CHAPTER 3

PREVIOUS STUDIES ON CLITIC PRODUCTION AND MAIN RESEARCH QUESTIONS

The goal of this chapter is to give an overview of previous studies which looked at pronominal clitics in language acquisition and studies which dealt with pronominal clitics in aphasia. Moreover, the main research question on which this thesis is based will be outlined.

3.1 Previous studies

3.1.1 Acquisition of clitics in Italian

The acquisition of clitics in Italian has been investigated by several authors. Antelmi (1997) investigated the development of several grammatical categories in the language of an Italian child, C., and she specifically deals with the development of pronominal clitics. Antelmi’s research shows that the first instances of clitic productions in C. occur at around 22 months. At this stage all clitics appear as enclitics. Antelmi suggests that this can be a sign that children do not perceive clitics as separable elements from the verb. Another interesting point shown by this study is the preference to produce full NPs instead of the clitic counterpart until around the age of 27 months. After this age the tendency is inverted, in that children begin to use pronominal clitics more frequently than full NPs. Clitic omissions are observed as well, but they constantly diminish, until the point at which they disappear. Most interestingly, when restructuring sentences begin to be produced, two particularities can be observed. The first one is that in restructuring sentences clitics are produced less frequently and substituted more frequently with a full NP than in sentences with a simple verb construction. Secondly, when clitics are produced they are always in the enclisis position, and never in a climbed position. Antelmi explains this by saying that children show a difficulty with climbing clitics before the verbal complex. Guasti (1994) investigated the language development of three Italian children, M., D. and G. In her study, the development of finite and non-finite verbs is predominantly analysed, but the

23 This is particularly interesting given that the pattern of enclisis was different from the usual position in which clitics were produced in the specific area (the Florence region) where the children were coming from.
production of pronominal clitics is described as well. Her data set shows that in the early development of all three children, the majority of productions are represented by the use of full nouns where a clitic could be produced instead, and omissions of clitics in required contexts (until around 27 months). After that age the number of omissions is decreasing and clitics begin to appear more frequently. Moreover, Guasti shows that the presence of a clitic before a verbal complex, i.e. in the climbed position, only appears later on, at around 31 months. Guasti gives a linguistic explanation of the general difficulty in clitic production by saying that this reflects a difficulty in creating an A-chain, which constitutes the first step of clitic movement. Moreover, she explains clitic climbing as a movement operation that has to occur in two steps (versus the one occurring with simple verbs in one step), and this is the reason why clitic climbing is more difficult. Another interesting study from Bottari, Cipriani, Chilosi & Pfanner (2001) compares, using spontaneous speech analysis, the linguistic development of two Italian children with no history of language development problems; one is an aphasic child and 11 children diagnosed with SLI. The results show that children who are developing normally omit determiners and clitics at an early stage, but that these omissions decrease in the course of development. For children who are developing normally there was no difference in the omission rate between determiners and clitics. The aphasic child also presented omissions of determiners and of pronominal clitics, but in this child clitics were significantly more frequently omitted than determiners. SLI children omitted both determiners and clitics, determiners being significantly more often omitted than pronominal clitics.

All these studies present common observations. The first one is that pronominal clitics are acquired in a later stage of development, and that in early stages of language acquisition they are omitted or substituted by full NPs. Moreover, the first two studies show that when linguistic structures arise, which permit clitic climbing to appear, children produce clitics in the enclisis position.

### 3.1.2 Clitic production in agrammatism

There are very few studies that specifically deal with the analysis of clitic production in Italian agrammatic aphasia. So far, there are no studies with an experimental setting specifically designed to test clitic production in Italian agrammatism. In the literature three main studies have been found which analyse clitic production in the spontaneous speech of Italian non-fluent aphasic speakers. This work will report the results of these studies, as well as some other interesting studies, which nevertheless do not have Italian as the target language.

The first study is by Lonzi & Luzzatti (1993). In this study the goal of the authors is to check the
adverb distribution relevant to verb production. Nevertheless, some data about clitic production
in spontaneous speech is presented. The three agrammatic speakers tested by these authors all
present a typical agrammatic speech with omissions of pronominal clitics. The second study
which deals with Italian aphasic spontaneous speech, and which looks at the production of
clitics, is the study by Miceli, Silveri, Romani and Caramazza (1989). The third one is by Miceli
and Mazzucchi (1990). In the first study the spontaneous speech of twenty agrammatic patients
was analysed. The major outcomes were that the performance among participants varied with
respect to the number of clitics produced. The error analysis revealed that the two typologies of
errors were represented by omissions and/or substitutions of the clitic. Unfortunately, this study
takes the data about clitics as a whole and it does not subdivide among types of clitics. Another
drawback of this study is the absence of a control group. In the second study the results repeat
the same pattern as those in the first. A very important contribution in the analysis of clitic
pronouns in agrammatism comes from the work of Chinellato (2004) who shows that
agrammatic speakers are heavily impaired in the production of both subject and object clitic
pronouns in Venetian dialect. Both clitic types were always omitted by the agrammatic speakers.
Looking at the studies which deal with other languages, one recent interesting report is that by
Reznik, Dubrovsky and Maldonado (1995) which specifically looks at the production of clitics in
the spontaneous speech of one Spanish agrammatic speaker. Firstly, it is particularly interesting
because of the similarity in the clitic system between Italian and Spanish, and secondly, because
it differentiates among different clitic types. The results from this study show that the aphasic
speaker is impaired in the production of clitics, and that omissions prevail over substitutions. The
authors perform a separate analysis for reflexive and personal clitics (personal clitics are typical
in Spanish), but they do not have a separate analysis for the other types of clitics. Nevertheless,
this study is the one which most explicitly focuses on the production of clitics in agrammatic
spontaneous speech. Another recent study by Stavrakaki & Kouvava (2003) investigates by
analysis of their spontaneous speech the use of functional categories (among which is the clitic
category) in two aphasic speakers of Greek. The results showed that object clitics were impaired
(especially the third person clitic pronoun) in both aphasic speakers, and that the major type of
error was that of clitic omissions.

3.2 Main research question
Clitics are complex grammatical elements as described in the theoretical linguistic literature, and
in studies on language acquisition and aphasiological studies. From studies on language
acquisition clitics have been reported to develop later than other grammatical elements. Studies
from aphasia (although there are few) conclude that clitics are significantly impaired in agrammatic speech. These results converge in showing that clitics are indeed complex linguistic elements to process. What is still missing in the literature (at least for aphasiology) is a comprehensive account for clitic impairment. In other words, even though some data is described, a coherent explanation for the cause of the observed deficit is still missing.

The principal goal of this thesis is to study clitic production in agrammatic speech and more importantly to interpret the results to give an account of the underlying cause for (an eventual) clitic impairment in agrammatic speech. In doing this, the main linguistic theories dealing with clitics and the neurolinguistic theories (outlined in the previous chapters) dealing with agrammatism will be tested.

The following chapters will present a series of experiments designed to reach this goal. Chapter 4 will present the data on clitic production in spontaneous speech. Chapters 5 and 6 will present several experiments dedicated to clitic production in different sentence structures. Finally, chapter 7 will compare the results from chapters 5 and 6.