>
<td>Numeral pronoun</td>
<td>2:6</td>
<td>2:6</td>
<td>2:9</td>
</tr>
<tr>
<td>Possessive pronoun</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Relative pronoun</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Reflexive pronoun</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>

Notes. na = not analyzed for productive use because of no or too few occurrences in the data.

There is individual variation in the acquisition of different types of pronominal forms between the Dutch children. Matthijs appears to be slower in acquiring pronominal forms than Abel and Sarah. For example, personal pronouns become productive at 2;6 for Matthijs and at 2;3 for Abel and Sarah. This corresponds to Matthijs’ slower acquisition of the determiner system and slower MLUW-development (§5.3.1.1 and §4.2.1). The influence of differences in speed of acquisition of pronominal forms on form-function use is, however, not investigated further in this thesis.

In sum, these Dutch children are in the process of acquiring the pronominal system of their language, which offers the possibility to investigate the use of different pronominal forms for reference while the paradigm is being built. In both the child and input data, demonstrative pronouns are generally the most frequently used pronominal forms for third person reference, followed by personal pronouns.

5.4.2 Frequency and productivity of pronouns and proper names in English

Adam uses proper names, personal pronouns and demonstrative pronouns for third person reference at the start of the investigation, that is, at 2;3 (Table 5.20). He can use these forms productively at this age (see 71-73). The personal pronoun, however, is only used in its neuter form it and in post-verbal position at 2;3. From 2;6 onwards, instances of pre-verbal use of this form occur in the data. The masculine form appears around 2;6 and the feminine and plural form around 2;9.
Table 5.20. Frequency of proper names and different types of (third person) pronouns in raw numbers per age point (and as a percentage of the total number of pronouns per age point) for Adam and input to Adam (English)

<table>
<thead>
<tr>
<th>Age</th>
<th>Proper Name</th>
<th>Pprs</th>
<th>Pdem</th>
<th>Ppos</th>
<th>Pnum</th>
<th>Prlt</th>
<th>Prfl</th>
<th>Total Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:0</td>
<td>no data available</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:3</td>
<td>50</td>
<td>13</td>
<td>29</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>(30%)</td>
<td>(67%)</td>
<td>(2%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:6</td>
<td>15</td>
<td>22</td>
<td>40</td>
<td>1</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>(31%)</td>
<td>(56%)</td>
<td>(1%)</td>
<td>(13%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:9</td>
<td>20</td>
<td>41</td>
<td>62</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>(18%)</td>
<td>(37%)</td>
<td>(4%)</td>
<td>(2%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:0</td>
<td>24</td>
<td>64</td>
<td>85</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>152</td>
</tr>
<tr>
<td></td>
<td>(42%)</td>
<td>(35%)</td>
<td>(1%)</td>
<td>(1%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:3</td>
<td>16</td>
<td>51</td>
<td>54</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>(45%)</td>
<td>(47%)</td>
<td>(4%)</td>
<td>(4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input 2:3</td>
<td>14</td>
<td>41</td>
<td>51</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>(41%)</td>
<td>(51%)</td>
<td>(6%)</td>
<td>(3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input 3:3</td>
<td>8</td>
<td>49</td>
<td>23</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>(61%)</td>
<td>(29%)</td>
<td>(4%)</td>
<td>(4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes. Pprs = personal pronoun; Pdem = demonstrative pronoun; Ppos = possessive pronoun (attributive and predicative); Pnum = numeral; Prlt = relative pronoun; Prfl = reflexive pronoun.

(71) Productive use of proper name (Adam, English, from 2;3 onwards)

a. CHI: Must go Catherine.  
   (2:3)
b. CHI: Ricky tie dat.  
   (2:3)
c. CHI: Joshua home.  
   (2:3)

(72) Productive use of demonstrative pronoun (Adam, English, from 2;3 onwards)

a. CHI: My see that.  
   (2:3)
b. CHI: Ride that.  
   (2:3)
c. CHI: I read that.  
   (2:3)

(73) Productive use of personal pronoun (Adam, English, from 2;3 onwards)

a. CHI: Go get it.  
   (2:3)
b. CHI: Hit it.  
   (2:3)
c. CHI: Like it # screwdriver?  
   (2:3)

Evidence for the productive use of numerals is provided in the data at 2;6 (see 74). The attributive possessive pronoun is more frequent in Adam’s data than in the data for any of the Dutch children. Productive use of the possessive pronoun is evidenced by 2;9, at least for the masculine form (see 75).
(74) **Productive use of numeral (Adam, English, from 2;6 onwards)**

a. *chi*: Give one Cromer. (2;6)
b. *chi*: Two break right dere. (2;6)
c. *chi*: I have three. (2;6)

(75) **Productive use of possessive pronoun (Adam, English, from 2;6 onwards)**

a. *chi*: Mail # read his mail. (2;9)
b. *chi*: Draw # his spurs. (2;8)
c. *chi*: You have his hat. (2;8)

The relative pronoun does not occur in the data and there is only one instance of a reflexive pronoun, at 3;3. These forms will not be further investigated. In the input, personal and demonstrative pronouns are used most frequently for pronominal reference, just as in the child’s speech.

**Nina**

Nina uses proper names and various pronominal forms for reference at 2;0 (Table 5.21).

<table>
<thead>
<tr>
<th>Age</th>
<th>Proper Name</th>
<th>Pprs</th>
<th>Pdem</th>
<th>Ppos</th>
<th>Pnum</th>
<th>Prlt</th>
<th>Prfl</th>
<th>Total Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td>46</td>
<td>33</td>
<td>44</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>(42%)</td>
<td>(56%)</td>
<td>(1%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;3</td>
<td>17</td>
<td>60</td>
<td>46</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>111</td>
</tr>
<tr>
<td></td>
<td>(54%)</td>
<td>(41%)</td>
<td>(1%)</td>
<td>(4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;6</td>
<td>29</td>
<td>77</td>
<td>56</td>
<td>8</td>
<td>3</td>
<td>o</td>
<td>0</td>
<td>144</td>
</tr>
<tr>
<td></td>
<td>(54%)</td>
<td>(39%)</td>
<td>(6%)</td>
<td>(2%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;9</td>
<td>27</td>
<td>60</td>
<td>33</td>
<td>8</td>
<td>2</td>
<td>o</td>
<td>0</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>(58%)</td>
<td>(52%)</td>
<td>(8%)</td>
<td>(2%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3;0</td>
<td>14</td>
<td>82</td>
<td>54</td>
<td>14</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>154</td>
</tr>
<tr>
<td></td>
<td>(53%)</td>
<td>(35%)</td>
<td>(9%)</td>
<td>(1%)</td>
<td></td>
<td>(2%)</td>
<td>(2%)</td>
<td></td>
</tr>
<tr>
<td>3;3</td>
<td>31</td>
<td>113</td>
<td>55</td>
<td>49</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>223</td>
</tr>
<tr>
<td></td>
<td>(51%)</td>
<td>(25%)</td>
<td>(22%)</td>
<td>(1%)</td>
<td>(0.4%)</td>
<td>(1%)</td>
<td>(1%)</td>
<td></td>
</tr>
<tr>
<td>Input 2;3</td>
<td>9</td>
<td>108</td>
<td>24</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>(79%)</td>
<td>(18%)</td>
<td>(4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input 3;3</td>
<td>17</td>
<td>93</td>
<td>20</td>
<td>24</td>
<td>o</td>
<td>o</td>
<td>1</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>(67%)</td>
<td>(15%)</td>
<td>(17%)</td>
<td>(0.4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes. Pprs = personal pronoun; Pdem = demonstrative pronoun; Ppos = possessive pronoun (attributive and predicative); Pnum = numeral; Prlt = relative pronoun; Prfl = reflexive pronoun.

Proper names and demonstrative pronouns have already become productive (see 76 and 77). In addition, Nina uses personal pronouns productively
at this age. She not only uses the neuter form *it*, but also the masculine forms *he/him* (see 78). The feminine⁶ and plural personal pronoun become available a little later, around 2;3. The personal pronoun is more frequent than the demonstrative pronoun in Nina’s data at all age points investigated. This contrasts to the findings for Adam and the Dutch children, who all prefer to use demonstrative pronouns to personal pronouns at most age points.

(76) Productive use of proper name (Nina, English, from 2:0 onwards)
   a. chi: Nonna gave it. (2:0)
   b. chi: With Miriam. (2:0)
   c. chi: Leila blow them. (2:0)

(77) Productive use of demonstrative pronoun (Nina, English, from 2:0 onwards)
   a. chi: Open that. (2:0)
   b. chi: That lie down. (2:0)
   c. chi: This Leila book. (2:0)

(78) Productive use of personal pronoun (Nina, English, from 2:0 onwards)
   a. chi: With doggies on it. (2:0)
   b. chi: He’s brown. (2:0)
   c. chi: Take him on the hand. (2:0)

The numeral is used productively in at least three different clauses at 2;3 (see 79). Possessive pronouns (in combination with a noun) are more frequent in Nina’s data than in the data from Adam and the Dutch children reported on earlier. Nina uses the possessive pronoun productively from 2:3 onwards in different forms (masculine and feminine, see example 80).

(79) Productive use of numeral (Nina, English, from 2:3 onwards)
   a. chi: My eat one. (2:0)
   b. chi: you have one. (2:3)
   c. chi: He has six. (2:2)

(80) Productive use of possessive pronoun (Nina, English, from 2:3 onwards)
   a. chi: His head # his head around. (2:0)
   b. chi: Where his eye? (2:2)
   c. chi: Her foot’s cold. (2:2)

⁶ Nina uses the feminine pronoun very frequently. A total of 115 tokens are found throughout the data. The frequent use of the feminine may be related to the fact that Nina often plays with her (female) doll(s) during the recordings.
The reflexive and relative pronoun occur occasionally in the data from 2;9 onwards. These forms are not further investigated for productive use because of their low frequency. In the input, Nina’s mother shows a strong preference for personal pronouns. In addition, the mother uses demonstrative and possessive pronouns.

Peter

At 2;0, Peter uses proper names, demonstrative pronouns and personal pronouns and the numeral ‘one’ for person and object reference (Table 5.22). Proper names and demonstrative pronouns are productively used in various forms at this age (see 81 and 82).

Table 5.22. Frequency of proper names and different types of (third person) pronouns in raw numbers per age point (and as a percentage of the total number of pronouns per age point) for Peter and input to Peter (English)

<table>
<thead>
<tr>
<th>Age</th>
<th>Proper Name</th>
<th>Pprs</th>
<th>Pdem</th>
<th>Ppos</th>
<th>Pnum</th>
<th>Prlt</th>
<th>Prfl</th>
<th>Total Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td>4</td>
<td>21 (26%)</td>
<td>57 (71%)</td>
<td>0</td>
<td>2 (3%)</td>
<td>0</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>2;3</td>
<td>23</td>
<td>43 (39%)</td>
<td>59 (54%)</td>
<td>0</td>
<td>7 (6%)</td>
<td>0</td>
<td>0</td>
<td>109</td>
</tr>
<tr>
<td>2;6</td>
<td>30</td>
<td>48 (39%)</td>
<td>67 (55%)</td>
<td>4</td>
<td>3 (3%)</td>
<td>0</td>
<td>0</td>
<td>122</td>
</tr>
<tr>
<td>2;9</td>
<td>19</td>
<td>67 (55%)</td>
<td>38 (31%)</td>
<td>10</td>
<td>6 (5%)</td>
<td>0</td>
<td>0</td>
<td>121</td>
</tr>
<tr>
<td>3:0</td>
<td>no data available</td>
<td>21</td>
<td>115 (49%)</td>
<td>106 (45%)</td>
<td>7 (3%)</td>
<td>8 (3%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Input 2;3</td>
<td>10</td>
<td>57 (61%)</td>
<td>31 (33%)</td>
<td>0</td>
<td>0</td>
<td>4 (4%)</td>
<td>1 (1%)</td>
<td>93</td>
</tr>
<tr>
<td>Input 3;3</td>
<td>4</td>
<td>74 (68%)</td>
<td>31 (28%)</td>
<td>1 (0.5%)</td>
<td>2 (2%)</td>
<td>1 (1%)</td>
<td>0</td>
<td>109</td>
</tr>
</tbody>
</table>

Notes. Pprs = personal pronoun; Pdem = demonstrative pronoun; Ppos = possessive pronoun (attributive and predicative); Pnum = numeral; Prlt = relative pronoun; Prfl = reflexive pronoun.

(81) Productive use of proper name (Peter, English, from 2;0 onwards)

a. chi: Right back # Jenny. (2;0)

b. chi: # Go go # go go # go go # mama. (1:11)

c. chi: My pencil # Patsy’s pencil. (1:10)

(82) Productive use of demonstrative pronoun (Peter, English, from 2;0 onwards)

a. chi: Open this! (2;0)

b. chi: Broke this. (2;0)

c. chi: That go round. (2;0)
Example (83) shows that Peter also uses the personal pronoun productively at 2;0, but mainly the neuter form *it* in post-verbal position. From 2;3 onwards, this form is also used in pre-verbal position in the data. The masculine, feminine and plural forms of the personal pronoun paradigm appear around three months later. Personal pronouns become more frequent than demonstrative pronouns from 2;9 onwards. Finally, the numeral *one* is used productively for reference to person and objects at 2;0 (see 84).

(83) **Productive use of personal pronoun (Peter, English, from 2;0 onwards)**

- **a.** CHI: Put it there. (2;0)
- **b.** CHI: Turn it off # there. (2;0)
- **c.** CHI: Fix it. (2;0)

(84) **Productive use of numeral (Peter, English, from 2;0 onwards)**

- **a.** CHI: Don’t put one on there? (2;0)
- **b.** CHI: One # a one # take one that # take a one right there # xxx # take one. (1;11)
- **c.** CHI: One more. (2;0, outside analyzed sample)

From 2;6 onwards, Peter uses some third person possessive pronouns in attributive position in the data. He uses both the masculine and feminine attributive possessive pronoun productively from this age onwards (see 85).

(85) **Productive use of possessive pronoun (Peter, English, from 2;6 onwards)**

- **a.** CHI: His eyes are closed. (2;5)
- **b.** CHI: Patsy has his [[!] keys to open to [/] to <you house> [/] <your house> [/] your house. (2;5)
- **c.** CHI: Where’s her [[!] dog? (2;6)

Finally, the relative pronoun and reflexive pronoun do not occur for third person reference in Peter’s data. These forms are therefore not further investigated. In the input, there is a strong preference for pronominal reference by means of personal pronouns. Demonstratives are the next frequent pronominal forms.

*Summary: acquisition of pronouns and proper names in English*

The English children are able to use proper names, demonstrative pronouns and...

7 Other numerals are only used as single-word utterances at 2;0.
personal pronouns productively at the start of the investigation (2;3 for Adam and 2;0 for Nina and Peter, Table 5.23).

Table 5.23. Age points of earliest productive use in the data of proper names and different types of (third person) pronouns per child (English)

<table>
<thead>
<tr>
<th></th>
<th>Adam</th>
<th>Nina</th>
<th>Peter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper names</td>
<td>2;3</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Demonstrative pronoun</td>
<td>2;3</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Personal pronoun</td>
<td>2;3</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Numeral pronoun</td>
<td>2;6</td>
<td>2;3</td>
<td>2;0</td>
</tr>
<tr>
<td>Possessive pronoun</td>
<td>2;9</td>
<td>2;3</td>
<td>2;6</td>
</tr>
<tr>
<td>Relative pronoun</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Reflexive pronoun</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>

Notes. na = not analyzed for productive use because of no or too few occurrences in the data. Italics indicate that the age point given is the earliest age point for which data could be analyzed, if different from 2;0.

All children acquire the neuter personal pronoun before the masculine form of this paradigm. This is in line with results from earlier studies on the acquisition of pronouns in English (§3.2.2.2). This pattern contrasts with the findings for the Dutch children, however, who start to use the personal pronoun productively in its masculine form. The numeral becomes productive between 2;0 and 2;6 in English and the possessive pronoun between 2;3 and 2;9. The large majority of the possessive pronouns in the English data are attributively used. The relative and reflexive pronouns are infrequently used and were not further investigated.

There is individual variation between the English children in the acquisition of pronouns. Nina has acquired the most frequent pronominal forms at 2;3. In contrast, Peter’s development is slower than Nina’s but faster than Adam’s. The variation between the children in the acquisition of pronouns corresponds to differences in mluw-development and in the acquisition of determiners (§4.2.2, §5.3.1.2 and §5.3.2.2).

In conclusion, the children are in the process of acquiring the pronominal system of English. At first, the children prefer demonstratives for pronominal reference. At the later age points, personal pronouns generally become, as in the input, the most frequently used forms.

5.4.3 Frequency and productivity of pronouns and proper names in French

In French, there are more gender and number forms of different types of pronouns than in Dutch and English (§2.2.2). However, since the role of gender in reference
is not investigated in this study, the acquisition of different gender forms is not discussed in detail. The same applies to (differences in) the acquisition of strong and weak/clitic pronominal forms in French.

Anne

Anne uses proper names productively for third person reference at 2;0 (Table 5.24 and example 86). In addition, Anne uses demonstrative pronouns (clitic and full forms) productively. The first demonstrative pronouns are all neuter forms (see 87). The masculine, feminine singular and plural form of the demonstrative pronoun appear around 2;6-2;9.

(86) Productive use of proper name (Anne, French, from 2;0 onwards)
   a. chi: C(e) est Babar. \( (2;0) \)
      ‘That’s Babar’
   b. chi: ‘Est pas à Mamy, non. \( (2;0) \)
      ‘Is not at Grandma’s, no’
   c. chi: (Ga)ëtan dessine des nuages alors. \( (2;0) \)
      ‘Well, Gaëtan is drawing clouds’

(87) Productive use of demonstrative pronoun (Anne, French, from 2;0 onwards)
   a. chi: Non, pas ça. \( (2;0) \)
      ‘No, not that’
   b. chi: (C’) est quoi, ça? \( (2;0) \)
      ‘What’s that?’
   c. chi: C(e) est tombé. \( (2;0) \)
      ‘It has fallen down’
Table 5.24. Frequency of proper names and different types of (third person) pronouns in raw numbers per age point (and as a percentage of the total number of pronouns per age point) for Anne and input to Anne (French)

<table>
<thead>
<tr>
<th>Age</th>
<th>Proper Name</th>
<th>Pprs</th>
<th>Pdem</th>
<th>Ppos</th>
<th>Pnum</th>
<th>Prlt</th>
<th>Prfl</th>
<th>Total Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td></td>
<td>10</td>
<td>5</td>
<td>24</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(17%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;3</td>
<td></td>
<td>8</td>
<td>34</td>
<td>26</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(56%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;6</td>
<td></td>
<td>18</td>
<td>59</td>
<td>36</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(48%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2;9</td>
<td></td>
<td>67</td>
<td>94</td>
<td>82</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(45%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3;0</td>
<td></td>
<td>32</td>
<td>52</td>
<td>54</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>121</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(43%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3;3</td>
<td></td>
<td>45</td>
<td>167</td>
<td>42</td>
<td>17</td>
<td>0</td>
<td>11</td>
<td>238</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(70%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input 2;3</td>
<td></td>
<td>5</td>
<td>60</td>
<td>37</td>
<td>7</td>
<td>6</td>
<td>2</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(51%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input 3;3</td>
<td></td>
<td>25</td>
<td>55</td>
<td>23</td>
<td>6</td>
<td>16</td>
<td>8</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(51%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes. Pprs = personal pronoun; Pdem = demonstrative pronoun; Ppos = possessive pronoun (attributive and predicative); Pnum = numeral; Prlt = relative pronoun; Prfl = reflexive pronoun.

The personal pronoun is also used productively at the start of the investigation (see 88). At first, Anne mainly uses the clitic subject singular masculine form *il*. The singular feminine subject form *elle* follows at 2;3. Clitic objects and full forms are generally used productively around 2;3 or 2;6. Finally, the plural personal pronouns appear around 3;0.

**[88] Productive use of personal pronoun (Anne, French, from 2;0 onwards)**

a. **chi**: Il est à moi.     (2;0)
   ‘It’s mine’

b. **chi**: Il pleure.     (2;0)
   ‘He’s crying’

c. **chi**: Il(l) filme, papa.     (2;0)
   ‘He’s filming, Daddy’

From 2;6 onwards, Anne is able to use singular possessive pronouns productively (see 89). These mainly occur in attributive position. The reflexive pronoun is more frequent in Anne’s data than in the speech of any of the Dutch and English subjects (§5.4.1 and §5.4.2). The reflexive pronoun is used productively by 2;6 (see 90). The numeral and relative pronouns are not further investigated for Anne, since these forms occur infrequently in the data.
Productive use of possessive pronoun (Anne, French, from 2;6 onwards)

a. CHI: Sa casquette, il est où? (2;6)
   ‘His cap, where is it?’

b. CHI: On va le mettre avec sa maman. (2;6)
   ‘We are going to put him with his mummy’

c. CHI: Mettre son écharpe. (2;6)
   ‘Put on his scarf’

Productive use of reflexive pronoun (Anne, French, from 2;6 onwards)

a. CHI: Ils s’envolent # haut. (2;6)
   they 3PL(rfl)-fly high
   ‘They’re flying high’

b. CHI: +, mettre ça # parce que il s’habille. (2;6)
   put that because he 3SG(rfl)-dress
   ‘+ put that (= clothes) on, because he’s dressing himself’

c. CHI: (Il) s’appelle (M)anoliale. (2;6)
   (he) 3SG(rfl)-call Manoliale
   ‘(He) is called Manoliale’

From 2;3 onwards, personal pronouns are the most frequently used pronominal forms, followed by demonstrative pronouns. This pattern is also found in the input.

Grégoire

At 2;0, Grégoire uses proper names, demonstrative pronouns and personal pronouns for third person reference. The latter two forms are, however, not so frequent until 2;6 (Table 5.25). Proper names are used productively from 2;0 onwards (see 91). The productive use of the demonstrative pronoun is restricted to the neuter forms ça and ce at 2;0 (see 92). The masculine, feminine and plural demonstrative pronouns follow at 2;6 or later. Personal pronouns are also used productively at 2;0. Grégoire uses both the masculine and feminine clitic subject at this age (see 93). Other forms of the personal pronoun paradigm, such as plural forms, singular full forms or clitic objects, appear at or after 2;6.
Table 5.25. Frequency of proper names and different types of (third person) pronouns in raw numbers per age point (and as a percentage of the total number of pronouns per age point) for Grégoire and input to Grégoire (French)

<table>
<thead>
<tr>
<th>Age</th>
<th>Proper Name</th>
<th>Pprs</th>
<th>Pdem</th>
<th>Ppos</th>
<th>Pnum</th>
<th>Prlt</th>
<th>Prfl</th>
<th>Total Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2;0</td>
<td>54</td>
<td>9 (64%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>14</td>
</tr>
<tr>
<td>2;3</td>
<td>29</td>
<td>5 (19%)</td>
<td>0 (0%)</td>
<td>2 (7%)</td>
<td>1 (4%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>27</td>
</tr>
<tr>
<td>2;6</td>
<td>37</td>
<td>64 (58%)</td>
<td>29 (26%)</td>
<td>3 (3%)</td>
<td>1 (1%)</td>
<td>7 (6%)</td>
<td>7 (6%)</td>
<td>111</td>
</tr>
<tr>
<td>Input 2;3</td>
<td>42</td>
<td>49 (66%)</td>
<td>17 (23%)</td>
<td>2 (3%)</td>
<td>4 (5%)</td>
<td>1 (1%)</td>
<td>0 (0%)</td>
<td>74</td>
</tr>
</tbody>
</table>

Notes. Pprs = personal pronoun; Pdem = demonstrative pronoun; Ppos = possessive pronoun (attributive and predicative); Pnum = numeral; Prlt = relative pronoun; Prfl = reflexive pronoun.

(91) Productive use of proper name (Grégoire, French, from 2;0 onwards)

a. **chi**: Chaussures à Adrien.
   ‘Shoes of Adrien’

b. **chi**: Il [?] dort Victor?
   ‘Is Victor asleep?’

c. **chi**: (L)e lit maman.
   ‘Bed (of) Mummy’

(92) Productive use of demonstrative pronoun (Grégoire, French, from 2;0 onwards)

a. **chi**: Ça c’est la tête ?
   ‘That’s the head’

b. **chi**: Ça tombe.
   ‘That’s falling down’

c. **chi**: C’est mouillé.
   ‘It’s wet’

(93) Productive use of personal pronoun (Grégoire, French, from 2;0 onwards)

a. **chi**: Il est cassé.
   ‘It’s broken’

b. **chi**: Elle fait # elle roule.
   ‘It does, it’s rolling’

c. **chi**: Où elle est?
   ‘Where is it (= paper)’

The other types of pronominal forms studied, that is, the possessive, numeral, relative and reflexive, occur fewer than ten times in the data for this child. These are therefore not further investigated for productive use. In the input, the personal pronoun is the most frequently used form for pronominal reference, followed by the demonstrative pronoun. This pattern is also found in Grégoire’s speech at 2;6.
Léa

The investigation of Léa’s speech starts at 2;9. At this age, she uses proper names and all the different types of pronouns investigated for third person reference (Table 5.26). Moreover, she already uses most forms productively at 2;9, for example proper names (see 94) and the demonstrative pronoun in various forms, such as the full neuter form ça, the clitic neuter form ce and the masculine form celui (see 95).

(94) Productive use of proper name (Léa, French, from 2;9 onwards)

a. **chi**: A une [/] à une heure que Luc s’est réveillé, dis eh! (2;9)
   ‘It was one o’clock when Luc woke up, goodness me!"

b. **chi**: Quand il (n’) y oen a plus Maman en rachète. (2;9)
   ‘When there is no more (= bottled water), Mummy buys more’

c. **chi**: Et ensuite on prend Minnie quand on va faire dodo. (2;9)
   ‘And then we take Minnie (= her doll) when we are going to have a sleep’

(95) Productive use of demonstrative pronoun (Léa, French, from 2;9 onwards)

a. **chi**: Ça, c(e) est pour augmenter le volume. (2;9)
   ‘That’s for turning up the volume’

b. **chi**: C(e) est meilleur que le coca. (2;9)
   ‘It’s better than Coke’

c. **chi**: (tu as appuyé) sur celui-là ou sur celui-là? (2;9)
   ‘(Did you press) that one or that one?"

Table 5.26. Frequency of proper names and different types of (third person) pronouns in raw numbers per age point (and as a percentage of the total number of pronouns per age point) for Léa and input to Léa (French)

<table>
<thead>
<tr>
<th>Age</th>
<th>Proper Name</th>
<th>Pprs</th>
<th>Pdem</th>
<th>Ppos</th>
<th>Pnum</th>
<th>Prlt</th>
<th>Prfl</th>
<th>Total Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:9</td>
<td>35</td>
<td>64</td>
<td>34</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>111</td>
</tr>
<tr>
<td>3:0</td>
<td>25</td>
<td>59</td>
<td>49</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>2</td>
<td>123</td>
</tr>
<tr>
<td>3:3</td>
<td>23</td>
<td>64</td>
<td>34</td>
<td>1</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>119</td>
</tr>
<tr>
<td>Input 3:3</td>
<td>12</td>
<td>22</td>
<td>21</td>
<td>0</td>
<td>1</td>
<td>10</td>
<td>4</td>
<td>58</td>
</tr>
</tbody>
</table>

Notes. Pprs = personal pronoun; Pdem = demonstrative pronoun; Ppos = possessive pronoun (attributive and predicative); Pnum = numeral; Prlt = relative pronoun; Prfl = reflexive pronoun.

Léa uses the personal pronoun productively from 2;9 onwards. She uses many different forms of this paradigm, for example singular masculine and feminine forms, not only as clitic subjects but also as clitic objects (see
The possessive pronoun is also used productively by 2;9, mainly in attributive position, as in (97).

(96) Productive use of personal pronoun (Léa, French, from 2;9 onwards)

- **a.** CHI: Parcequ’il a un cauchemar. (2;9)
  ‘Because he has a nightmare’
- **b.** CHI: [...] et après elle venait dans ma chambre [...]. (2;9)
  ‘And then she came to my room’
- **c.** CHI: Non je veux le tenir. (2;9)
  ‘No, I want to hold it’

(97) Productive use of possessive pronoun (Léa, French, from 2;9 onwards)

- **a.** CHI: Avec Luc et Luc est dans son lit. (2;9)
  ‘With Luc and Luc is in his bed’
- **b.** CHI: Avec mes briques et ses briques. (2;9)
  ‘With my blocks and his blocks’
- **c.** CHI: On va bouger sa robe. (2;9)
  ‘We are going to take her dress away’

In contrast to what was found for the Dutch and English child subjects, Léa uses reflexive and relative pronouns to a considerable extent. Productive use of these forms is set at 2;9 and 3;0 respectively (see 98 and 99). The numeral is used in three different contexts and thus considered to be productive at 3;0 (see 100).

(98) Productive use of reflexive pronoun (Léa, French, from 2;9 onwards)

- **a.** CHI: [...] et puis le matin il s’est réveillé, dis! (2;9)
  ‘And then, in the morning he woke up’
- **b.** CHI: Il s’est levé à huit heures le matin. (2;9)
  ‘He got up at eight o’clock in the morning’
- **c.** CHI: Elle s’allumera? (2;9)
  ‘Will it (= the light) go on?’

(99) Productive use of relative pronoun (Léa, French, from 3;0 onwards)

- **a.** CHI: Mais oyl oen a un autre qui est par terre. (2;8)
  ‘But (there is) another one, that is on the floor’
- **b.** CHI: C(e) est du sel qui il y a dedans. (2;9)
  ‘It is salt, that is inside’
- **c.** CHI: Une petite bête qui monte sur Mamy. (3;0)
  ‘A small animal that is climbing on Grandma’
(100) Productive use of numeral (Léa, French, from 3;0 onwards)

a. CHI: Tu en veux une?  
   ‘Do you want one?’  
   (2;9)

b. CHI: En un qui est trop haut, en un qui est plus bas.  
   ‘(There) is one (= button) that is too high and one that is lower’  
   (3;0)

c. CHI: Ben, six de la sauce’  
   ‘Well, six (portions) of the sauce’  
   (3;0)

In the input, personal and demonstrative pronouns are used to the same extent. The relative pronoun is more frequent in the input to Léa than in the input to all of the other Dutch, English and French children.

Philippe

Philippe uses proper names and most types of pronouns at the start of the investigation of his language development, that is, at 2;3 (Table 5.27). At the early age points, the demonstrative pronoun is the most frequently used type of pronoun. Later, the personal pronoun becomes used more often. The examples show that Philippe uses proper names as well as demonstrative pronouns in various gender forms productively from at least 2;3 onwards (see 101 and 102).

(101) Productive use of proper name (Philippe, French, from 2;3 onwards)

a. CHI: Est parti pour aujourd’hui Manou.  
   ‘Manou has left for today’  
   (2;3)

b. CHI: Un croissant pour papa.  
   ‘A croissant for Daddy’  
   (2;3)

c. CHI: Assis à côté de Madeleine.  
   ‘Sat down next to Madeleine’  
   (2;3)

(102) Productive use of demonstrative pronoun (Philippe, French, from 2;3 onwards)

a. CHI: Je veux ça.  
   ‘I want that’  
   (2;3)

b. CHI: C’est cassé.  
   ‘It’s broken’  
   (2;3)

c. CHI: Pour celui-là.  
   ‘For that one’  
   (2;3)
The personal pronoun is also used productively from 2;3 onwards. At this age, Philippe already uses the singular masculine and feminine clitic subjects and singular clitic objects (see 103). Other forms of the French personal pronoun paradigm, such as the full masculine form lui and the plural personal pronouns are less frequent and appear around 2;6 or 2;9 in Philippe’s speech.

(103) Productive use of personal pronoun (Philippe, French, from 2;3 onwards)

a. chî: Il est malade.  
   ‘He’s ill’  
   (2;3)

b. chî: Elle est dans ma chambre là.  
   ‘It’s in my room there’  
   (2;3)

c. chî: On le met dedans.  
   ‘We put it (= tractor) inside’  
   (2;3)

Furthermore, Philippe uses attributive third person possessive pronouns, numerals and the reflexive pronoun productively in the data from 2;3 onwards (see 104-106). Finally, relative pronouns are productively used in the data from 2;9 onwards (see 107).
(104) Productive use of possessive pronoun (Philippe, French, from 2;3 onwards)

a. CHI: Il a perdu sa queue. (2;3)
   ‘He has lost his tail’

b. CHI: Enlever son pneu. (2;3)
   ‘Remove his tire’

c. CHI: Fini son café. (2;3)
   ‘Finished his coffee’

(105) Productive use of numeral (Philippe, French, from 2;3 onwards)

a. CHI: En a deux. (2;2)
   ‘Have two’

b. CHI: J’en ai une. (2;3)
   ‘I have one’

c. CHI: Une pour moi. (2;3)
   ‘One for me’

(106) Productive use of reflexive pronoun (Philippe, French, from 2;3 onwards)

a. CHI: Ça se met aux pieds comme ça. (2;3)
   that 3SG(rfl)-go on the feet like that
   ‘That (= belt) goes on my feet like this’

b. CHI: Il se ouvre. (2;3)
   he 3SG(rfl)-open
   ‘It (= lighter) opens’

c. CHI: Va se mouiller la voiture. (2;3)
   go 3SG(rfl)-get wet the car
   ‘The car is getting wet’

(107) Productive use of relative pronoun (Philippe, French, from 2;6 onwards)

a. CHI: Qu’est-ce que qu’elle fait là cette cuillère qui est toute seule? (2;6)
   ‘What’s that spoon doing there, that is there on its own?’

b. CHI: C’est un pont dé qui l’a fait casser. (2;9)
   It is a ‘dice-bridge’ that broke it
   ‘A ‘dice-bridge’ broke it’

c. CHI: Aujourd’hui a pas Ginette qui vient. (2;9)
   Today has not Ginette that will come
   ‘Today, Ginette will not come’

In the input, personal and demonstrative pronouns are by far the most frequently used devices for pronominal reference.

Summary: acquisition of pronouns and proper names in French
The three youngest French children use proper names, demonstrative pronouns and personal pronouns productively for third person reference at the start of the
investigation, that is, at 2;0 for Anne and Grégoire and at 2;3 for Philippe. Not surprisingly, these forms are also productive for Léa at 2;9. For personal pronouns, the singular masculine subject clitic generally appears before other forms of this paradigm. The possessive pronoun is mainly used in attributive position. It is productively used either simultaneously with proper names, demonstrative and personal pronouns (Philippe, Léa) or three to six months later (Anne, possibly Grégoire). Numerals and relative pronouns are used by Philippe and Léa, but were too infrequent in the data to assess productive use for Anne and Grégoire.

Table 5.28. Age points of earliest productive use in the data of proper names and different types of (third person) pronouns per child (French)

<table>
<thead>
<tr>
<th></th>
<th>Anne</th>
<th>Grégoire</th>
<th>Léa</th>
<th>Philippe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper names</td>
<td>2;0</td>
<td>2;0</td>
<td>2;9</td>
<td>2;3</td>
</tr>
<tr>
<td>Demonstrative pronoun</td>
<td>2;0</td>
<td>2;0</td>
<td>2;9</td>
<td>2;3</td>
</tr>
<tr>
<td>Personal pronoun</td>
<td>2;0</td>
<td>2;0</td>
<td>2;9</td>
<td>2;3</td>
</tr>
<tr>
<td>Numeral pronoun</td>
<td>na</td>
<td>na</td>
<td>3;0</td>
<td>2;3</td>
</tr>
<tr>
<td>Possessive pronoun</td>
<td>2;6</td>
<td>na</td>
<td>2;9</td>
<td>2;3</td>
</tr>
<tr>
<td>Relative pronoun</td>
<td>na</td>
<td>na</td>
<td>3;0</td>
<td>2;3</td>
</tr>
<tr>
<td>Reflexive pronoun</td>
<td>2;6</td>
<td>na</td>
<td>2;9</td>
<td>2;6</td>
</tr>
</tbody>
</table>

Notes. na = not analyzed for productive use because of no or too few occurrences in data. Italics indicate that the age point given is the earliest age point for which data could be analyzed, if different from 2;0.

There is some individual variation between the children in the age at which pronominal forms are available for productive use. That is, Philippe’s development is faster than Anne’s and Grégoire’s. This was also found for the MLUW-development and for the speed of determiner acquisition (§4.2.3 and §5.3.2.3).

In sum, at the start of the investigation, the French children have acquired proper names and the most frequently used pronominal forms for third person reference: personal pronouns and demonstrative pronouns. These forms are also the most frequently used devices for pronominal reference in the input.

5.4.4 Cross-linguistic comparison on productivity of proper names and pronouns

The children acquiring Dutch, English or French all have proper names and demonstrative pronouns available for productive use at the start of the investigation. Personal pronouns can be used productively around 2;3 by most children (Table 5.29).
The other pronominal forms are less frequent or not used at all by some children. Relative and reflexive pronouns only occur in the speech of some the French children. The productive use of numerals could be established for most children, but the age range of first productive use is rather broad: between 2;0 and 3;0. This may be related to the infrequent occurrence of this form. It therefore takes more time to find three instances of this form in different contexts in the data.

Finally, attributive possessive pronouns are used by the English and French children, but are rather infrequent in Dutch. It is not clear why the Dutch children use this form less frequently than the children acquiring the other languages. Finally, it was predicted on the basis of the adult systems that predicatively used possessive pronouns might be more frequent in English than in Dutch and French, since this form is less marked in English (§2.2.2.4). However, the children from all three languages hardly use predicative possessive pronouns. Because of the low frequency of the relative, reflexive, numeral and possessive pronouns for some of the children, these forms will not be examined for form-function use in Chapter 8. The focus will be on personal and demonstrative pronouns.

Table 5.29. Overview of the age points of earliest productive use in the data of proper names and different types of (third person) pronouns per child (Dutch, English and French)

<table>
<thead>
<tr>
<th></th>
<th>Dutch</th>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proper names</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab</td>
<td>2;0</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Ma</td>
<td>2;0</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Sa</td>
<td>2;0</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td><strong>Demonstrative pronoun</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ad</td>
<td>2;3</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Ni</td>
<td>2;0</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Pe</td>
<td>2;0</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>An</td>
<td>2;0</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Gr</td>
<td>2;0</td>
<td>2;0</td>
<td>2;0</td>
</tr>
<tr>
<td>Lé</td>
<td>2;9</td>
<td>2;3</td>
<td>2;3</td>
</tr>
<tr>
<td>Ph</td>
<td>2;3</td>
<td>2;3</td>
<td>2;3</td>
</tr>
<tr>
<td><strong>Personal pronoun</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab</td>
<td>2;3</td>
<td>2;6</td>
<td>2;3</td>
</tr>
<tr>
<td>Ma</td>
<td>2;6</td>
<td>2;6</td>
<td>2;9</td>
</tr>
<tr>
<td>Sa</td>
<td>2;3</td>
<td>2;3</td>
<td>2;6</td>
</tr>
<tr>
<td><strong>Numeral pronoun</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab</td>
<td>2;6</td>
<td>2;6</td>
<td>2;9</td>
</tr>
<tr>
<td>Ma</td>
<td>2;6</td>
<td>2;3</td>
<td>2;6</td>
</tr>
<tr>
<td>Sa</td>
<td>2;9</td>
<td>2;3</td>
<td>2;6</td>
</tr>
<tr>
<td><strong>Possessive pronoun</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Ma</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Sa</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td><strong>Relative pronoun</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Ma</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Sa</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td><strong>Reflexive pronoun</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Ma</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Sa</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
</tbody>
</table>

Notes. na = not analyzed for productive use because of no or too few occurrences in the data; Italics indicate that the age point given is the earliest age point for which data could be analyzed, if different from 2;0. Only the first two letters of a child’s name are given here for reasons of brevity.

There are some cross-linguistic differences in pronoun acquisition. Firstly, the English children start to use the personal pronoun productively by means of the neuter form *it*, whereas the Dutch and French children favor the singular masculine forms *hij* and *il* respectively. This finding is in accordance with earlier studies on the acquisition of personal pronouns in these languages.
(§3.2.2). Secondly, the Dutch children make more frequent use of demonstrative pronouns than the English and French children, who favor personal pronouns, especially at the later age points. This pattern is also found in the input. In §2.2.2, demonstrative pronouns were shown to be more common in pronominal reference in Dutch than in English and French. This might explain the difference found here.

5.5 Conclusion

This chapter has examined when the Dutch, English and French children studied are able to use the different types of determiners and pronouns productively. Productive use was defined as the first three non-imitative appearances of the morphosyntactic devices studied in three different morphosyntactic contexts (§5.2). The results from this analysis offer essential background knowledge to the investigation in Chapters 7 and 8, since only those forms that are used productively and frequently will be analyzed for form-function use. Forms that occur more than ten times in the data of all children were taken to be frequent enough to be included separately in the further analyses. Finally, this chapter also served to confirm and identify differences in the acquisition of determiners and pronouns across the three languages. There is some variation in the acquisition of these forms between individual children acquiring the same language. This variation is also reflected in the children’s MLU-development, but all children fall within the normal range (§4.2).

Between 2;0 and 3;3, there are no large differences between the children in the productive use of the different types of determiners investigated. Almost all children have the indefinite, definite, demonstrative and possessive determiner available for productive use between 2;0 and 2;6 (§5.3.1.4). The numeral determiner and genitive construction were not used frequently enough in the data of all children to be investigated for productivity. The use of these forms for pragmatic functions will therefore not be investigated separately in Chapter 7. These forms will be included in a combined category ‘other’ (§4.4.1 and §7.2).

There are cross-linguistic differences in the frequency of use of determiners in obligatory morphosyntactic positions and in the moment at which the children reach Brown’s 90-percent-criterion (1973). The French children reach the 90-percent-criterion earlier than the Dutch children do (2;9 versus after 3;3). The English children fall in between these two groups: they reach the 90-percent-
level by 3;0 (§5.3.2.4). On the basis of these differences, the influence of the speed of acquisition of determiners on their use for pragmatic functions will be investigated in §7.5.

The productive use of pronominal forms and proper names is largely similar for the children acquiring Dutch, English or French. Generally, they are able to use proper names, demonstrative pronouns and personal pronouns productively at the start of the investigation or shortly afterwards. Numerals, relative pronouns and reflexive pronouns are not used frequently enough to investigate productivity for all children. These forms will therefore be combined in a general category ‘other’ in the analyses in Chapter 8 (§4.4.2 and §8.2). There are some differences between the children acquiring each of the languages in the frequency of different types of pronouns. Most importantly, the Dutch children make more use of demonstrative pronouns than the English and French children. This pattern is also found in the input. Whether this has an effect on form-function use across these languages will be investigated in Chapter 8.