



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

Università degli Studi di Padova

Dipartimento di Studi Linguistici e Letterari

Corso di Laurea Triennale Interclasse in
Lingue, Letterature e Mediazione culturale (LTLLM)

Classe LT-12

Tesina di Laurea

The Role of Universal Grammar in First and Second Language Acquisition.

Relatore

Prof. Emanuela Sanfelici

Laureando

Francesca Greco

n° matr.2010195/ LTLLM

Anno Accademico 2022 / 2023

Dedica

Dedico questa tesi, il cui significato simbolico è duplice, a due persone intrinsecamente legate per sempre.

A Francesco, perché simboleggia la fine di un percorso.

A te che non hai fatto in tempo a realizzare questo desiderio perché te ne sei andato troppo presto. A te che hai lasciato un vuoto nell'animo di Mimmi e che cercheremo di riempire noi, anche se non sarà mai la stessa cosa.

A Miriam, perché simboleggia l'inizio di un nuovo percorso.

A te, Mimmi, con la speranza che il dolore si affievolisca, che trovi una sistemazione dentro di te. A te che sei forte, più di quanto pensi. A te che ti manca una parte di vita.

Indice

Introduzione	7
1 - UNIVERSAL GRAMMAR	9
1.1 – Chomsky’s revolution	9
1.1.1 - E-Language and I-Language	11
1.2 – Universal Grammar (UG)	13
1.2.1 - The Language Faculty (LF)	16
2 - FIRST LANGUAGE ACQUISITION	17
2.1. – Characteristics of L1 acquisition.....	17
2.2 - Critical Period Hypothesis (CPH)	18
2.3 – Initial state.....	20
2.4 – Poverty of the Stimulus Argument (POS)	21
2.4.1. – Underdetermination	23
2.4.1.1 - The Null Subject Parameter (NSP)	23
2.4.1.2 - The Overt Pronoun Constraint (OPC).....	24
2.4.2 – Negative evidence	26
2.4.2.1 – Positive evidence.....	26
2.4.2.2 – Direct negative evidence	28
2.4.2.2.1 – Overregularization errors.....	29
2.4.2.3 – Indirect Negative evidence.....	30
3 - SECOND LANGUAGE ACQUISITION	33
3.1. - Characteristics of L2 acquisition.....	33
3.2 – Critical Period Hypothesis (CPH)	34
3.3 – Initial state.....	35
3.4 – Poverty of the Stimuli Argument (POS).....	37
3.4.1 – Underdetermination	37
3.4.1.1 – The OPC in L2 acquisition: Pérez-Leroux and Glass (1999)	38
3.4.2 – Negative evidence	39
3.4.2.1 – Positive evidence and direct negative evidence	39
Conclusioni	43
Bibliografia	45
Ringraziamenti	47

Introduzione

Cos'è il linguaggio? Cos'è una lingua? Da cosa è composta una lingua?

Queste sono state alcune domande poste dal professore alla mia prima lezione universitaria. Tre domande apparentemente banali che mi hanno subito suscitato un grande interesse, e che nel corso della vita non avevo mai formulato nonostante io sia una persona estremamente curiosa. Perché non ci avevo mai riflettuto? Semplicemente per il fatto che parlo, penso, ascolto, elaboro, scrivo, comunico. Il mio cervello è in grado di compiere tutte queste azioni senza particolare istruzione, o meglio automaticamente. Sono capacità che possiedo da quando ne ho memoria e che davo per scontate in quanto essere umano. Inconsciamente non ero così distante dalla realtà, perché la risposta alla domanda che tutti almeno una volta nella vita ci siamo fatti, “Perché noi esseri umani parliamo e gli altri esseri viventi no?”, sarà la protagonista della mia ricerca.

Continuando il mio percorso universitario, ho compreso che i quesiti che mi sarei posta d'ora in avanti, non avrebbero fatto altro se non moltiplicarsi. La semplice interrogazione sulla definizione di lingua è mutata in “Come impara una lingua un bambino? Cos'è la grammatica? Se sono dotata di linguaggio, allora perché ci vuole così tanto impegno per imparare una seconda lingua in età adulta?”. Si è aperto così un mondo talmente vasto da lasciarmi interdetta e, allo stesso tempo, affascinata.

In questo elaborato ho voluto rispondere alle mie domande iniziali, concentrandomi principalmente su due proprietà dell'acquisizione del linguaggio umano: la povertà degli stimoli (input) e la mancanza di evidenze negative esplicite cercando di evidenziare le differenze presenti tra il processo di acquisizione della lingua madre (L1) e quello della seconda lingua (L2). Per raggiungere tale scopo, ho diviso l'elaborato in tre capitoli dove, partendo da una base teorica, verranno analizzate le due proprietà precedentemente citate, portando il lettore a ragionare sulla complessa conoscenza linguistica che possediamo.

Più precisamente, il primo capitolo è dedicato alla teoria della Grammatica Universale e alla rivoluzione linguistica avvenuta nel secolo scorso grazie ad uno degli intellettuali di maggior rilievo del Novecento, nonché il più grande linguista ad oggi vivente: Noam Chomsky. Verranno in particolare contrapposti due tipi di approcci linguistici, quello innatista e quello comportamentalista, in modo da apprezzare l'evoluzione storica delle teorie linguistiche.

Il secondo capitolo si concentra sul processo di acquisizione della prima lingua e sul ruolo fondamentale che gioca la Grammatica Universale in esso. Partendo dalle principali caratteristiche di tale processo, verrà dimostrato che la semplice esposizione agli stimoli linguistici e i tentativi di correzione di tipo grammaticale non sono sufficienti a giustificare la capacità di acquisire la lingua di un bambino di tre anni. Anzi, le correzioni grammaticali sembrano essere totalmente ignorate dai bambini. Inoltre, vedremo come la generalizzazione di regole grammaticali è comunque limitata da proprietà universali del linguaggio.

Il terzo capitolo, invece, è dedicato all'acquisizione di una seconda lingua da parte di un adulto. Le sfide principali in questo ambito sono due: la prima è quella di dimostrare la presenza della Grammatica Universale nonostante l'acquisizione già avvenuta di una lingua madre; la seconda è quella di dimostrare che alcune proprietà del linguaggio apprese della seconda lingua non sono riconducibili alla grammatica della prima lingua. Infine, verrà sottolineato che, anche per quanto riguarda l'acquisizione di una seconda lingua, sia gli input linguistici che le correzioni grammaticali non spiegano la competenza linguistica appresa.

1 - UNIVERSAL GRAMMAR

1.1 – Chomsky’s revolution

In the late 19th century and early 20th century Ferdinand de Saussure laid out an approach to language which allowed for followed principles of the turn-of-the-20th-century in linguistics. His name is largely linked to the *Cours de linguistique générale* (1916; Course in General Linguistics) - whose publication is considered the starting point of structural linguistics – which is a reconstruction of his lectures on the basis of notes by his students of Paris and Geneva.

Saussure’s lectures have been fundamental for modern linguistics mainly for two reasons. Prior to Saussure, languages were considered historical entities, therefore they were studied from a diachronic perspective. This means that the focus of the studies were the development and evolution of a language through history. Saussure, instead, was the first who studied languages from a synchronic perspective, which means studying them in a specific, constrained time. From this new way of considering the study of languages, Saussure made the other fundamental distinction. He identified “language” (*la langue*) as the internal system consisting of symbolic units (signs) defined by their relations, in contrast with “language behaviour” (*la parole*) as the empirical speech activity, the actual utterance. He suggested that signs are made up of two parts: a signifier (a sound, an object, an image) and a signified (a concept generated by the signifier), whose mutual relation is arbitrary and based on convention. By making the distinction between *langue* and *parole*, Saussure was actually introducing the “psychological” concepts represented in the human mind which are linked to “linguistic” sound and reflected in a psychological process. Indeed, he was introducing two decisive concepts: the first is the assumption that language is a system of signs that expresses ideas; the second is the existence of a general linguistic faculty which governs signs. Yet, he thought that language is a social phenomenon and therefore he was focusing his studies on the actual speech in order to discover the underlying structure of language faculty.

From Saussure, over the 20th century multiple researchers started to investigate the functioning of languages. In order to discover their nature and characteristics, scholars

concentrated on language acquisition. In 1957, B.F. Skinner, an American behaviourist psychologist, published his *Verbal Behaviour*, a book that led to numerous debates.

In his book, Skinner provides the first theory of language acquisition, called Operant Conditioning theory, based on his previous studies using animals. In these studies, animals were placed in a box where they had to understand how to activate levers or how to respond to light or sound stimuli in order to get their reward (usually food or elimination of the noisy stimuli). The experiments suggested that by manipulating the stimuli coming from the external environment, animals' behaviour could change. In *Verbal Behaviour*, Skinner argued that language acquisition could also be explained by the Operant Conditioning mechanism. In fact, he believed that children are born with a blank state of mind where language is "a question about human behaviour and hence a question to be answered with the concept and techniques of psychology as an experimental science of behaviour" (Skinner 1975: 5). Indeed, from his point of view, language is a set of mechanical habits which is acquired through imitation and interaction with the environment in a stimuli-response-reinforcement scheme. In this framework, children are "shaped" into language users by their parents or, more in general, by caregivers using positive (a reward) or negative (punishment) reinforcement.

A profound shift in linguistics began in mid-1950s with Noam Chomsky. In 1959, he published a critical review of *Verbal Behaviour* which became more influential than Skinner's book both in linguistics and in psychology field.

Chomsky's review has come to be regarded as one of the fundamental documents of the discipline of cognitive psychology, and even after the passage of twenty-five years it is considered the most important refutation of behaviourism (Newmeyer, 1986: 73).

In the review Chomsky argued that human verbal behaviour is different from nonverbal animal behaviour, therefore it requires additional or entirely different principles. Language cannot be solely reduced to a behaviour because humans are the only species that communicate through it. Children's minds are not a tabula rasa, but rather they are equipped with some kind of innate structure or genetic component that helps them acquire language. Moreover, if children really acquire language through the

stimuli-response-reinforcement scheme, three years would not be enough in order to acquire the basic structures of language. More importantly, the behaviourist framework was leaving behind one of the most distinctive aspects of human language: its creativity. It is the property of language that allows us to produce sentences which have never been heard before and which could not be present in the environment. The “creative aspect of normal language use is one fundamental factor that distinguishes human language from any known system of animal communication” (Chomsky, 1986: 88).

Another important point of Chomsky’s critique lies on the on the concept of stimuli. He argues that “if animal behavior is controlled by external stimuli or internal states (the latter including those established by conditioning), then as the stimuli vary over an indefinite range, so may the behavior of the animal” (Chomsky, 2005: 11). Instead, language is not controlled by the external stimuli because it is a “instrument of thought and self-expression”.

In Chomsky’s view, language is not a system of habits, conditioned responses or verbal behaviour, rather, it is a manifestation of a system of knowledge that an individual uses in speech and thought. From the moment in which Chomsky argued that humans are biologically programmed to acquire language, the behaviourist Operant Conditioning theory has been left behind with a consequent rise of cognitive psychology.

Chomsky’s revolution consisted of the following paradigm shift: he moved the focus of the scientific study of language from the actual speech, otherwise the product of the behaviour, to the knowledge of language in human brain/mind to discover its nature, origin and use.

He has revolutionised linguistics, and in so doing has set a cat among the philosophical pigeons. He has resurrected the theory of innate ideas, demonstrating that a substantial part of our knowledge is genetically determined; he has reinstated rationalist ideas that go back centuries, but which has fallen into disrepute; and he has provided evidence that unconscious knowledge is what underlies our ability to speak and understand (Smith 1999: 1).

1.1.1 - E-Language and I-Language

According to Chomsky, language can be studied either as an “external” or as an “internal” phenomenon. Indeed, Chomsky distinguishes between: E(xternal)-language which

consists of a collection of sentences, from I(nternal)-language which is the internal system of principles in the mind. This distinction is particularly relevant since the object of the study is completely different.

The E-language approach, such as structuralism and behaviourism, intends to collect a set of actual sentences to describe properties of language without considering the properties of the speaker's mind. Indeed, this approach considers grammar as a "collection of descriptive statements concerning the E-language" (Chomsky, 1986a: 20).

On the other hand, I-language approach intends to understand what a speaker knows about language and where this knowledge comes from. The focus is the human mind, not the environment or the verbal behaviour. For this reason, language is considered as "a system represented in the mind/brain of a particular individual" (Chomsky, 1988: 36). Therefore, a grammar describes the knowledge of language of the speaker mind, not the actual product of the mind.

On the basis of Chomsky's distinctions, it is important to notice that the standard conception of language is as E-language. English, Italian, Spanish, etc, are E-language concepts referring to socio-political entities rather than mental entities. However, they constitute the external representation of the internalized system in human mind. Therefore, the word "language" has changed its meaning: it is not a set of descriptive rules, but it "is a state of the faculty of language, an I-language, in technical usage" (Chomsky, 2005a: 2).

Chomsky's linguistic theories and studies have always been focused on I-language. Indeed, he is extremely critical on E-language approach: "E-language, if it exist at all, is derivative, remote from mechanisms and of no particular empirical significance, perhaps none at all" (Chomsky, 1991b: 10).

Another important distinction made by Chomsky which resemble the difference between I-language and E-language is the one between *competence* and *performance*. The former is the "speaker/hearer's knowledge of his language", the latter is "the actual use of language in concrete situations" (Chomsky, 1965: 4). Hence, the aim of a linguist is to determine the speakers' competence from the data of their performance.

To conclude, using Chomsky's terminology, he revolutionized the linguistics field by placing the study of language on the I-language rather than on the E-language: "the

shift of focus from the dubious concept E-language to the significant notion of I-language was a crucial step in early generative grammar” (Chomsky, 1991b: 10).

1.2 – Universal Grammar (UG)

The theory of Universal Grammar, proposed by Chomsky in the 1950s, takes a cognitive approach to language, therefore it concerns the I-language knowledge.

The theory is based on the observations that certain properties of languages are universal. Therefore, Chomsky argues that humans are biologically programmed to acquire language because the human mind is equipped with an innate knowledge of language that enables languages to be acquired and used. This innate component is called Universal Grammar.

The language faculty has an initial state, genetically determined; in the normal course of development it passes through a series of states in early childhood, reaching a relatively stable steady state that undergoes little subsequent change, apart from the lexicon. To a good first approximation, the initial state appears to be uniform for the species. Adapting traditional terms to a special usage, we call the theory of the state attained its grammar and the theory of the initial state Universal Grammar (UG). (Chomsky, 1995: 14).

Universal Grammar consists of sets of invariant linguistic principles that are common to all languages in the world, as well as parameters which allow for variation from language to language. This innate human component, the UG, is the starting point from which all humans develop language.

According to Chomsky, “The principles of universal grammar provide a highly restrictive schema to which any human language must conform, as well as specific conditions determining how the grammar of any such language can be used” (Chomsky, 1986: 55). The most important principle of UG is “structure dependence” which “asserts that knowledge of language relies on the structural relationship in the sentence rather than in the sequence of items” (Cook, 1988: 2). A sentence cannot be analysed as simply a sequence of words, but rather it must be regarded as having a certain hierarchical structure. Consider the following sentences reported in Cook (1988: 2-3) to understand this principle:

1. a. The letter will arrive tomorrow.
- b. Will the letter arrive tomorrow?

The sentence (1a) can be turned into a question like (1b) by inverting the subject with the auxiliary *will*, so that it is now at the beginning of the sentence. In sentences like (1a), a linear rule such as “move the third element in the front of the sentence in order to form yes/no questions” would produce a grammatical interrogative sentence (1b). However, this rule does not work when we encounter sentences like (2a):

2. a. This is a dagger which I see before me.
- b. *A this is dagger which I see before me?

Clearly, sentence (2b) is ungrammatical, meaning that it is not possible to have a rule stating that the yes-no question formation depends on the position of the words in the sentence. Indeed, “An English speaker’s knowledge of yes/no question depends in knowing which word belong to the syntactic category of auxiliary” (Cook, 1988: 3).

However, the knowledge of the syntactic category is still not enough to explain the formation of English yes-no questions. Consider now the following sentences:

3. a. The man who is tall is John.
- b. *Is the man who _ tall is John?
- c. Is the man who is tall _ John?

In sentence (3a), there are two auxiliaries, hence the issue here is to understand which one has to be moved at the beginning of the sentence. An English speaker can assume that s/he has to move the second auxiliary like in (3c), otherwise the sentence would not be grammatical as in (3b). This hypothesis leads to ungrammaticality when the relative clause comes after the main clause like in (4a):

4. a. John is the man who is tall.
- b. *Is John is the man who _ tall?

c. Is john _ the man who is tall?

In this case, moving the second auxiliary will produce an ungrammatical sentence as in (3c), while moving the first will lead to grammaticality as in (3b).

Sentences (3) and (4) explain that a rule based on the linear position of the auxiliary is not sufficient to define what is really happening. In fact, English yes/no question formation involves the movement of the auxiliary which is placed on the main sentence rather than the one in the relative clause. “It is the position on the sentence of the auxiliary within the syntactic structure of the sentence that is crucial – whether it is in the main sentence or the relative clause” (Cook, 1988: 4).

To summarize, in order to form yes/no questions a native English speaker has to know two things. Firstly, he has to know the syntactic categories of the words in order to recognize the auxiliary; secondly, he has to know the structural relationships of the words in the sentence in order to identify which one is the main sentence and which one is the relative clause. This subtle knowledge comes from the principle of UG.

Structure dependence constrains children’s grammatical hypotheses so that they must analyse the structure [...] before forming a question inversion rule and thus not first “consider the simple linear rule...then discard it (Chomsky 1988a: 45).

Parameters, instead, are binary options which define space of variation from language to language. They are set by children during the language acquisition process throughout the exposure to the linguistic input. “When parameters are fixed, a particular realization of the general system is obtained, the grammar of a particular language”. (Rizzi, 1989: 70). In section 2.4.1.1, the Null Subject Parameter will be explained to demonstrate the involvement of UG in the first language acquisition.

The importance of the formulation of principles and parameters lies on the fact that once a single parameter is set, a number of connected syntactic properties of the language will follow (Chomsky, 1981a). This observation is relevant in terms of language acquisition task: a child has just to discover the right parameters settings of her/his L1 instead of acquiring a large number of properties independently.

To conclude, the relevance of Universal Grammar is attributed to the fact that it explains various aspects of language and language acquisition such as:

- (i) Language is a human-specific ability;
- (ii) Language is universal and all languages share the same underlying structure;
- (iii) It explains the Poverty of the Stimulus Argument, which will be amply discussed in the next two chapters;
- (iv) It accounts for the characteristics of the first language acquisition process which are discussed in section 2.1.

1.2.1 - The Language Faculty (LF)

Chomsky has often claimed that knowledge of language is to be considered independent from other aspects of the human mind because of its unique nature. One of the main arguments in favour of this mental independence is that language acquisition seems to use special forms of learning which are different from those used for other activities. “Language knowledge is separate from other forms of representation in the mind; it is not the same as knowing mathematical concepts, for example” (Cook and Newson, 2007: 46). Chomsky suggests that the Language Faculty is a “mental organ” similar to the other organs of the human being. “This language organ, or “faculty of language” as we may call it, is a common human possession, varying little across the species as far as we know, apart from very serious pathology” (Chomsky, 2002: 47). However, this analysis is in contrast with other cognitive theories (such as the “Usage-based approach” by Tomasello and “The Theory of Cognitive Development” by Piaget) which consider the mind as a whole system.

To conclude the whole chapter, Chomsky’s words are used to summarize the main concepts which are going to be important in the proceeding of this dissertation:

The language organ is the *faculty of language* (FL); the theory of the initial state of FL, an expression of the genes, is *universal grammar* (UG); theories of states attained are *particular grammars*; the states themselves are *internal languages*, “language” for short” (Chomsky, 2005b: 145).

2 - FIRST LANGUAGE ACQUISITION

“Nothing is more specifically “human” than the knowledge of language” (Lust, 2006: 1).

Language is a uniquely human ability. It is often said to be a way to communicate, but there is clearly something more since animals also communicate but they do not use language. The study of language acquisition explains this incredible human phenomenon. In particular, the study of the first language acquisition, that is the process by which children acquire their mother tongue or first language (L1), is fundamental to understand why we have this special ability. According to Chomsky, acquiring the first language means “learning how principles apply to a particular language and which value is appropriate for each parameter” (Cook, 1988: 2.).

The main focus of this chapter will be the role played by UG in the first language acquisition. Starting from an analysis of the main characteristics of the process, the chapter will examine in depth the Poverty of the Stimulus Argument which is the major striking aspect of the acquisition process.

2.1. – Characteristics of L1 acquisition

One of the most remarkable facts is that every normal child spontaneously acquires a natural language quickly and effortlessly, giving the impression that the whole process is simple and straightforward. However, the true complexity of the first language acquisition becomes evident when children’s success is compared with the difficulties faced by adults who try to learn a second language. Therefore, understanding how children are able to acquire and master the complexity of human language in few years has become one of the major goals of contemporary linguistic research. In order to understand children’s success, it is important to report the main characteristics of language acquisition.

Despite the diversity of natural languages around the world and the complexity of language, the process of first language acquisition seems to be universal and uniform:

- (i) All children acquire their first language (L1) despite the variety of experiences they have with the linguistic input during their early years. For example, some children may spend a lot of time with their parents and receive individual attention, while other children may spend more time with other children and less time with their parents receiving less individual attention;

- (ii) All children in the same linguistic community acquire the same language even if they all receive different primary linguistic data (PLD). Moreover, in communities where more than one language is spoken, children will acquire all the languages of the community. This means that, in order to acquire their first language, children only require passive exposure from the environment;
- (iii) Children do not need adults' corrections during the process of language acquisition. If a child born of Italian-speaking parents is taken to Germany and raised there, s/he will acquire German even if their parents will not. Moreover, parents' language does not determine children's language;
- (iv) All children acquire their first language with the same ease despite their cultural and social differences. It is common to hear that one language is more difficult to acquire compared to another, but this is not true for children. Russian children acquire Russian as easy as Italian children acquire Italian;
- (v) All children go through the same phases in the same order during the first language acquisition process (babbling, one-word stage, multi-word stage).

These characteristics suggest that, as long as typically-developing children are exposed to linguistic stimuli during their critical period, any of them will spontaneously acquire their L1 with the same ease and in the same amount of time. Therefore, a language acquisition theory has to account for all the characteristics expressed above.

2.2 - Critical Period Hypothesis (CPH)

Eric Lenneberg in 1967 published his book *Biological Foundation of Language*, where he hypothesized that there is a critical period in which language is acquired to a native proficiency. He suggested that this period begins early in life (around 2 years old) and ends at puberty (around 13 years old) when there is a loss of "cerebral plasticity". Outside of this period, language would be difficultly acquired and will never reach the proficiency of a person who acquires her/his L1 during the critical period. Lenneberg proposed his hypothesis based on deaf children that did not develop native proficiency after puberty, children who were victim of child abuse during early childhood and children that had brain injury which better recovered compared to adults.

The most revealing evidence for an age limitation of language acquisition is provided by adventitious language disorders. The chances for recovery from acquired aphasia are very different for children than for adult patients, the prognosis being directly related to the age at which insult to the brain is incurred (Lenneberg, 1967: 142).

In 1970, a 13 years and 9 months old girl, Genie, was discovered in a situation of isolation and malnutrition due to domestic abuse. During her childhood, Genie did not speak to anyone and rarely received linguistic input, therefore she did not develop any language. In fact, when she was discovered, she could understand only few words.

For over seven years, a medical team was assigned to Genie among which linguist Susan Curtiss investigated Genie's linguistic development. At the beginning, Genie seemed to prove the Critical Period Hypothesis wrong because she rapidly grown a wide vocabulary. In the first 11 months Genie developed the ability to understand and produce single words and names.

This ability was a necessary precursor to an investigation of her comprehension of grammatical sentences but did not in itself reveal how much language she knew since the ability to relate the sounds and meanings of individual lexicon items, while necessary, is not a sufficient criterion for language competence (Fromkin, Krashen, Curtiss, D. Rigler, M. Rigler 1974 :87).

However, Genie later showed her cognitive deficiency. Her grammatical development was much slower and unsuccessful so that she was not able to communicate. As Curtiss said, "language is not words, language is grammar". In spite of the intensive teaching Genie received from professionals, she did not acquire proper syntax. According to Curtiss:

Genie's vocabulary grew by leaps and bounds, but she was still not able to string words together into meaningful sentences. Normal children begin by learning to say simple sentences, like "No have toy". Soon, they are able to say "I not have toy". Eventually they will learn to say "I do not have the toy", lately they will refine the sentence and say "I don't have the toy". Genie seemed to be stuck at the first stage (Curtiss, 1977: 94).

Another important case study regarding the critical period hypothesis is the one of Isabelle. She was isolated with her deaf-mute mother because she was an illegitimate child. When Isabelle was found in 1938, she was 6 years and 6 months old and she did not speak, “In lieu of speech she made only a strange croaking sound” (Devis, 1947: 436). Albeit she was able to use non-verbal communication and she could hear, doctors had very little hope that she would learn language. However, even if she required one week of intense teaching before making her first attempt of vocalization, after two months Isabelle was putting sentences together.

Nine months after that she could identify words and sentences on a printed page, could write well, could add to ten, and could retell a story after hearing it. Seven months beyond this point she had a vocabulary of 1,500-2,000 words and was asking complicated questions. Starting from an educational level of between one and three years (depending on what aspect one considers), she had reached a normal level by the time she was eight and a half years old. In short, she covered in two years the stages of learning that ordinarily require six (Davis, 1947: 436).

Clearly the two cases have some differences such as the fact that Isabelle at least had a non-verbal input data and some kind of social interaction with her mother. However, both Genie and Isabelle when first discovered could not speak or understand language. The main difference from the Critical Period Hypothesis point of view is that Isabelle begun to acquire her L1 within puberty reaching a normal end state; whereas Genie begun her L1 acquisition process after puberty and did not succeed in acquiring grammatical features.

The case of Genie seems to support Lenneberg’s theory. However, according to some scientists, Genie’s language development was disturbed due to the inhumane conditions she had been subjected during her childhood.

2.3 – Initial state

The term “initial state” refers to the starting point by which a child develops language. In the framework of Universal Grammar, the initial state in the first language acquisition is the UG. “Universal grammar is part of the genotype specifying one aspect of the initial state of the human mind and brain” (Chomsky, 1980: 82). The presence of UG explains

why and how children acquire their language in their first years. UG provides a system of constraints (Principles and Parameters) which restrict the range of possible grammars considered by the child when exposed to the primary linguistic data. The result will be the steady state grammar, that is the mental representation of the mother tongue. Thus, at the beginning of language acquisition the child starts from an initial state where s/he knows no language, and where s/he is equipped only with UG. During the acquisition process, the Faculty of Language goes through different states until the time in which the whole process is completed (end-state) and the individual achieves a full knowledge of the language.

When children begin to hear the linguistic input from the environment, they will unconsciously recognize which kind of language is spoken (and so which kind of language they will acquire) and they will start the “parameter setting”. In this process, children will not only use UG but they will also use a language learning tool, which is also innate, that Chomsky called Language Acquisition Device (LAD). LAD is a cognitive mechanism that permits children to process the data coming from the environment. “In general, the “language acquisition device” is whatever mediates between the initial state of the language faculty and the states it can attain, which is another way of saying it is a description of the initial state” (Chomsky, 2000a: 55).

In order to understand how children acquire their L1, we need to look at the primary linguistic data they are exposed to. In the next section, we will demonstrate that children cannot acquire their language competence only on the basis of the input.

2.4 – Poverty of the Stimulus Argument (POS)

“How do we come to have such rich and specific knowledge, or such intricate system of belief and understanding, when the evidence available to us is so meager?” (Chomsky, 1987: 33).

The POS Argument is a central concept in generative linguistics nowadays. It is not only one of the most famous and disputed aspects of language acquisition and cognitive science, but, according to Chomsky, it is also the most striking aspect of the acquisition process.

The argument with its name first appeared in the 1980s, but it was well known long before:

The child who acquires a language in this way of course knows a great deal more than he has “learned”. His knowledge of the language, as this is determined by his internalized grammar, goes far beyond the presented primary linguistic data and is in no sense an “inductive generalization” from these data (Chomsky 1965: 32,33).

The argument is: since our knowledge of a language is complex and abstract, how is it possible for a child to accomplish an unconscious grammatical knowledge with a limited input? The Poverty of the Stimulus Argument (also known as *The logical problem of language acquisition* or *Plato’s problem*) is based on the assumption that there is a mismatch between the input available to children, and the complex grammar knowledge acquired by the age of three. In other words, on the basis of the primary linguistic data (PLD), “children must arrive at an internalized system, a grammar, which will allow them to understand language produced by others and to produce language themselves, and which will constitute their knowledge of language” (White, 1989: 4). In order to appreciate the POS argument, a deep zoom regarding the knowledge of language has to be made.

The knowledge of language, specifically the linguistic *competence*, has three main characteristics. The first is that it is unconscious, which means that most people are not aware and cannot explain the systematic rules they apply and follow in their language. For example, a native English speaker knows that the suffix *-able* can be added to verbs in order to form adjectives such as usable, readable, drinkable, comfortable, etc. However, they also unconsciously know that this process cannot be done with other verbs because the form would be ungrammatical: *sleepable, *stiable, *goable, etc. This knowledge does not lie on the basis of the meaning, rather, on the rule for adjective formation which makes this type of suffixation possible only with transitive verbs.

The second characteristic is that it is very rich: not only can children and adults understand and produce utterances which have never heard before, but they can also judge if a sentence is grammatical, ungrammatical, ambiguous (when sentences have more than one meaning) or paraphrased (one meaning can be represented by more than one sentence). For example, native English speakers immediately spot that *sitable is ungrammatical, while usable is grammatical.

This knowledge does not seem to be taught, which leads to the third characteristics of linguistic knowledge: innateness. If we consider the previous example with the *-able* suffix, parents would not give instruction on transitive and intransitive verbs to their child when the latter is learning the language. Yet, before going to school and learning the suffixation rule, children proficiently use the suffix.

If we do not take into consideration the role of UG in language acquisition, a child must arrive to this kind of knowledge by the age of three relating only on the input s/he hears. The fact is that PLD has three major problems: it underdetermines the final grammar, it does not contain negative evidence and it is often degenerate..

2.4.1. – Underdetermination

Underdetermination is the fact that the grammar acquired by children, which underlines our language use, goes far beyond the sentences they have been exposed to.

In this section, the Overt Pronoun Constraint (OPC) is taken as an example of the abstract knowledge which cannot come only on the input basis. Before diving into this topic, it is important to explain the Null Subject Parameter.

2.4.1.1 - The Null Subject Parameter (NSP)

The NSP was one of the first parameters suggested in the Principle and Parameter Theory (Chomsky 1981; Rizzi 1982). As mentioned in the previous section, language can essentially be seen as the result of interaction between the general principles of UG and a finite set of binary parameters that are responsible for the syntactic variability across human languages. In these terms, languages can differ from their realization or non-realization of the subject pronoun. This choice led to the distinction between [+null subject] languages, as Italian, and [-null subject] languages, as English. To simplify, languages like English must phonetically realize the subject pronoun, while languages like Italian can omit this realization. This last class of languages is also called *pro-drop* languages: when the pronoun is phonetically null, it takes the form of an empty category called *pro*. It is important to notice that even if [+null subject] languages phonetically omit the pronoun, this does not mean that it is not syntactically realized. Let's consider the following sentences:

- (1) a. [John believes [that he is intelligent]].
- b. *[John believes [that _ is intelligent]].
- c. [Gianni crede [che lui è intelligente]].
- d. [Gianni crede [che _ è intelligente]].

The distinction is well shown above: in English the subject pronoun *he* must be realized in order to have a grammatical sentence; while this realization is not crucial in Italian.

2.4.1.2 - The Overt Pronoun Constraint (OPC)

As previously considered, [+null subject] languages like Italian have the possibility to produce sentences with a null subject. The next step is to understand if there is an inner rule of UG that coordinates the omission of the subject pronoun. In other words, the question is: is it always possible to drop the subject pronoun for [+null subject] languages, or there are some kinds of constraints? In order to answer this question, the issue of the OPC is explained based on the studies of Montalbetti (1984). He conducted his studies comparing utterances in English and Spanish, while for this dissertation English and Italian are compared. Let's first consider the following embedded clauses in English, a [-null subject] language:

- (2) a. [Mary_i thinks [that she_i will win]].
- b. [Everyone_i thinks [that she_i will win]].

The pronoun subject *she* in the embedded clauses refers to the antecedent in the main clause, which can be both a referential as in (2a), or a quantifier as in (2b). The difference between these clauses lies on the fact that while in (2a) the pronoun refers to *Mary*, in (2b) the pronoun can refer either to *Mary* or to another individual in the upcoming race. In other words, the subject pronoun in [-null subject] languages have an ambiguous interpretation when its antecedent is a quantifier. This particular situation of the pronoun is known as *bound variable* interpretation. The question now is: what happens with [+null subject] languages if the antecedent of the subject pronoun is a quantifier? Does it behave the same?

- (3) a. [Maria(i) crede [che *pro*(i) vincerà]].
b. [Chiunque crede [che lei(i) vincerà]].
c. *[Chiunque(i) crede [che lei(i) vincerà]].
d. [Chiunque crede [che *pro*(i) vincerà]].

In [+null subject] languages the embedded null subject in (3a) behave equivalently to English overt pronoun as in (2a). The overt and the null pronoun in the two sentences both refers to the referential antecedent in the main clause. The situation changes when the antecedent in the main clause is a quantifier: in English the embedded overt subject pronoun can have an ambiguous interpretation; in Italian, on the other hand, there is only one option and no ambiguity. As shown in (3c), the pronoun *lei* cannot be referred to the quantifier *chiunque*, the sentence alone is ungrammatical. On the contrary, the pronoun *lei* can be referred to someone else in the discourse as in (3b), just like the over pronoun in English (2b). In other words, the overt pronouns in [+null subject] languages like Italian are more restricted than null pronouns and then overt pronouns in [-null subject] languages like English.

To summarize, the overt subject pronoun in [+null subject] languages cannot take a quantifier as its antecedent, while the ones in [-null subject] languages can. Specifically, overt and null pronouns behave similarly as shown in (2b) and (3d) permitting both referential and discourse antecedents. The interesting matter is that Italian adult native speakers know the subtle restrictions of the overt pronouns. That is, speakers unconsciously know that if they want to refer to the quantified antecedent in an embedded clause, they have to omit the pronoun as in (3d), otherwise the sentence would be ungrammatical as in (3c).

The question now is: how does a native speaker acquire this knowledge? More importantly for this dissertation: how does a child of [+null subject] languages acquire these restrictions? As said before, adults' utterances do not always contain quantified antecedents and are not always well formed. The input alone is not sufficient for the child to understand and distinguish the differences, even because "utterances involving quantified antecedents are likely to be relatively infrequent" (White, 2003: 8). Additionally, the feature that makes (3c) an ungrammatical sentence is the fact that the

embedded overt subject pronoun cannot be referred to the quantifier. This is what the child with [+null subject] first language really needs to discover.

Linguists argue that in order to acquire the distinctions between overt and null pronouns, there must be an innate and specific property of grammar. These properties are given by a universal constraint, which is a principle of UG. Montalbetti (1984) introduced the Overt Pronoun Constraint which incorporate all null-argument languages: “Overt Pronoun Constraint: overt pronouns cannot receive a bound variable interpretation (i.e., cannot have quantified or *wh*-antecedents), in situations where a null pronoun could occur”.

2.4.2 – Negative evidence

As seen in the previous sections, during the language acquisition process a child must acquire an internal system which allows infinite possibilities in language with limited available data. The problem here is to define what type of evidence are available to children, which properties they have and the use they make of it. Chomsky in *Lectures on Government and Binding* (1981) distinguishes between three types of evidence for language acquisition: positive evidence, direct negative evidence and indirect negative evidence.

2.4.2.1 – Positive evidence

Positive evidence is simply the linguistic input, the PLD, which is the sentences that children are exposed to. This type of evidence tells children what kind of language they are acquiring and represent the experience of what occur in a language. If children never hear French, we do not expect them to acquire French; whereas when they hear Italian, we expect they acquire Italian.

However, the fact that children hear the language is not enough in order to explain the acquisition process. In fact, the sentences children hear are finite and therefore not only they will never determine the infinite expression of possible in a language; but also, they do not determine every possible expression meaning.

Let's consider Braine's (1971b) sentences and observations in order to demonstrate that language acquisition is not possible based solely on positive evidence.

- (1) a. Dad told a story to Sue.
b. Dad told Sue a story.
- (2) a. I gave a book to John.
b. I gave John a book.
- (3) a. Jim showed the model to Bob.
b. Jim showed Bob the model.
- (4) a. Mom baked a cake for Jack.
b. Mom baked Jack a cake.

A child that is exposed to these sentences (which contain the Dative Movement) can conclude that he can convert every sentence from form (a) to form (b). If it was the case, the child would produce ungrammatical sentences like (b) forms which an adult native English speaker most probably has never produced:

- (5) a. Dad said something nice to Sue.
b. *Dad said Sue something nice.
- (6) a. I reported the death to the police.
b. *I reported the police the death.
- (7) a. Mary donated a book to the library.
b. *Mary donated the library a book.
- (8) a. Jim demonstrated the model to Bob.
b. *Jim demonstrated Bob the model.
- (8) a. Mom buttoned the coat for Jake.
b. *Mom buttoned Jake the coat.

If the child is testing the Dative Movement rule solely based on positive evidence, how does s/he get to the knowledge that the rule does not apply to all verbs? Someone should tell him/her which verbs accept the Dative Movement, otherwise s/he has no reasons to question his hypothesis. Children need *something else* in order to question his hypotheses and set the right parameters.

The same discussion can be made for L2 acquisition. In section 3.4.2.1 will be shown that both positive and direct negative evidence are not sufficient in order to reset the parameters in the L2.

2.4.2.2 – Direct negative evidence

Direct negative evidence are the corrections made by adults in response to an ungrammatical utterance by the child. Many studies have suggested that most of the time explicit corrections are not highly efficient for mainly three reasons. The first one is that direct negative evidences are not vastly offered to a child. Parents, or more in general caregivers, are not correcting children every time they make a grammatical mistake. The second one is that when corrections are offered, children often reject them. The last one concerns the nature of the direct negative evidence: parents do not teach children the rules of language or they do not tell them which sentences can and cannot say. A famous example for the not effectiveness of direct negative evidence has been shown by McNeill (1966: 69). He reported the following conversation between a child and his mother:

Child: Nobody don't like me.

Mother: No, say "nobody likes me".

Child: Nobody don't like me.

(eight repetitions of this dialogue)

Mother: No, now listen carefully; say "nobody likes me."

Child: Oh! Nobody don't likes me.

For an adult speaker it is clear that the mother was trying to correct her child on two ungrammatical features of English: the double negation which is not possible, and the inflection of the verbs in the third person singular. After many repetitions, the child noticed the mistake in the verb inflection, but still failed to take the whole content of the correction. As just said, the correction offered by the mother did not contain the reasons why that sentence is ungrammatical. In other words, the mother does not explain why double negation is impossible and the morphological rules of the English verbs.

On the other hand, it is normal that children produce mistakes and overgeneralize grammatical rules during the language acquisition process. However, considering the fact

that direct negative evidence does not help children from blocking the production of ungrammatical sentences, how do they come to know what type of errors are ungrammatical in their language?

2.4.2.2.1 – Overregularization errors

The problem of the absence of direct negative evidence available to first language learner was not considered a strong argument for the logical problem of language acquisition claimed by generativists. However, the phenomena which is considered in this section rises a fundamental problem in language acquisition: how children avoid or unlearn errors in a context which lack of adults' corrections?

Overregularization error occurs when language learners apply the regular linguistic rule to an irregular stem. One of the most famous overregularization error in English is the suffixation of the past tense with *-ed*. A child, instead of saying *went* or *broke*, produces **goed* and **brokeed*, and so on. Since children are not exposed to these forms in the environment, these errors show “the operation of a creative process, presumably corresponding to a mental operation” (Marcus, Pinker, Ullman, Hollander, Rose, Xu, 1999: 1). This is probably because in the meantime children acquire the irregular forms of English past tenses, they use the most logical and easy form they have already acquired. In fact, Ervin and Miller (1963) have discovered that overregularization error occurs after a period where children actually use irregular past tense correctly. Therefore, it seems that children have difficulties on understanding when they have to use irregular or regular verb forms. This shows that children do much more than merely memorize irregular forms.

Stromswald (1990) conducted a study in which overregularized errors of English past tense were under inquiry. She examined spontaneous speech transcriptions of 14 children, aged from 1 to 7, and analysed the overgeneralization of the past tense with *-ed* for the following verbs: *do*, *have* and *be*. Since they are used both as main and auxiliary verbs in English, she wanted to see if children treat them differently depending on their syntactic function. Stromswald found only 32 overregularized forms of *do*, *have* and *be* (some of which are reported below) among over 55,000 uses of auxiliaries.

And Mommy **doos** two.

Mommy why it **dos** like that?

I **doed** it.

She **dos** what her Mother tells her.

Um – but first I **hadded** to get like dis...

He said “I **ams**”.

Surprisingly, the overregularized errors concerned only the main verbs *have*, *do* and *be* and not the homophonous auxiliaries. This means two fundamental things:

- (i) children distinguish between auxiliaries and lexical verb forms;
- (ii) children apply different rules to auxiliaries and lexical verbs.

One hypothesis concerning the overregularization errors of *do*, *have* and *be* when used as lexical verb in the sentence was the fact that children might not have yet acquired the correct auxiliary forms for *do*, *have* and *be*. However, this hypothesis does not seem to be true because children were already using auxiliary irregular forms correctly, apart for three exceptions regarding *have*.

To conclude, Stromswald (1990) study suggests that children are born with an innate knowledge that permits the distinction between main and auxiliary verbs, otherwise they would overgeneralize the *-ed* past tense both in main and auxiliary forms of *have*, *do* and *be*. Moreover, Steele (1981) found auxiliaries’ properties which are universal, meaning that they have similar properties across all languages in the world.

Thus, the child is forced to make those generalization which Universal Grammar allows. Some of these Universal Grammar-based generalizations are specific to the auxiliary system (e.g., Steele’s universals) and some relate to more general aspects of language (e.g., universal aspects of tense). In those aspects of the auxiliary system which Universal Grammar can guide the child, her acquisition is early and essential error-free. Where Universal Grammar cannot guide the child [...] acquisition is protracted and the grammar of the child may differ from that of the adult. (Stromswald, 1990: 265, 266).

2.4.2.3 – Indirect Negative evidence

The indirect negative evidence is the absence of ungrammatical sentences in the input. For example, it is highly improbable that a child would hear *putted* from the external

environment. In this sense, this type of negative evidence depends on the analysis of positive evidence made by the child. The analysis, which is a hypothesis regarding the possible language, is essential for a child in order to determine that certain occurrences are possible in a situation.

As Barbara Lust in her *Child Language* (2006) reports, indirect negative evidence is consulted by children when they are acquiring the specific grammar. This means that indirect negative evidence “would work in those areas in which UG does not directly provide a language-specific constraint or principle” (Lust, 2006: 257). In fact, indirect negative evidence can be efficient in the contexts where UG cannot prevent from overgeneralization. If we consider the sentence “The father likes him”, in modern English it cannot be interpreted as “The father likes himself”. However, this last interpretation was possible in Old English and it is possible in some South Asian languages. The issue is that children learning English as their L1 today have to know that not only the interpretation in modern English is not possible, but also that the sentence does not occur. This specific not occurrence can be signed by indirect negative evidence.

3 - SECOND LANGUAGE ACQUISITION

The term “second language acquisition” refers to the process of learning a language other than the mother tongue. In this dissertation, a second language (L2) learner is intended as an individual who is learning a second language once the first language has been already acquired.

The main focus of this chapter is to determine whether or not UG is available to the second language learners. In order to do so, the same arguments of the previous chapter will be reviewed so that the two language acquisition processes can ultimately be compared.

3.1. - Characteristics of L2 acquisition

In chapter 2, we have seen that the first language acquisition is a rapid and effortless process in which children achieve full competence of their mother tongue. The process is universal and uniform, meaning that all children acquiring the same language achieve typically the same end result.

In this section, we will see that the second language acquisition process has not the same characteristics of the first acquisition process. In order to understand which role UG plays in the L2 acquisition, we should be able to determine the end state of a L2 speaker; however, this is not easy to define. In fact, as White (2003) points out, L2 learners achieve a different end state even if they acquire the same L2 starting from the same L1. Moreover, the end state of L2 learners can differ from the one of native speakers. In this respect, White (2003) distinguishes between three different scenarios:

- (i) Convergence (native-like). The end-state of the L2 learner is the same as the one of native speaker, which ultimately constitutes evidence of the UG involvement in the L2 grammar;
- (ii) UG-constrained divergence (near-native). The end-state of the L2 learner is different from the one of the native speakers but it is UG constrained. Namely, the end state “is a *possible* grammar which happens not to correspond to the grammar of a native speaker. It may combine properties of the L1 grammar and the L2 grammar, as well as grammars of other languages” (White, 2003: 243);

(iii) Unconstrained divergence (non-native). The end state of the L2 learner is not the same of the native speakers and it is not UG constrained. In this scenario, the L2 learner end state is qualitatively divergent from the one of the native speakers.

The problem that White points out is the following: previous researches considered the success of the L2 learners only when their final grammar was identical to that of native speakers. Therefore, the role of UG was entirely denied when the grammar of the L2 learner did not coincide with the one of native speakers. However, interlanguage grammar can be UG-constrained although it diverges from the native speaker grammar as MacLaughlin (1996,1996)¹ showed.

3.2 – Critical Period Hypothesis (CPH)

In section 2.2, we have seen that if a child is not exposed to PLD during the critical period, s/he will difficultly succeed on acquiring her/his mother tongue. A frequently asked question is: is there a critical period also in the L2 acquisition? There are different positions about this matter.

On one hand, there are studies which support the CPH in L2 acquisition like the one of Johnson and Newport (1989, 1991). They have tested the Subjacency Principle in adults native Chinese speakers who were exposed to L2 (English) input at different age (from 4 years old to adulthood). The subjects were divided into four groups depending on the age of arrival in USA. The test involved a grammatical judgment task with different types of sentences. The researchers come to the conclusion that there is a decline in proficiency for languages learned before the puberty. Particularly, the adult group (composed of people who arrived in USA in their adulthood) accepted more violation on the Subjacency principle compared with the youngest group which represented individuals who arrived in USA between 4-7 years old. Johnson and Newport come to the conclusion that the adult group ended up with no-native competence, while “the youngest subjects achieved fully native-like success, in the sense that their judgments did not differ from native speakers” (White, 2003: 249).

Another research that supports the CPH in L2 acquisition is the one conducted by Hyltenstam (1992). His subjects were people who immigrated to Sweden before

¹ MacLaughlin (1996,1996) shows that some L2 learner set parameters values that are not part neither of their L1, nor of the L2.

adolescence and lived there for at least five years. Hyltenstam tested them with grammaticality judgement task and compared the results with a Swedish native speaker-controlled group. The study found out that immigrants who arrived to Sweden after the age of seven produced more grammatical mistakes than the group who arrived before the age of six.

On the other hand, other researchers have argued that there is no clear evidence to support the CPH in L2 acquisition. For example, White and Genesee (1996) examined the Subjacency Principle among L2 learners of English, where most of them were French native speakers, who achieved native-like proficiency. The study came at the following conclusion:

There were no significant differences between near-native speakers and native speakers on any sentence type, no differences in response times, and, crucially, no evidence of maturation decline with age: the group that learned English as adults was just as accurate as the group who had learned at younger age (White, 2003: 251).

As seen in this section, different studies arrive at different conclusion: Johnson and Newport (1989, 1991) claim that individuals who begin to learn their L2 after the critical period cannot obtain a native-like competence; while White and Genesee (1996) study's results come to the exact opposite conclusion.

3.3 – Initial state

As seen in chapter 2, the term “initial state” is used to refer to the kind of unconscious knowledge available to the learner before the exposure at the linguistic input. In the context of L1 acquisition, the initial state is UG. The issue of concern here is what kind of initial state is available to the L2 learner.

Learners of a second language face a similar task of that faced by L1 acquires: in order to understand and speak the second language (L2) they need to arrive at its linguistic system. The question is: is UG also involved in L2 acquisition process? The answer to this question is not easy because, as seen previously, L2 learners have already internalized the system of their L1. Moreover, White claims that it is not clear whether UG turns into a specific grammar in the first language acquisition process, or if it remains a separate

source of linguistic grammar. In order to understand the so-called “access issue”, three hypotheses have been discussed:

- (i) No access: according to this hypothesis, the mechanism by which the L1 has been acquired is not available to L2 learner. Therefore, UG is only partially available to L2 learner via L1;
- (ii) Direct access: this hypothesis claims that L2 learners have access to UG because interlanguage grammar shows evidence of being constrained by UG principles. This means that when a L2 learner develops the second language, s/he sets L2 parameters which are clearly different from those of the L1;
- (iii) Indirect access: according to this hypothesis, L2 learners have access to UG but, at least at the beginning, they have access through the L1 grammar. This means that, as the second language develops because of the exposure to L2 input, the parameters will reset and the grammar of the L2 will be reconstructed.

Bley-Vroman was one of the first people who pointed out to the access issue. He has supposed that, after the acquisition of the L1, UG does not exist anymore as a separate source of grammar. In his view, therefore, the initial state of L2 acquisition is inevitably L1 grammar, which corresponds to the no access hypothesis.

It is as if an application program come with an installation-configuration program, with which you set parameters to customize the application to your computer and your tastes. You use this installation program just once, it sets up the application to operate properly, often stripping it down, removing options your machine cannot implement. You never use the installation program again. The application program is now a particular program for your machine (Bley-Vroman, 1990: 18,19).

However, Flynn and Martohardjono (1994) and Epstein et al. (1996) suggest that bilingual first language acquisition would be very difficult if UG turned into a specific grammar. A bilingual child is acquiring two different grammars; hence, s/he needs to set different parameter settings at the same time. This indicates that UG must be a separate entity from both grammars so that the child can figure out which parameter is for one language and which for the other.

In the light of this last observation, UG must be present and distinct from the L1 grammar during the second language acquisition process. Indeed, in section 3.4.1.1 we will see that UG is involved as a separate entity in L2 acquisition.

Before diving into the topic, we must specify that, in the interest of demonstrating the involving of UG, we have to prove that a L2 learner has acquired the complex and subtle proprieties of language that have not been introduced from the L2 input. In other words, UG is involved although the L2 learner has not acquired the L2 as a native speaker. Instead, the L2 learner needs to have acquired specific abstract properties of the second language which cannot have been learned neither from the L2 input, nor from the L1 grammar. Therefore, there are three main challenges to satisfy:

- (i) distinguish the mental representation of the L2 from the one of the L1;
- (ii) demonstrate that the acquired properties are not coming from the L1 grammar;
- (iii) exclude that the properties acquired have not been learned on the basis of explicit instructions (input) or from general principles.

3.4 – Poverty of the Stimuli Argument (POS)

In the previous chapter, we have seen both the abstract knowledge a child needs to achieve when acquiring s/he L1 and the essential role played by UG in it. The next step now is to understand what happens in the second language acquisition process. The first question which arises is: do L2 learners face the same logical problem of L1 learners? The answer is quite easy. It is not difficult to think that, for example, the majority of people who learn a second language (at least at the very beginning) are still living in their country (i.e., kids at school). This implicitly means that the L2 input is indubitably poor. Therefore, as for the L1 acquirer, the L2 learner has to face issues: the input is underdetermined compared with the knowledge acquired, it does not contain negative evidence and it is degenerate.

3.4.1 – Underdetermination

As seen in section 2.3.1, the underdetermination problem occurs when the grammar acquired by the learner goes far beyond the linguistic input s/he has been exposed to. The issue of concern here, is that if L2 learner face the same situation of L1 learner. In

other words, does the L2 learner acquire abstract knowledge of the target language which cannot come only from the L2 input?

In order to answer to this question, the same constraint, namely the Overt Pronoun Constraint (OPC), is taken into consideration in the L2 acquisition context.

3.4.1.1 – The OPC in L2 acquisition: Pérez-Leroux and Glass (1999)

As the L1 learner, the L2 learner has to discover the interpretative restrictions of the overt pronoun in [+null subject] languages: the overt subject pronoun cannot appear with the bound variable interpretation when the antecedent is a quantifier element, even though it can appear with a referential antecedent.

In order to satisfy the requirements mentioned in section 3.3, Pérez-Leroux and Glass (1997, 1999) conducted their studies with three classes of adults' native English speakers learning Spanish with three different levels of L2 proficiency (elementary, intermediate and advanced). By doing so, they ensured that:

- (i) the L1 grammar could not be a potential source of information of the OP restrictions because the two languages have a different parameter setting (one language is [+null subject], while the other is [-null subject]);
- (ii) the input could not be involved since OP has not been argued in class or discussed in Spanish textbooks.

Strictly speaking, this means that native English speakers need to reset the Null Subject Parameter (NSP) (Chomsky 1981) to the Spanish setting during the language acquisition process.

In Pérez- Leroux and Glass (1999) study, L2 learners were asked to translate biclausal sentences (sentences which consists of an independent and a dependent clause) from their L1 (English) to the L2 (Spanish) following written contexts which favoured either a quantified or a discourse-based referential antecedent for the embedded subject pronoun. If the translations show a dominant use by L2 learners of null subjects where the antecedent is quantified, they can conclude that interlanguage grammar is constrained by OPC. In contrast, if the translations do not use the null subject in the same context, interlanguage grammar is not constraint by OPC. It is not relevant whether L2 learner prefer null or overt subject pronouns in referential context since both of them are grammatical.

The results from the three tested groups show that the production of overt pronouns is significantly limited in bound variable contexts where the production of null pronouns is higher. This suggests that L2 learners discriminate between referential and bound variable interpretation of pronouns as native speakers do. However, significantly limited does not mean that there is not ungrammatical production. In fact, only the advanced group never used the overt pronoun in bound variable contexts. Pérez- Leroux and Glass (1999) claim that the tendency to overuse overt pronouns by the elementary and intermediate groups in ambiguous contexts is due to the generalization based on their L1. However, there is a clear distinction in the different types of sentences with a lower usage and acceptance of overt pronouns with quantified antecedents like native speakers do.

To conclude, the fact that L2 native English speakers learning Spanish, even at early stages, do not allow overt pronouns in the bound variable context provide evidence of OPC effects in interlanguage grammars. Since the Overt Pronoun Constraint is a principle of UG, this means that every individual has a grammar which is constrained by this principle.

3.4.2 – Negative evidence

As seen in the previous chapter, the evidence available to children (positive, direct negative and indirect negative) in their L1 acquisition process are not sufficient to achieve the complex final competence. In this section, we are going to explore if these types of evidence are sufficient for L2 learners in order to arrive at the final state.

3.4.2.1 – Positive evidence and direct negative evidence

In section 2.4.2.2 we have seen that direct negative evidence does not help children from avoiding ungrammatical sentences in L1 language acquisition. In this section, we will examine if this type of evidence is useful during the L2 acquisition process.

There are two factors which need to be considered. First, a L2 language learner has already internalized the grammar of their mother tongue. Secondly, L2 learners are known to receive correction and precise instruction about what is possible and what is not in the L2. Therefore, the issue of concern here is to understand if the parameter resetting

from their L1 to L2 is caused by direct negative evidence (information about ungrammaticality of the target language), or by grammar instructions under the form of rules. In order to respond to this matter, let's see the results from the experiment reported in White (1990/1991).

White studied how French beginner learners from an elementary school where English was taught as Second Language in a communicative context with no explicit instruction (apart from those given during the experiment) would respond to the Verb Raising Parameter. This parameter is responsible for the differences of placing the lexical verbs in the languages. In fact, English and French have different value setting regarding the verb inflection. In English, lexical verbs do not move to I², therefore they appear on the right of negation (1c), adverbs (1a) and subjects. On the other hand, French finite lexical verbs move to I, therefore they appear on the left of negation (2c) and adverbs (2a). As far as French subjects are concerned, finite lexical verbs may also appear on the left in questions as in (2d). For the interest of the explanation, only the position of the adverbs in respect of the lexical verb will be contemplated. Let's consider the following sentences:

1. a. Cats often catch mice.
b. *Cats catch often mice.
c. Cats do not catch mice.
2. a. Les chats attrapent souvent les souris.
c. Les chats n'attrapent pas les souris.
d. Attrapent-ils les souris?

The issue of concern here is that native French speakers acquiring English have to set the verb inflection strength from strong (L1) to weak (L2) in order to avoid the raising of the English verb to I from the evidence they are exposed to. If the interlanguage grammar is constrained by L1 grammar at least initially, it is possible that sentences like (1b) are produced. The question now is: can ungrammatical sentences like (1b) be eliminated on the basis of direct negative evidence?

² The functional head Inflection responsible for tenses and inflection of a clause.

White divided the subjects into two groups: the *question group* which received instructions for two weeks on English question formation and do-support (instructions that contain cue on the verb, namely the verb remains in the VP) but none in the adverbs placement; and the *adverb group* which received instructions on the adverb placement, specifically the grammaticality of (1a) and the ungrammaticality of (1b). The instruction given to both groups included direct corrections and rules on question formation or adverb placement, hence the input included positive and negative evidence.

Both groups were tested before and after the teaching intervention in order to evaluate their response two weeks later. In fact, before the beginning of the experiment, children were producing sentences like (1b) more often than (1a) which are ungrammatical in English but grammatical in their L1 grammar. Two weeks later, the adverb group showed a significant increase of grammatical sentences like (1a) and a decrease of ungrammatical (1b); while the question group showed a slight increase in producing grammatical sentences. Hence, the instruction of question with *do*-support did not stop the raising of the verb in other cases like the adverb placement. However, explicit negative evidence appeared to be successful on changing the parameter value from strong to weak.

Besides these results, White (1991a) reports a follow-up study (where no further instructions were given concerning adverb placement) with the same subjects one year later. Results showed that children returned to their L1 parameters refusing the English grammatical order as in (1a). This means that children have not acquired the English Verb Movement Parameter, namely the not raising of the finite lexical verbs to I (as in their mother tongue). Children have actually lost the grammaticality which seemed to be present in the previous study.

As noted by Schwartz and Gubala-Ryzack, the results from White's follow-up suggest that UG-based parameters were never implicated, therefore parameter resetting does not take place on the basis of explicit input either positive or negative.

Conclusioni

Ad oggi, lo studio del linguaggio è un ambito di ricerca che costringe ad interrogarsi su numerose questioni dell'essere umano e che comprende diverse discipline: dalla psicologia alla filosofia, dalla neurolinguistica alla neurobiologia. Tuttavia, non è sempre stato così.

Nella prima metà del Novecento, gli sviluppi delle scienze psicologiche avevano portato a credere che le capacità umane fossero riducibili a una serie di risposte comportamentali a stimoli esterni, quantificabili e verificabili. Il linguaggio non fece eccezione: Skinner sosteneva che il linguaggio fosse un comportamento di tipo verbale, appreso grazie all'imitazione e all'interazione con stimoli esterni. In questa visione, l'apprendimento della lingua era considerato il risultato di una serie di stimoli, risposte e rinforzi (sia positivi che negativi), che intervengono anche in altre forme di apprendimento. Skinner non contemplava alcun coinvolgimento cognitivo nell'acquisizione del linguaggio.

Durante gli anni '50, Noam Chomsky mise in dubbio l'approccio comportamentista. Riteneva che l'acquisizione del linguaggio implicasse altro, perché i bambini acquisiscono la lingua madre ancor prima di imparare ad allacciarsi le scarpe. Chomsky iniziò a delineare una teoria linguistica in cui sosteneva che gli esseri umani fossero predisposti ad acquisire il linguaggio grazie ad un sistema linguistico innato che chiamò Grammatica Universale. Essa costituirebbe la base su cui i bambini acquisiscono la lingua madre quando esposti a stimoli linguistici esterni.

L'obiettivo di questo elaborato è stato, dunque, quello di dimostrare l'importanza della Grammatica Universale (GU) nell'acquisizione della prima e della seconda lingua.

Nel secondo capitolo, si è dimostrato il ruolo fondamentale della Grammatica Universale nell'acquisizione della prima lingua. Questa teoria è in grado di fornire delle risposte precise in merito a questioni che non erano state mai spiegate; in particolare:

- (i) la velocità e la facilità con le quali i bambini acquisiscono la lingua madre;
- (ii) l'acquisizione di regole grammaticali molto precise e "sottili" come l'interpretazione dell'anafora pronominale nel parametro del pronome nullo (Overt Pronoun Constraint, OPC), in un contesto dove i dati linguistici ai quali i bambini sono esposti non sono sufficienti a spiegare tale acquisizione;

- (iii) la generalizzazione selettiva di regole grammaticali in fase di apprendimento di forme irregolari, come nell'esempio della formazione del passato in inglese;
- (iv) l'acquisizione delle regole grammaticali senza l'aiuto di correzioni da parte degli adulti.

L'obiettivo del terzo capitolo è stato quello di indagare il ruolo della Grammatica Universale nell'acquisizione della seconda lingua. Partendo dal presupposto che un individuo che apprende una seconda lingua ha già interiorizzato la grammatica della lingua madre, dimostrare il ruolo attivo della GU in questa fase è stata una sfida più ardua, perché, prima, bisognava dimostrare che l'acquisizione della seconda lingua non si basasse né sulla grammatica della prima lingua né sugli input esterni della seconda lingua. Tra il 1990 e il 1991, White condusse degli studi da cui evinse la marginalità delle evidenze negative dirette nell'acquisizione della seconda lingua. Nel 1999, Pérez-Léroux e Glass pubblicarono uno studio che dimostrava il coinvolgimento della GU nel processo di acquisizione della seconda lingua. Questi e altri studi hanno portato alla luce aspetti del processo di acquisizione del linguaggio prima sconosciuti. Questa tesi ha cercato di ripercorrere il percorso di ricerca finora svolto, che è ancora lungo, perché i traguardi ottenuti hanno fatto emergere altre questioni. Due fra tutte: quali forme assume la GU una volta acquisita la prima lingua? Che tipo di influenza ha la grammatica della prima lingua sul parameter resetting nell'acquisizione della seconda lingua?

Bibliografia

- CHOMSKY, Noam, *Aspects of the Theory of Syntax*, Cambridge: The MIT Press, 1965.
- CHOMSKY, Noam, *Knowledge of Language*, Cambridge: The MIT Press, 1965.
- COOK, Vivian James, *Chomsky's Universal Grammar: An Introduction*, Oxford: Blackwell, 1988.
- COOK, Vivian James - NEWSON, Mark, *Chomsky's Universal Grammar: An Introduction*, Oxford: Blackwell, 2007.
- CRIAN, Stephen – LILLO-MARTIN, Diane, *An Introduction to Linguistic Theory and Language Acquisition*, Malden: Blackwell, 1999.
- CURTISS, Susan, *Genie: a Psycholinguistic Study of a Modern-Day "Wild-Child"*, New York: Academic Press, 1977.
- DAVIS, Kingsley, «Final Note on a Case of Extreme Isolation», *American Journal of Sociology*, (1947), 5, pp. 432-437.
- FROMKIN, Victoria – KRASHEN, Stephen – CURTISS, Susan – RIGLER, David – RIGLER, Marilyn, «The Development of Language in Genie: a Case of Language Acquisition beyond the "Critical Period"», *Brain and Language*, (1974), I, pp. 81-107.
- GUASTI, Maria Teresa, *Language Acquisition: The Growth of Grammar*, Cambridge: MIT Press, 2002.
- HAKUTA, Kenji – BIALYSTOK, Ellen – WILEY, Edward, «Critical Evidence: A Test of the Critical-Period Hypothesis for Second-Language Acquisition», *Psychological Science*, (2003), I, pp. 31-38.
- LUST, Barbara, *Child Language: Acquisition and Growth*, Cambridge: Cambridge University Press, 2006.
- MARCUS, Gary F. – PINKER, Steven – ULLMAN, Michael – HOLLANDER, Michelle – ROSEN, T. John – XU, Fei, «Overregularization in Language Acquisition», *Monograph of the Society for Research in Child Development*, (1992), 4, pp. 1-178.

RIZZI, Luigi, «The New Comparative Syntax: Principles and Parameters of Universal Grammar», *Cahiers Ferdinand de Saussure*, (1989), XLIII, pp. 65-78.

WHITE, Lydia, *Second Language Acquisition and Universal Grammar*, Cambridge: Cambridge University Press, 2003.

WHITE, Lydia, *Universal Grammar and Second Language Acquisition*, Amsterdam Philadelphia: John Benjamins Publishing Company, I, 1989.

Ringraziamenti

Voglio ringraziare per primi i due professori che più mi hanno colpita durante questo percorso universitario grazie alla passione che mostrano per il loro lavoro. Ringrazio il professor Davide Bertocci per avermi incuriosita sulla materia linguistica sin dalla prima lezione. Ringrazio la professoressa Emanuela Safelici per avermi guidata e seguita in questo lavoro di tesi, e per cercare di dare delle risposte a delle complicate domande, talvolta esistenziali.

Ringrazio tutta la mia famiglia allargata, e con allargata intendo zii, zie, cugini, nonni, nipoti, di primo e secondo grado, da parte di mamma, Massi, Alberto e papà. Scusate se non vi nomino uno ad uno, ma mi ci vorrebbero almeno tre pagine per farlo. Permettetemi però di ringraziare in particolar modo i miei cugini e cugine Miriam, Anna, Marta, Sara, Corrado, Alberto con i quali condivido dei ricordi preziosi a casa dei nonni.

Ringrazio i genitori, le sorelle e la nonna di Alberto per avermi fatta sentire parte della loro famiglia sin dal primo incontro.

Ringrazio gli amici e conoscenti che ho incontrato nella vita. Ringrazio chi è rimasto dopo anni passati all'estero, chi non c'è più e chi ho conosciuto dall'altra parte del mondo.

Ringrazio chi non è più in questo mondo. In particolare i miei tre nonni Adriano, Raffaele ed Antonio. Purtroppo non ho la fortuna di vedervi qui con me oggi, ma so che in qualche modo ci siete sempre stati. Il vostro ricordo mi riempie sempre di gioia e gratitudine. Mi avete fatto passare un'infanzia stupenda tra campi di uva, ciliegie e trattori; tra le castagne e mele cotte, tra i funghi del bosco e gli abbracci più stritolanti.

Ringrazio mio moroso, Alberto, per l'amore, il rispetto e la cura che mi riserva ogni giorno. Ti ringrazio per la pazienza e la razionalità che cerchi di insegnarmi, anche se a volte con scarsi risultati. Ma ti ringrazio soprattutto per esserci sempre, per darmi un senso di stabilità che cercavo da molto tempo, e per condividere la quotidianità con me. È bello crescere assieme.

Ringrazio mio papà, che mi sta insegnando a perdonare. Sono felice di averti qui oggi e, nonostante tutto, sono felice di conoscerti più a fondo dopo tanto tempo.

Ringrazio Massi per avermi mostrato amore incondizionato sin da subito, per avermi insegnato a prendermi meno sul serio, per aver preso molti treni e fatta correre lungo i binari. Grazie per la pazienza che hai avuto con me, soprattutto quando ero

piccola. Solo tu sai come guardare sempre il lato positivo in ogni situazione, anche nella più tragica. È la tua caratteristica che amo di più. Grazie inoltre per risolvermi i macelli burocratici che solo io riesco a creare, per salvarmi le password, per aiutarmi a mettere ordine nella vita adulta.

Ringrazio mia nonna Gabriella, Stefania, Lella. È una persona con molti nomi, ma per me è sempre e solo nonna. Ti ringrazio per avermi insegnato che il cuore si apre sempre a tutti e lo si fa in silenzio; che un posto a tavola si aggiunge sempre anche se la quantità di cibo è la stessa. Ti ringrazio per avermi mostrato l'esempio più puro di amore tra marito e moglie. Ti ringrazio per avermi fatta viaggiare nel tempo con i tuoi racconti con gli occhi lucidi e pieni di una vita passata. Ti ringrazio per avermi trasmesso i valori, come dici tu, "de na volta", per avermi accolta durante le estati da piccola. Ti ringrazio per tenere il Ristorante Granello ancora aperto nonostante i tuoi 87 anni. Anche se tu hai sempre meno voglia di festeggiare, hai troppi nipoti, figli/e, cognate/i che non ti lasciano scampo.

Ringrazio mia mamma, Sabina, che ha lottato per me sin dagli inizi. Ti ringrazio per avermi insegnato a non mollare mai, ad inseguire i miei sogni, ad essere libera. Ti ringrazio per essere sempre stata al mio fianco ed aver supportato e sostenuto ogni mia scelta di vita. Ti ringrazio per avermi incoraggiata a volare lontano da sola perché sapevi che sarebbe stato un insegnamento di vita più unico che raro. Ti ringrazio per esserti fatta piccola per farmi diventare grande. Ti ringrazio per le avventure che abbiamo vissuto assieme, da quando ero piccola in casa da sole, a quando sono adulta dall'altra parte del mondo. Sei la persona più forte, coraggiosa e determinata che io conosco. Sei la base solida su cui mi posso sempre appoggiare, la casa in cui posso sempre tornare.

Ringrazio infine me stessa, il mio coraggio, la mia curiosità e la mia voglia di mettermi sempre in gioco. Ricordati che oggi sei dove ieri sognavi di essere.