The acquisition of reference : a cross-linguistic study
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A very fundamental communicative act is reference, whereby people indicate the entity they want to communicate about (Brown & Yule, 1983: 205; Brown, 1995: 66-67). The referential act will hopefully lead to the correct identification of the intended entity by the interlocutor. Children’s first communicative tools are vocalizations and gestures. Through, for example, pointing or giving they can make clear which person or object they mean (Guidetti & Nicoladis, 2008). Around approximately twelve months, an additional and very powerful referential tool becomes available: language. The acquisition of language is a significant step forward in children’s referential possibilities. Whereas gestures are bound to the here-and-now, words enable children to also talk about referents that are not perceptually available to the interlocutor. The acquisition of morphosyntax is an even further step, since reference can be achieved with different morphosyntactic forms (nouns with different types of determiners, pronouns or proper names). For example, in reference to ‘cat’ speakers of English can use a cat, the cat, my cat, it, she or a proper name, such as Cleo. However, these forms differ in the specificity and amount of information they convey about the referent to the hearer. Consequently, the communicative contexts in which these forms can be used felicitously are also different. For example, the proper name Cleo can be used if the hearer knows that the speaker owns a cat with this name. If this is not the case, the form my cat is more felicitous. Pronominal forms are most likely to be used if the referent is already given in discourse and in the focus of attention of both conversation participants. The choice of a particular morphosyntactic form
for reference is part of the linguistic subfield of pragmatics, which can be defined as the study of the relation between language and context (Levinson, 1983: 21). In this thesis, pragmatics is defined as those cognitive and discourse factors that influence the choice of morphosyntactic forms for reference.

In acquisition, children are faced with a double task: not only do they have to acquire the relevant morphosyntactic forms for reference, but also the different conditions under which these forms can or must be used. This study examines the interaction between the morphosyntax and pragmatics of reference in children who are in the process of language acquisition, that is, between 2;0 and 3;3. Three issues will be considered to give insight into the nature of this interaction. First, this study investigates how this interaction develops and to what extent the rate of acquisition of morphosyntactic forms impacts on this development (see §1.2.1). Questions that are pertinent to this first issue are whether children start to make associations between morphosyntactic form and pragmatic aspects of form use from the moment that this form is productively used and whether the acquisition of a form triggers the children’s sensitivity to the pragmatic aspects that influence form use. To this end, the acquisition of reference is compared in Dutch, English and French, languages in which the acquisition of some morphosyntactic forms (i.e. determiners) is known to proceed at different rates (§3.2). In the adult systems of these languages, there are some differences in how the use of the morphosyntactic forms studied interacts with pragmatic aspects in reference (§2.4.2). This relates to the second issue studied: the role of the input in the acquisition of reference (§1.2.2). Finally, pragmatic factors influence the use of different morphosyntactic forms for reference, that is, both determiners and pronouns. The third issue therefore deals with the question whether children’s sensitivity to pragmatic aspects of reference develops at similar rates in the use of determiners and pronouns (§1.2.3).

1.1 Drawing boundaries in the investigation of reference

Various pragmatic factors play a role in the choice of linguistic forms for reference in adult languages. This section serves to outline those pragmatic factors that will be the focus of the current study (see also Chapter 2).

Consider the constructed English dialogue in (1), in which the speakers make use of several morphosyntactic forms (underlined) to refer to the same entity, ‘dress’.
Different morphosyntactic forms in reference to ‘dress’

A: I want to buy a new dress, so I’ll go shopping and see if I can find one tomorrow.

B: Why don’t you buy the dress that we saw in Oxford Street last week? It was really nice. You really should buy it!

Speaker A first uses a noun with an indefinite determiner (a dress), followed by a numeral (one). Speaker B uses a noun with a definite determiner (the dress), a relative pronoun (that) and a neuter personal pronoun (it). The choice of a particular linguistic form in reference depends on the referent’s cognitive status. By cognitive status I mean the assumed representation of the referent in the speaker’s and hearer’s memory and the extent to which the referent is active in memory (Gundel, Hedberg & Zacharski, 1993). Cognitive status is influenced by various factors: The influence of three of these factors on form choice will be the focus of the current study: (a) whether the referent is uniquely identifiable (specific reference) or whether only a certain type of entity can be identified (non-specific reference), (b) for referents that are specific, whether the referent has been mentioned before in discourse (‘givenness’) and is therefore activated in the minds of the conversation participants and (c) for specific referents that are new to discourse, whether the referent is assumed to be familiar to the listener on the basis of previous knowledge or physical presence. In Chapter 2, these pragmatic factors will be linked to different pragmatic functions of referents in discourse (e.g. discourse-new reference, discourse-given-maintenance etc., see §2.3).

In language use, morphosyntactic forms are associated or disassociated with different pragmatic factors/functions. Thus, by using an indefinite determiner in the first reference to ‘dress’ in (1), speaker A signals that she is referring to a non-specific and not uniquely identifiable dress. From the subordinate clause that follows, it also appears that there is not yet a representation in memory for any particular dress. In contrast, by using a definite determiner, speaker B indicates that he assumes that the particular dress he is referring to, is specific and mutually known between him and speaker A. In other words, he assumes speaker A to be familiar with this particular dress. Once the referent ‘dress’ is mentioned in discourse and in the focus of attention of both conversation participants, the

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1 The term cognitive status is taken from Gundel et al. (1993). Their givenness hierarchy is, however, not taken as the basis of the analyses in this study.

2 Givenness is used in a restricted sense in this study, indicating only referents that have already been mentioned in the discourse (§2.3).

3 In the remainder of this thesis, the first speaker in any constructed dialogue will be referred to as she and the listener or second speaker as he.
most natural way to refer to it in English is by means of a pronominal form, as is reflected by speaker B’s choice in subsequent utterances.

The aim of this research is to investigate how specificity, givenness and familiarity impact on children’s use of referential expressions. Only reference to third person entities (e.g. ‘dress’ in example 1) will be investigated. Reference to first and second person entities (e.g. ‘I’ and ‘you’ in example 1) as well as impersonal reference were excluded, since these are more restricted than third person entities both pragmatically and morphosyntactically. The cognitive status of first and second person reference is usually obvious in an active conversation, since they refer to the conversation participants (speaker and hearer). In contrast, the cognitive status of third person referents can vary under the influence of the pragmatic factors mentioned above. Moreover, first and second person reference are usually achieved by means of pronouns, whereas third person entities can also be referred to with lexical nouns or proper names (Bhat, 2004; Siewierska, 2004). Third person entities thus offer the best possibility of investigating the interaction between morphosyntax and pragmatics in the acquisition of reference. Only references to persons or objects will be considered. More detailed selection criteria of the analyzed references will be discussed in §4.3.2.

In addition to the pragmatic factors that determine a referent’s cognitive status studied here, there are other aspects of referents that may affect the speaker’s choice of a particular linguistic form. For example, Schiffrin (2006) found that speakers of English more often use a full lexical noun or proper name instead of a pronoun if the pronominal reference is potentially ambiguous, as in (2), where the referents’ genders are identical.

(2) Proper name for reference if use of a pronoun is potentially ambiguous

A: André and Jonathan are both handymen.
B: Jonathan (?he) still has a lot to learn though!

Semantic properties of referents, such as animacy, also influence form choice. Dahl and Fraurud (1996) show that speakers of Swedish use more pronouns for animate referents and more definite nouns for inanimate referents. The possible effects of avoidance of ambiguity and animacy will, however, not be included in the investigation of form choice for reference in this study. The focus lies on the three factors of (a) specificity, (b) givenness in discourse and (c) assumed familiarity of

4 The impersonal use of the second person form is also excluded here.
specific referents that are new to discourse. These factors were chosen since early sensitivity to some of these factors has been demonstrated in three-year-old children (§3.4). The aim of the current study is to investigate whether younger children, between 2;0 and 3;3, already show any sensitivity to these factors at the point when they are still in the process of acquiring the morphosyntactic forms. Moreover, by examining younger children the nature of the interaction between morphosyntax and pragmatics in acquisition can be investigated (§1.2 and §3.5).

The morphosyntactic forms studied fall into three categories: full nouns without determiners or with different types of determiners, pronouns and proper names (§4.4). Not all languages make use of these morphosyntactic devices in reference to the same extent. For example, Russian has no indefinite and definite articles and uses word order to express the pragmatic factor of specificity (Avrutin & Brun, 2001). Dutch, English and French, the languages to be studied here, all make use of full nouns with determiners, pronouns and proper names in reference. These forms differ from each other with respect to their semantic, morphosyntactic and pragmatic properties.

Nouns and pronouns are different with respect to their semantics in that pronouns lack the descriptive content of nouns. The interpretation of pronouns therefore depends heavily on the discourse context (anaphoric reference) or extra-linguistic, physical context (deictic reference). Moreover, the relationship between a third person pronoun and its referent in discourse or in the extra-linguistic context can be made clear by means of the semantic features expressed by the pronoun, such as number and gender. In addition, syntactic structure can be relevant to identify the referent of a pronoun, as is evidenced by the restrictions on binding for reflexive and personal pronouns (Wiese & Simon, 2002). Pragmatically, pronouns are generally used for referents that are in the focus of attention of the conversation participants, whereas nouns can also be used for referents that are less or not at all active in their consciousness (Gundel et al., 1993, see also §2.4).

Proper names are semantically different from nouns in that they do not have a meaning independent from the entity they name. For example, the noun man in English carries (amongst others) the descriptive criteria of ‘being human’, ‘male’ and ‘adult’. The proper name John does not carry these features, even though we will usually associate John with a male person (example taken from Lyons, 1999: 21). In lacking a descriptive content, proper names are comparable

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5 All elements that precede nouns and limit the potential referent of a noun phrase are headed under the term ‘determiner’ in this thesis.
to pronouns, which rely on the extra-linguistic or discourse context in reference (see above). However, proper names also have a unique reference, as nouns do. In certain contexts, the name *John* will refer to one single person, whereas the pronoun *he* does not necessarily. Morphosyntactically, proper names differ from both nouns and pronouns in several ways. In contrast to (count) nouns, proper names cannot be pluralized. Moreover, proper names generally do not take a determiner in Dutch, English or French. If proper names are preceded by a determiner, they lose their proper name interpretation and receive a type reading in these languages (e.g. *the Peter I met yesterday*, Pannemann, 2007). In other languages, proper names can be preceded by a definite determiner without receiving this type reading, for example, in some German dialects. In contrast to pronouns, proper names do not agree in number and gender with their referent in the languages studied. From a pragmatic point of view, proper names are often treated as being intermediate between pronouns and definite nouns (Ariel, 1996; Mulkern, 1996). The pragmatic differences between nouns with different types of determiners, pronouns and proper names are central in the current study and are discussed in more detail in §2.4.

For nouns, the use of different types of determiners in relation to pragmatic factors will be investigated. The use of pronouns in relation to pragmatic factors will be contrasted with the use of nouns and determiners as a group and with proper names. Other linguistic devices for reference are excluded from the analyses. First of all, non-realized arguments are not considered here. In the languages studied, non-realization of arguments is only allowed in highly restricted contexts, such as diary style (see 3a) or topic drop (see 3b) (Thrift, 2003). Research has shown that children omit more arguments than adults do. The children drop subjects and objects if they are given but tend to use full (nominal or pronominal) forms for new referents (Clancy, 1997; Serratrice, 2005). In this study, however, only realized arguments will be considered in order to avoid attributing knowledge of argument structure to the children where this is not evident from their language production (Laakso & Smith, 2007).

(3) **Non-realized arguments in diary style (a) and topic drop (b)**

a.  Saturday: Ø got up early to go to the runners club.

b.  A: Wat heb je met mijn spijkerbroek gedaan?
    ‘What did you do with my jeans?’

B: Ø Heb ik in de was gestopt.
    ‘I put ø in the wash’
Speakers of Dutch, English and French can also use word order or prosodic contour to convey the cognitive status of a referent (Lambrecht, 1994; Fretheim, 1996). Consider example (4), which is the Dutch variant of speaker B’s contribution in example (1):

(4) Cognitive status and word order
B: Waarom koop je niet die jurk die we vorige week in de Kalverstraat zagen? Die was echt leuk! Die moet je echt gaan kopen!
‘Why don’t you buy the dress that we saw in the Kalverstraat last week? It was really nice. You really should buy it!’

The third utterance in (4) does not exhibit the standard SVO word order for main clauses in Dutch, but has the object die placed in first position. As such, the speaker signals that ‘dress’ is still in the focus of attention, which is also reflected by the choice of a demonstrative pronoun as the referring expression. Speakers of French would probably use a dislocation to convey the high saliency of the referent ‘dress’. In such dislocations, an element appears to the left or right boundary of the sentence, as the demonstrative celle-là in (5).

(5) Cognitive status and dislocation
B: Pourquoi tu achètes pas la robe qu’on a vue dans la Rue de Rennes la semaine dernière? Celle-là, elle était vraiment chouette. Il faut vraiment que tu l’achètes.
‘Why don’t you buy the dress that we saw in the Rue de Rennes last week? It was really nice. You really should buy it!’

In the English variant, the standard svo word order is retained despite the high saliency of ‘dress’. English is a rather strict subject first language and pragmatic factors do not have a large influence on word order. Speakers of English make use of sentence accent instead (Lambrecht, 1994: 24). The acquisition of the relation between cognitive status and prosody or sentence form, as well as cross-linguistic variations in these, are very interesting. However, these aspects of referential form will not be studied in the current thesis.6

In sum, not all aspects of reference can be investigated in this thesis. The focus will be on the influence of the pragmatic factors of (a) specificity, (b)

6 The referential expressions that are the focus of the current study can occur in dislocations. Therefore, dislocations will be addressed briefly in discussing the morphosyntactic forms for reference in §2.2 and in the analysis method in §4.4 and §4.5.
givenness in discourse and (c) familiarity of new referents on the use of nouns and different types of determiners, pronouns and proper names.

1.2 The acquisition of reference: a challenge for language acquisition theory

It will be clear by now that reference involves both morphosyntax and pragmatics. In language acquisition, children must therefore not only learn the relevant morphosyntactic forms of referential expressions (e.g. determiners, pronouns), but also the pragmatic conditions under which these forms can or must be used. For instance in (6), the child tells a story from a library book that the investigator does not know and cannot see. The child uses a noun with a definite determiner to refer to ‘boys’ (de jongens). Definite nouns generally convey that the hearer is expected to be already familiar with the referent (§2.4.1), which is not the case in (6). Either the child does not yet know that he needs to assess the listener’s familiarity with the referent to use this form, or he has not assessed the listener’s perspective correctly.

(6) Referential error (Abel, 3;3, Dutch)

INV: Hèhè, maar vertel eens even van die bibliotheek.
‘Well, tell me about that library’

CHI: Zijn allemaal boekjes.
‘Are all kinds of books’

[...]

CHI: En van Flipper.
‘And about Flipper’

CHI: Toen ging de jongens slaper.
‘Then the boys went to sleep’

The acquisition of the pragmatic aspects of reference is closely related to more general cognitive development. That is, to be able to correctly assess the cognitive status that a referent has to the listener, and subsequently choose the appropriate referential form, the speaker must realize that her memory and attention state are not necessarily the same as those of the listener. This is part of the Theory

7 Most examples in this thesis will come from the corpora analyzed in this research (CHILDES-database, MacWhinney, 2000, see also §4.2). Target references are underlined. The examples are presented as they occur in the database as much as possible, including hesitations, self-corrections etc. Speaker turns are indicated as in the chat-format. CHI stands for the child, MOT for mother, FAT for father, GRM for grandmother, GRF for grandfather, INV for the investigator and BRO for brother. An idiomatic translation is given for the Dutch and French examples. Where relevant, a morphemic translation will also be included. The glossary for various symbols in examples can be found in the List of Abbreviations.
of Mind: the insight that other people have intentions, beliefs, thoughts and knowledge that are different from one’s own (Wilde Astington & Baird, 2005). The acquisition of morphosyntactic forms for reference already starts around age two, whereas the development of understanding that others’ minds are separate from one’s own starts early, but seems to take at least until age four (§3.2 and §3.3). Given the unequal developmental paths, the challenge for language acquisition research is to make clear how morphosyntax, pragmatics and cognition interact in development. The area of reference is an ideal research topic in this respect, since reference is one of the first uses of language for children. Therefore, this study will investigate first and foremost how children’s sensitivity to the interaction between the morphosyntax and pragmatics of reference develops. The important question in this respect is when children start to associate morphosyntactic forms with pragmatic functions in language use. In addition, three issues are investigated to gain more insight into the development of reference. First, this thesis will examine whether the rate of acquisition of morphosyntactic forms influences the development of associations between morphosyntax and pragmatics. Second, the influence of the input on acquiring form-function combinations for reference will be examined. Third, the pragmatic factors of givenness and familiarity play a role in the use of both determiners and pronouns. The question is whether children show parallel sensitivity to these pragmatic factors in their use of determiners and pronouns or whether the pragmatics of reference develops on a form-by-form basis, that is, unequally in determiners and pronouns. These three issues will be introduced in more detail in the following sections and form the basis for the further structure of this thesis.

1.2.1 Associating morphosyntax and pragmatics in the acquisition of reference

Previous research has shown that children have acquired many of the social-cognitive skills that are useful for reference well before two years-of-age. For example, around 18 months children can already distinguish between new and given, which might be relevant to assess ‘givenness’ in discourse (§3.3). The question is, however, whether they are able to apply these skills in language when they start to refer linguistically. Around three years-of-age, children acquiring various languages are sensitive to some of the pragmatic factors that condition the use of determiners and nouns, pronouns and proper names (see §3.4), but it is not clear how this sensitivity develops. That is, if the cognitive basis is present, do children start to associate pragmatic factors with morphosyntactic forms as
soon as they start to produce these forms? To investigate this issue, the current study will use longitudinal data in which the development of the associations between morphosyntax and pragmatics can be traced in the same children over a longer period of time (between 2;0 and 3;3, §4.2). In addition, the development of associations between morphosyntax and pragmatics will be examined by investigating the role of the speed of acquisition of morphosyntax. That is, if the morphosyntax and pragmatics of reference develop in close association, the earlier a morphosyntactic form is acquired, the earlier (appropriate) pragmatic application of that form is expected.

The development of morphosyntactic forms for reference, most notably determiners, is known to proceed at different rates in Dutch, English and French. Researchers have tried to connect different developmental paths in determiner acquisition to both qualitative and quantitative differences in the determiner systems of languages (Avrutin & De Lange, 2004; Kupisch, 2004, see also §2.2.1 and §3.2.1). Qualitatively, the complexity of the determiner system, e.g. the number of determiner forms, differs in Dutch, English and French. Also, the determiner paradigms in these three languages differ in the degree to which number and gender are systematically marked. The focus of the current study will, however, be on the influence of quantitative differences in the determiner systems of Dutch, English and French. Determiner use is more frequent and consistent in French. That is, bare nouns hardly occur in adult usage in this language, whereas they do in Dutch and English. An input-driven model of language development predicts that these quantitative differences in the input lead to earlier acquisition of determiners in French than in Dutch or English (§1.2.2). Moreover, if the morphosyntax and pragmatics of reference are connected to each other in development, it is expected that French children will also show earlier sensitivity to the pragmatic factors of reference in determiner use.

1.2.2 Influence of the input in the acquisition of reference

Theoretical models of language acquisition attribute different roles to the input. In generative models, the input plays a limited role. It only serves to identify and set the parameters provided by Universal Grammar (Crain & Thornton, 1998). Within the constructivist or usage-based theory of language acquisition, the input is assumed to play a large role (Tomasello, 2003). Children start the acquisition of language by using principles from general cognition and figure out the target system on the basis of actual expressions in the input. The constructivist theory would predict a
large influence of the input on the acquisition of the morphosyntax and pragmatics of reference. In fact, little is known about the influence of the input in this area and in such young children, so it will be addressed in the current study.

Input influence can take two forms. First of all, language-specific patterns are expected in children’s language production already from an early age. Cross-linguistic investigation has shown that young children are indeed sensitive to various language-specific patterns, for example in the acquisition of spatial terms (Choi & Bowerman, 1991). Within the area of pragmatics, Hickmann (2003) found that French children make more use of word order to mark a referent’s first mention in discourse than English children do. Section §2.4.2 describes some differences between Dutch, English and French in how the morphosyntactic forms studied are used in reference. If the input influences the acquisition of reference, it is expected that these language-specific patterns are also evident in children’s early use of morphosyntactic forms for reference, around the age of two.

Secondly, the input can influence the acquisition of reference in a broader sense. If language is connected to other cognitive capacities, children can figure out the interaction between morphosyntax and pragmatics on the basis of input cues and their general conceptual skills. Tomasello (2003) has suggested that the simple frequency with which children come across a particular linguistic form or construction plays a role. The more frequent the form or construction is in the input, the earlier it will be acquired. Frequency effects have been found in the acquisition of various syntactic phenomena, for example English negation constructions (Cameron-Faulkner, Lieven & Theakston, 2007). As was pointed out in §1.2.1, the influence of frequency will be explored in the acquisition of determiners in this thesis. It may, however, also play a role in the acquisition of form-function combinations for reference. Following the same line of reasoning, the more frequent a form-function combination is in the input, the earlier it will be acquired. Other input cues may interact with frequency, for example consistency (Bates & MacWhinney, 1989). A form that is invariably related to a particular function can be called completely consistent and reliable. The morphosyntactic forms studied here are all used to convey various pragmatic functions and pragmatic functions can usually be expressed by more than one form (see §2.4). However, some forms are more appropriate for particular functions than other forms and this leads to stronger associations or disassociations between forms and functions. In this study, a sample of input language will be studied to determine cue frequency and consistency of form-function combinations. If
children are sensitive to input cues, the acquisition of morphosyntactic forms for pragmatic functions will proceed faster for form-function combinations that are more frequent and less variable in the input.

In sum, the current study will investigate the nature of the interaction between the morphosyntax and pragmatics of reference in acquisition by addressing the role of the input. If early influence of the input is found, this would be most consistent with the constructivist theory of language acquisition.

1.2.3 Parallel sensitivity to pragmatic factors in the use of different morphosyntactic forms for reference

In adult Dutch, English and French, the pragmatic factors of givenness and assumed familiarity of discourse-new referents influence the use of both different types of determiners and of pronouns as compared to nouns and proper names (§2.4.1). It is possible that children's sensitivity to these pragmatic factors develops in parallel for determiner and pronoun use. Alternatively, it may be the case that sensitivity to a particular pragmatic factor is evident earlier in the use of one morphosyntactic form than in the other. The issue of parallel or unequal sensitivity to pragmatic factors in determiner and pronoun use sheds more light on the nature of the interaction between morphosyntax and pragmatics in the acquisition of reference. It has, to my knowledge, not yet been investigated, so it will be addressed in the current study.

If sensitivity to pragmatic factors develops across the board, it is expected that once the relevant cognitive skills and pragmatic distinctions are available to the child (§3.3), they will be applied in the use of determiners and pronouns alike. Parallel development predicts for example that if children are sensitive to givenness in their use of determiners, they must simultaneously be able to apply this knowledge to the use of pronouns. Similarly, if children have difficulties in assessing familiarity in determiner use, they must face the same difficulty in using pronouns. In contrast, if children's sensitivity to the pragmatics of reference develops on a form-by-form basis, it is possible that they show adult-like sensitivity to givenness in the use of determiners, but not in the use of pronouns. In that case, the unequal sensitivity to pragmatic factors in the use of morphosyntactic forms needs to be explained. The constructivist model of language acquisition can account for an unequal developmental pattern, because of the assumed role of cue frequency and cue consistency (§1.2.2). For example, there would be evidence for the constructivist model, if the cue frequency and consistency for givenness
in determiner use is stronger than in pronoun use and if sensitivity to givenness in determiner use is acquired earlier.

In sum, the nature of the interaction between the morphosyntax and pragmatics of reference in acquisition will be investigated by examining how the pragmatic factors of givenness and assumed familiarity play a role in children's use of nouns and determiners on the one hand and pronouns on the other. An unequal developmental pattern might be explained by an input-based theory of language acquisition.

1.2.4 The modularity debate in the acquisition of reference

The interaction between morphosyntax and pragmatics in reference, and more generally between language and cognition, is related to the discussion about modularity. In a modularity model, human cognitive capacities are traditionally seen as largely independent from each other, each forming a specific module (Fodor, 1983). Two levels of modularity are distinguished: (1) the modularity between cognitive capacities and language and (2) between different aspects of language. According to Fodor, modules operate largely in isolation, according to principles that are specific to the particular module, the so-called domain-specificity. For example, Fodor considers language to be a module that is largely independent from general cognition. Within the linguistic module, morphosyntax and pragmatics are also considered to be separate systems that function relatively autonomously. It is important to note that not all linguistic theories assume modularity and even the ones that do seem to have adopted a less radical view. Most current modular models allow for interaction between language and cognition and between language modules, on the basis of the argument that language would otherwise be isolated from the rest of the mind and thus useless (Chomsky, 2000; Jackendoff, 2002).

A modularity model can also be applied to the field of language acquisition. This is usually done by researchers working from a generative perspective (Crain & Thornton, 1998; Schaeffer, 2000). They argue that different modules develop autonomously and possibly at different rates. Morphosyntactic knowledge is assumed to be innate, whereas pragmatic and cognitive knowledge mature gradually or are acquired by experience. The interaction between these independently growing modules leads to gradual language acquisition. For example, Avrutin (1999) proposes a model for the interpretation of anaphors in acquisition. According to this model, children's initial errors in anaphora interpretation are not due to a lack of syntactic knowledge about binding. Rather,
children have difficulties in applying a pragmatic principle that governs binding
and reference. Avrutin (1999) predicts that once the relevant pragmatic knowledge
has matured, children will behave like adults in the interpretation of anaphora.

A non-modular model of language acquisition is usually adopted by
researchers working from a functionalist perspective (Bates & MacWhinney,
1989; Karmiloff-Smith, 1992; Gopnik & Meltzoff, 1997; Tomasello, 2003). These
researchers assume that different aspects of language are connected to each other
in acquisition and language itself is connected to social-cognitive development.
For example, Tomasello (2001) claims that children make use of social-pragmatic
cues in lexical acquisition. They understand their interlocutor’s communicative
intentions and use this knowledge in linking new words to referents.

The nature of the interaction between morphosyntax and pragmatics is rather
unclear in both modular and non-modular theories of language acquisition
(Foster-Cohen, 1996; Schaeffer, 2000). This thesis aims to shed more light
on this interaction. The first issue under consideration, that is, the influence
of the rate of morphosyntactic acquisition on the acquisition of the pragmatics
of reference, is of particular importance here (§1.2.1). In a modularity model,
the autonomous development of different modules is assumed. Influence of the
development in one module on the development in other modules is excluded
under this assumption. This rules out the possibility that earlier acquisition
of the morphosyntax of reference influences the acquisition of the pragmatics
of reference. A non-modular model, however, does allow links in development
between different aspects of language. Close associations between the
morphosyntax and pragmatics of reference in acquisition will therefore be more
compatible with a non-modular perspective on language acquisition.

It is not the goal of this thesis to settle the modularity debate in language
acquisition. The aim is to investigate the interaction between morphosyntax and
pragmatics in the acquisition of reference. Nevertheless, the results, especially
those concerning the influence of rate of determiner acquisition, may contribute
to the discussion about modularity in development.

1.3 Outline of this thesis
The aim of this thesis is to investigate the interaction between the morphosyntax
and pragmatics of reference in language acquisition. To this end, I will investigate
how children’s sensitivity to the three pragmatic factors of specificity, givenness
in discourse and familiarity of new referents to the listener develops in their use
of different types of determiners, pronouns and proper names. Three issues that can shed more light on the nature of the morphosyntax-pragmatics interaction in the acquisition of reference will be considered: (1) the development of associations between morphosyntax and pragmatics in reference and the role of the speed of acquisition of the referential expressions herein, (2) the influence of the input in the acquisition of reference and (3) children’s parallel sensitivity to pragmatic factors in their use of different morphosyntactic forms.

This thesis is organized into eight further chapters. Chapter 2 gives an overview of the referential expressions studied and their morphosyntactic properties in adult Dutch, English and French. It also describes the different pragmatic factors studied and how these influence form choice for reference in the adult systems of the three languages. Chapter 3 discusses earlier literature on the acquisition of nouns and determiners, pronouns and proper names in Dutch, English and French. Issues from children’s socio-cognitive development and earlier research on the acquisition of reference are also discussed. The discussion of earlier research leads to the formulation of the research questions that will be addressed in this thesis. These research questions are closely related to the three issues described in §1.2: (1) development of associations and influence of morphosyntactic acquisition, (2) influence of the input and (3) parallel sensitivity. Chapter 4 presents the research method followed in this study. In order to investigate children’s sensitivity to the morphosyntax and pragmatics of reference, it is necessary to establish when the relevant referential expressions and pragmatic functions are available to them and whether there are cross-linguistic differences. To this end, Chapter 5 describes the acquisition of the morphosyntactic forms for reference by the Dutch, English and French children from this research. Chapter 6 reports on the children’s and adult’s use of the different pragmatic functions that are related to the factors of specificity, givenness and familiarity to the listener. These results form the background to the main results on the children’s sensitivity to pragmatic factors in reference. The acquisition of reference with nouns and different types of determiners is discussed in Chapter 7, whereas Chapter 8 reports on the use of pronouns as opposed to nouns and proper names for reference. The influence of the speed of acquisition of a morphosyntactic form and the influence of the input are also discussed in these two chapters. Finally, in Chapter 9, the children’s sensitivity to pragmatic factors in both determiner and pronoun use will be compared. Together with the results on the other two issues of development of associations and input, the final chapter presents the main conclusions of this study.