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**THE ROLE OF FORMAL LINGUISTIC THEORIES IN GRAMMAR INSTRUCTION.
THE CASE OF V2 WITH ITALIAN CHILD L2 LEARNERS OF GERMAN IN THE PRIMARY SCHOOL**

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Italian abstract

Il presente lavoro descrive i risultati di un esperimento didattico atto a testare l'efficacia della teoria linguistica formale nell'insegnamento di una lingua seconda (L2) alla scuola primaria. Il fenomeno preso in esame è l'acquisizione/apprendimento del verbo secondo (V2) tedesco da parte di bambini italiani di età compresa tra i 6 e i 10 anni. Le basi teoriche della ricerca rientrano nel quadro dei Principi e Parametri (Chomsky 1981, 2005). Da un lato, si è esaminata la possibilità di accesso ai principi della Grammatica Universale da parte di apprendenti guidati di L2. Dall'altro lato, si è verificato se l'intervento didattico attuato favorisse l'impostazione del parametro del V2. I bambini della scuola primaria rientrano in una fase privilegiata per l'acquisizione del linguaggio e sono quindi nella condizione di acquisire – e non semplicemente di apprendere – una L2, anche in un contesto artificiale di esposizione all'input come quello scolastico. Per quanto riguarda le fasi iniziali di costruzione della grammatica della L2, si è osservato come l'apprendente si appoggi direttamente alla struttura sintattica della lingua materna (L1). Per innescare un processo di acquisizione della L2 completo di reimpostazione dei relativi parametri, l'apprendente deve essere adeguatamente stimolato ed esposto a un input significativo in L2. Occorre quindi che l'insegnante di lingua sia in grado non solo di selezionare quest'input, ma anche di analizzare con la classe modelli esemplificativi delle strutture sintattiche della L2. Inoltre, nemmeno il confronto interlinguistico tra L2 e L1 deve essere trascurato. L'operazione cognitiva presa in esame nello studio non consiste semplicemente nella memorizzazione o riproduzione di una regola grammaticale prescrittiva, ma nella costruzione produttiva di una struttura grammaticale. Se gli elementi lessicali e funzionali entrano in un processo di computazione sintattica, si vanno a stimolare abilità specifiche per il linguaggio. Gli effetti positivi immediati che questo metodo comporta devono essere supportati da una pratica regolare e dall'esposizione costante a un input mirato. L'esperienza didattica presentata nella tesi mostra come una riflessione grammaticale esplicita, basata su teorie linguistiche formali convenientemente semplificate, sia adeguata alle esigenze didattiche e allo sviluppo cognitivo generale degli apprendenti della scuola primaria. I dati raccolti mostrano anche come l'insegnamento di L2 alla scuola primaria sia da potenziare, soprattutto nei primi anni di scuola.

English abstract

This dissertation describes the results of a didactic experiment that tests the effectiveness of formal linguistic theories in L2 teaching at the primary school. The investigation focuses on the acquisition/learning of verb second (V2) in Italian L2 learners of German, who range in age from 6 to 10 years. My research is based on the theoretical framework of Principles and Parameters (Chomsky 1981, 2005), and I investigate the role that principles and parameters play in L2 learning: on the one hand, I examine the availability of Universal Grammar (UG) in tutored child L2 learners. On the other hand, I test whether the didactic intervention triggers/supports the resetting of the V2 parameter in the L2 under construction. L2 learners in the primary school fall within the scope of the critical period for language acquisition, and they are thus in condition to acquire – and not just to learn – a L2, even though the exposure to L2 input takes place in an artificial classroom context. As to the early stages of L2 learning, the children spontaneously rely on the syntactic structure of the L1. The activation of a real process of L2 acquisition, that includes the reset of the L2 parameters, is possible only if the L2 learners are adequately stimulated with significant L2 input. The L2 teachers must not only select focused L2 input, but also analyse the L2 models with the learners. Moreover, the crosslinguistic comparison between the L1 and the L2 must not be neglected. The process under examination is not just the recall of prescriptive grammar rules, but the productive application of a L2 structure. If lexical and functional items enter the syntactic computation, the learners' language-specific abilities are stimulated. The immediate positive results that this method entails must be supported with a regular and constant exposure to focused L2 input. The didactic experience discussed in my thesis shows that explicit grammar reflection, based on formal linguistic theories conveniently simplified, is adequate to the didactic needs and the general cognitive development of child L2 learners. The data collected in the experiment also suggest that L2 teaching should be enhanced in the primary school, particularly for the youngest learners.

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Introduction

1. The Critical Period Hypothesis: LAD and UG

In the late 1960s and early 1970s the *Critical Period Hypothesis* (Lenneberg 1967, Chomsky 1975) is put forward to account for first language acquisition (L1acq), which is strikingly fast and accurate despite the poverty of the “primary linguistic data” (PLD) received from the environment (*poverty of the stimulus*). The existence of an innate “Language Acquisition Device” (LAD) for language acquisition is assumed in Chomsky (1965). The LAD is genetically determined and related to the biological maturation of the human brain. Since the Language making capacity is subject to neuronal maturation, the critical (or sensitive) period for language acquisition progressively fades out, and ends around puberty (Pinker 1994). As observed in White (2003), the LAD has often been equated with an universal grammar (UG). UG has been defined as an innate grammar that includes the universal principles of language, and the parameters responsible for language variation, which are set in the course of language development according to the input encountered in the environment (see the Principles and Parameters model given in Chomsky 1981).¹ The acquisition of a language thus depends on the interaction of internal and external factors, i.e. innate linguistic endowment and PLD. In

¹ Parameters have been broadly investigated from the Chomsky’s 1979 Pisa Lectures on. In the eighties, parameters such as the *Null Subject Parameter* (Rizzi 1982, 1986) and the *Head Parameter* (Travis 1984) are identified within a Government and Binding (GB) framework. Borer (1984) assumes that parameters are always properties of functional heads of the lexicon (*The Borer-Chomsky Conjecture*). Within the Minimalist Program (MP), Borer’s proposal is largely resumed, and the parameters are located in the Lexicon or at the level of the interfaces (PF and LF). Finally, a recent revision of the P&P theory is proposed in Gianollo, Guardiano & Longobardi (2008), who reconsider the actual parameters of UG and their form.

an “emergentist” approach to parameters, Chomsky (2005) identifies a “third factor” which has to be added to the innate endowment (UG) and the experience (PLD), i.e. principles that are non-language-specific, but common to all cognitive faculties (cf. also Biberauer 2008).

The LAD potentially permits multiple L1acq (at least until the age of 3/4 years), but in the course of further development parts of this capacity become progressively inaccessible. However, language acquisition continues to be possible. This fact raises the question of whether UG remains available to L2 acquirers / L2 learners for the construction of a L2 grammar, and how long it stays available. The principles of UG are likely to be accessible also in adults L2 learners, even though the effects of the LAD vanish after the critical period (Hamann 2000, Hawkins 2001, 2004, White 2003, Smith & VanPatten 2014, VanPatten & Rothman 2014, among others).

2. Bilingualism and child L2acq

Irrespective of the availability of UG, L2acq produces different results (ultimate attainments) depending on the onset of exposure. Before the age of 3/4 years we can have simultaneous acquisition of two or more languages, i.e. bilingual first language acquisition. According to Meisel (2008), if the acquisition starts after age 3, it is no longer a matter of bilingualism, but the process becomes child L2acq, since the optimal age for the acquisition of morphology and syntax begins fading out at that point (at least for certain morphosyntactic phenomena). He also specifies that we have adult L2acq if the onset of exposure is after 8 years. Blom (2008) provides similar data: she observes that in child L2acq the substantial exposure to the L2 begins between ages 4 and 7. The lower boundary depends on the achievement of good knowledge of the L1 morphosyntactic

structure.² The upper boundary is determined on the basis of the ultimate attainment in L2 morphosyntactic competence: only if L2acq starts before the age of 8 years, the L2 acquirers reach native-like competence in morphosyntax. To sum up, a L2 acquirer has a good chance of reaching near native competence in the L2 if the onset of exposure is between ages 3/4 and 8. Meisel points out that puberty cannot be maintained as the terminal age of the critical period for language acquisition: the age period ranging from 3 to 8 appears to be the critical one for child L2acq.

My study considers the acquisition of German V2 in classroom L2 learners of the primary school, ranging in age from 6 to 10 years. Tutored child L2 learners are potentially in condition to acquire, and not just to learn, a L2. They fall within the scope of child L2acq, since they share some conditions with spontaneous L2 acquirers, even though the latter are exposed to naturalistic L2 input in a context of immersion, which is hard to reproduce at school (Benincà & Penello 2007). However, also for tutored L2 learners the onset of exposure to the L2 occurs before age 8 (or at least before puberty). The L1 has already established itself, but the learners are still in the critical period.

The fact that the L1 has already established itself raises the question of its influence on the acquisition of a L2. In my study I will thus examine the role of syntactic transfer from the L1 (see White 1992, Schwartz & Sprouse 1996, Haznedar 1997, Hamann 2000, Blom 2008 among many others).

² According to Guasti (2003), most of the L1 grammar is stabilised in children at the age of 4, across languages.

3. The availability of UG and the role of the L1 in L2acq / L2 learning

The issues just discussed point to two crucial aspects that must be considered if we aim to define the initial state for child L2acq (or child L2 learning): both the availability of UG and the role of the L1 must be taken into account.

As to the availability of UG, the research on L2acq has considered whether the L2 grammar under construction is constrained by UG as L1 grammar is (see, for example, Bley-Vroman 1990, White 2003, Hawkins 2004, Meisel 2011).

Some researchers suggest that L2acq and L1acq lean on different cognitive strategies. The *Fundamental Difference Hypothesis* endorsed in Clahsen & Muysken (1986, 1989) argues that a L2 is learned through general problem solving strategies, since L2 learners are completely unable to reset parameters. Therefore L2 learners have to resort to other cognitive capacities in order to compensate for those which are not available anymore. The implication is that the grammars produced by L2 learners can be impossible grammars.

As I have already pointed out, other researchers endorse an opposite proposal, and claim that L2 acquirers / L2 learners have full access to UG, hence L2 grammars are always UG constrained (Hamann 2000, Hawkins 2001, 2004, White 2003, Smith & VanPatten 2014, VanPatten & Rothman 2014, among others). In particular, White (2003) argues for a *Full Restriction* in L2acq: possible interlanguage grammars are always restricted by UG, and thus fall within a limited range specified by UG.

With regard to the role of the L1 in L2acq, I can firstly mention the *Full Transfer/Full Access Hypothesis* put forward in Schwartz & Sprouse (1994, 1996). According to this hypothesis, the initial state of L2acq is a full grammar, i.e. the whole syntactic structure of the L1 is available to L2

learners (*Full Transfer*); moreover, learners have access to UG to analyse the L2 input, and they modify their initial assumptions according to the L2 data (*Full Access*). In this proposal, UG is fully available for data analysis, but the first phase of L2acq consists in transferring the parameters of the L1 to the L2. The data in Haznedar (1997) give support to this hypothesis.

A possible variant is given in Epstein, Flynn & Martohardjono (1996), who support the *Full Access Hypothesis*: a full structure is available to L2 learners since the earliest stages, and L2 grammars are UG-constrained at all stages. However, the L1 does not play any role in the initial state.

A further development of the *Full Transfer/Full Access Hypothesis* is found in the *Domain-by-Age Model* proposed in Schwartz (2003). The author specifies that “in the domain of inflectional morphology, child L2 acquisition is more like child L1 acquisition, and in the domain of syntax, child L2 acquisition is more like adult L2 acquisition” (Schwartz 2003: 47). According to Blom (2008), this implies that syntax is influenced by L1 transfer and not by age of first substantial exposure. The prediction is that both child and adult L2 learners make syntactic errors due to L1 transfer (see Leonini 2003 for errors due to L1 transfer in adult L1 Italian/L2 German learners).

On the contrary, Meisel (2008) observes that while adult L2 learners do recur to syntactic transfer from the L1, this error is unattested in his data for child L2 acquirers. He refers to German children who acquired French as L2 after the age of 3 in a context of spontaneous acquisition. Meisel’s data suggest that word order is less of a problem for child L2 acquirers, while verb morphology is. The prediction is that child L2 learners do not recur to L1 transfer for syntax.

4. Availability of the syntactic structure in the earliest stages of L1acq and L2acq

Another issue that must be taken into consideration is whether the syntactic structure of the target language is completely available to the acquirers since the beginning.

With regard to L1acq, Radford (1990) assumes that functional categories, particularly the CP/IP system, are initially absent in the grammar of L1 acquirers of English. As to German, Clahsen & Penke (1992) rely on the hypothesis of Lexical Learning and claim that in the early stage of L1acq there is no IP/CP distinction. The acquirers only project lexical categories (VP) plus an underspecified FP with the feature [+F(inite)] above VP. This FP represents the highest phrase-structure position, until the acquisition of subject-verb agreement and the appearance of lexical complementisers trigger the emergence of a CP-component, and gives rise to the distinction between IP and CP.

According to Roeper (1992) the early stages of syntactic production in L1acq are characterised by the presence of a full Logic Form (LF) representation, but not a full syntactic tree representation.³ LF is considered as the point of “interaction with the world”, and thus universal, i.e. encoded in the UG. Following this proposal, the CP is present since the onset, but its activation is not to be ascribed to syntactic factors (such as the presence of a complementiser); the trigger for CP should rather be seen in the semantic information about illocutionary force, which is an information found in the UG, and not a parameter to be fixed.⁴

³ For instance, Roeper treats head-direction as a parameter that is not determined in the child grammar, but has to be re-set. Consequently the child grammar cannot be considered as a possible adult grammar.

⁴ According to Roeper (1992), the initial state in L1acq consists in some (semantic) principles encoded in UG: the CP has illocutionary force (question, focus, imperative); IP expresses time and modality (truth, irrealis, Tense, Aspect); the VP contains the Core Event (Event Node); and the DP includes the Reference (thematic roles, definite reference).

Finally, Rizzi (1993/1994) puts forward the *Truncation Hypothesis*: in the child's speech, not all the clauses are CPs, and the syntactic structure can be truncated at any level. Children can truncate structures if there is no material that forces their projection. However, the truncation is "regular", and always proceeds from top to bottom: the projections cannot be removed from the middle of the structure. Root Infinitives arise as a consequence of structures truncated below IP, and disappear around the age of 3 years.⁵

Moving to L2acq, the *Truncation Hypothesis* is extended to child L2acq of French and German in Prévost (1997). Another proposal is put forward in Vainikka & Young-Scholten (1996), who endorse the *Minimal Trees Hypothesis*: they argue that only lexical categories are available to L2 learners, whereas functional projections develop step-by-step guided by UG and L2 input. Consequently, L1 transfer is to be expected in lexical but not in functional projections.

A different viewpoint is found in the already mentioned *Full Transfer/Full Access Hypothesis* of Schwartz & Sprouse (1994, 1996): the initial state of L2acq is a full grammar, which consists of the whole L1 syntactic structure.

Also the *Full Access Hypothesis* in Epstein, Flynn & Martohardjono (1996) supports the availability of a full syntactic structure in L2acq / L2 learning since the earliest stages.

In my study, I will endorse the theories which support the full availability of the syntactic structure for the target language from the earliest stages on (both in L1acq and in L2acq). I suggest that both lexical (NP, VP) and functional categories (CP, IP) are present at an abstract level since the beginning of language acquisition. The activation of the functional

⁵ Rizzi (1993/1994) endorses a maturational account, and argues that maturation is a biological mechanism responsible for the development of certain features of biological systems, including syntax (see Borer & Wexler 1987 for a maturational view).

categories takes place as long as the acquirer identifies the features contained in the corresponding functional heads.

5. The initial state in L2 learning

As pointed out in VanPatten (in press), research on instructed L2acq/L2 learning ought to specify the particular processes involved in the construction of the L2 grammar, which a pedagogical intervention attempts to affect. The investigation involving tutored child L2 learners cannot ignore that the initial state in L2 learning is different from that in L1acq. Starting from the observations put forward in Meisel (2008) for spontaneous adult L2acq, I notice some similarities between adult L2acq and child L2 learning. First of all, the L2 utterances produced by L2 learners in the initial state are longer, probably more complex and contain functional categories. The course of acquisition is not identical in L1acq and L2 learning. The rate of acquisition is fast in L1acq, and protracted in L2 learning; in addition, a more extended time of exposure does not necessarily lead to success. The ultimate attainment is not necessarily the adult target for the L2: few (or no) L2 learners reach native competence. Meisel (2008) also points out that, while L1acq is uniform, a significantly broader range of variation is found across individuals and within the same learner across time in L2acq. Whereas my didactic experiment corroborates the first four characteristics observed in Meisel (2008), the idea that L2 learning is not uniform across individuals is challenged by my results. All these issues are relevant for L2 teaching, and could allow us to improve the didactic method adopted in grammar instruction for child L2 learners.

6. Theoretical and didactic purposes of my study

In my study I aim at investigating two main issues, a practical and a theoretical one. The wider, theoretical aim concerns the general mechanism

of parameter (re)setting in child (semi-tutored) L2 learners of the primary school. The more practical aim tests the effectiveness of the pedagogical intervention.

For the more theoretical objective, I attempt to account for the following issues, which have been taken into consideration also in previous studies that concerned tutored L2 learners (White 1992, Hamann 2000, Valente 2000, Tran 2005):

- Can classroom teaching lead to parameter (re)setting? Will the (re)set of the German V2 parameter take place?
- What is the role of the L1? Will L2 learners rely on syntactic transfer from the L1?
- Will tutored child-L2 learners rely upon the principles of UG?

The practical aim consists in examining the degree of effectiveness of explicit grammar instruction based on formal linguistics analyses. For this reason, I attempt to answer the following questions:

- How will child-L2 learners react to formal linguistic instruction?
- What kind of input should be provided to L2 learners? Will a L2 learner take formal instruction as language input, or will it be treated by a more general cognitive mechanism?
- Will this method entail immediate effects in parameter (re)setting?
- Will this method assure long-term effects?

I would like to point out that my study aims at investigating the *linguistic* strategies carried out in the process of L2acq or L2 learning. I will not take into consideration other non-language-specific cognitive processes which could be involved in L2acq (cf. “third factor” in Chomsky 2005). The process under examination is not just the recall of grammar rules, but the development of the L2 grammar. The tasks submitted to the participants mainly consisted in producing new sentences, which implied three different morphosyntactic operations: the learners had to select the verbal arguments

and to assign them correct thematic role and syntactic Case (basing on UG); they had to apply V-to-C movement to new contexts (parameter resetting); the finite verb had not only to be moved to C° (syntactic operation, derived from the input), but it also had to be properly inflected (independent morphological operation demanding learning). I envisage that the productive application of syntactic operations does not merely correspond to the recollection of a rule, but entails the stimulation of language-specific abilities, and, consequently, the construction of a mental representation for the L2 grammar. If child L2 learners use linguistic abilities to produce new utterances, it is plausible to think that they are involved in a process of real L2acq.

It is not easy to decide if tutored child L2 learners acquire or just learn a L2 in a school context.⁶ On the one hand, child L2 learners are potentially in condition to acquire a L2, since they are within the critical period for language acquisition. On the other hand, however, it is possibly inappropriate to define as acquisition a process that takes place in an artificial context as school. We may thus envisage that a L2 can be *acquired* in a naturalistic context, but it can only be *learned* in a school context. The linguistic research concerning tutored child L2 learners should aim to investigate if a process of real L2acq is possible at school during the critical period, even though with some restrictions.

My thesis is organised as follows: in the first chapter I will describe the target L2 parameter, i.e. German V2; I will provide an overview of recent linguistic theories which investigate V2 and pro-drop. In the second chapter I will consider how the V2 parameter is treated in L1 acquirers of German; I will then mention some previous studies about verb raising; finally I will outline my didactic proposal. In chapter three I will present the

⁶ In a classic definition, learning is the result of the extraction of data from the environment (the linguistic input in this case), which are used to build a cognitive structure in the mind (the L2 grammar in this case) (VanPatten & Rothman 2014).

didactic experiment I carried out: I will discuss how I structured my pedagogical intervention, and I will describe the results obtained. In particular, I will provide an analysis of the non-target-like utterances produced by the participants during the experiment and the delayed post-test.

Chapter 1

Verb second and the properties of CP:

A comparison of German and Italian left periphery

1. The syntactic properties of full V2 languages

1.1. Previous analyses on V2

Prior to presenting some analyses on V2 selected from the literature, I will briefly provide a general description of the phenomenon. A V2 language as German attributes a fixed position to the finite verb in root declaratives: the finite verb must strictly appear in second constituent position in main declarative clauses (1a-b). More formally, this position corresponds to the head of the left periphery of the sentence (CP), namely C°. Non-V2 languages as Italian, instead, seem to allow for a more flexible verb position (1c-d): this arises as a consequence of the fact that more than one “slot” is available in preverbal position, i.e. in the CP. However, the position of the finite verb is fixed also in Italian: the verb occurs in the head of IP (i.e. I°), and not in the CP as in German.

- (1) a. Gestern habe ich den Peter getroffen
yesterday have I the.ACC.MSG Peter met
'Yesterday I met Peter'
- b. *Gestern den Peter habe ich getroffen
yesterday the.ACC.MSG Peter have I met
- c. Ieri a scuola *pro* ho incontrato Pietro
yesterday at school have met Pietro

- d. Martedì al cinema LUI *pro* ho incontrato (non Sara)
 Tuesday at.the cinema him.STRONG have met (not Sara)
 ‘It is him who(m) I met at the cinema on Tuesday (not Sara)’

The contrast between (1a-b) and (1c-d) could be used to argue for a “flexible” CP in Italian, opposed to a “rigid” CP in German. It seems that German CP is not so articulated as in Italian, and that only one preverbal position is available in a reduced CP.

However, the asymmetry for the position of the finite verb in root and embedded clauses in German (2a-b) – which is unknown in Italian (2c-d) – suggests that the differences in the two languages could depend on different properties of the finite verb itself, rather than on different availability of the CP:

- (2) a. Peter **ist** gestern ins Kino gegangen
 Peter is yesterday in.the.ACC.NSG cinema gone
- b. Peter hat gesagt, dass er gestern ins Kino gegangen **ist**
 Peter has said that he yesterday in.the.ACC.NSG cinema gone is
- c. Mario è andato al cinema ieri
 Mario is gone to.the cinema yesterday
- d. Mario ha detto che *pro* è andato al cinema ieri
 Mario has said that is gone to.the cinema yesterday

The asymmetry root/embedded in German is arguably not to be reduced to the availability of a single “slot” in the CP; instead, it has to be related to specific features of the heads in the CP.

In the following paragraphs, I would like to reduce the parametric variation between Italian and German to precise syntactic features within a common articulated structure of CP.

The analysis of the syntax-pragmatic interface supports the idea that more than one projection can be potentially activated in German CP, and serve as a landing site for the finite verb. This theoretical discussion is

possibly beyond the aim of my didactic experiment. However, the investigation on the “fine structure” of German CP could allow us to appropriately select the linguistic input more significant for (child) tutored L2 learners of German, so as to guide them in the setting of the V2 parameter. L2 learners in fact transform linguistic data from the input into useable materials for the internal mechanisms that build the L2 grammar (VanPatten in press).

I will firstly present the main analyses put forward to explain the properties of CP in V2 languages (paragraph 1). I will then describe the syntax-pragmatic interface in root declaratives for both Italian and German: on the basis of a cartographic framework, a common articulation of the left periphery can be assumed, and the parameters of variation within the two languages can be related to the different syntactic features in the CP heads (paragraph 2). Finally, I will reflect on what kind of linguistic information is crucial in the input provided to Italian L2 learners of German, in order to guide them in detecting and resetting the V2 parameter (paragraph 3).

1.1.1. Den Besten (1983)

In the analysis proposed in den Besten (1983), it clearly emerges that the “verb second” (V2) which characterised a language as German is not to be considered as a linear restriction. Instead, it is the result of a syntactic rule forcing the finite verb and one XP to move to the left periphery of the sentence (CP) in all main declarative clauses.

First of all den Besten points to the root/embedded asymmetry: in German – as well as in other Germanic languages such as Dutch and Swedish – the phenomenon of V2 only involves root declaratives, while it does not affect embedded clauses. This suggests that the fronted verb and the complementiser have a complementary distribution, i.e. they compete for the same position in the left periphery:

- (3) a. Er sagte, **dass** er morgen **komm-e**
 he said that he tomorrow come-SBJ.3SG
- b. Er sagte, er **komm-e** morgen
 he said he comes-SBJ.3SG tomorrow
- [Ex. from den Besten (1989: 82)]

This position can be generally defined as C° . The head C° has to be necessarily lexicalised in V2 languages: when it is not lexicalised by the complementiser *dass* (3a), it has to be lexicalised by the finite verb (3b). Therefore V2 languages can also be defined as languages requiring V-to-C movement.¹

The V2 order in root clauses arises from two independent operations:

- (4) a. head movement of the finite verb to C
 b. A'-movement of an XP to SpecCP

The XP moved to the left periphery can be any verbal argument or a circumstantial. Another crucial issue related to German V2 is that only one constituent can occur in first sentence position. Den Besten argues for only one SpecCP available in the left periphery of full V2 languages as German.

His analysis was conceived in the eighties, when only one CP – extended just to include a Focus or a Topic in languages as Italian – was assumed. The Split CP hypothesis, emerged in the nineties within a cartographic framework (Rizzi 1997), challenged the idea that the German CP could just include a single position. If a fine-grained structure for the CP is supposed, and if this structure is potentially universal, the V2 cannot be simply accounted for envisaging a reduced CP, but it must be related to other properties of the CP.

¹ Since the movement to C° involves the finite verb, V-to-C movement has later been re-defined as I-to-C movement, with I containing V. In minimalist terms, it is V+T that moves to C. However, in the following chapters, I will use the general label “V-to-C movement” to refer to the more complex V-to-I-to-C movement.

1.1.2. Roberts (2004)

The proposal in den Besten (1983) represents the basis for further investigations on verb movement to C° . Within a minimalist approach, Roberts (2004) develops the analysis on V2, taking the trigger for V-to-C movement into account. As a general statement, V2 can be considered as the result of some features of C° (cf. the Optimality Theory in Anderson 2000). More precisely, Roberts claims that the features on the head Fin are responsible for verb movement.

Resuming den Besten's (1983) proposal, Roberts identifies four main components for V2 languages:

- (5) a. V-movement to Fin
- b. XP-movement to SpecFinP
- c. The restriction to just one XP
- d. The root-embedded asymmetry

As to (5a), Fin has the parametric property of requiring a PF-realisation.² More precisely, in V2 languages as German, the head Fin must have a lexical realization also in root declaratives, whereas non V2-languages require overt realization of Fin only in contexts of residual V2 (for instances interrogatives in French). Therefore, in declarative main clauses, the target position of the finite verb is I° in non-V2 languages, and Fin in V2 languages. In German, the lexical realization of Fin is guaranteed by Move, hence T (containing V) has to move to Fin in order to assure its phonological realization.^{3 4}

² In minimalist terms, parameters depend on the realisation or non-realisation of functional categories at the phonological level.

³ According to Roberts and Roussou (2002), the second linear position of the verb only arises as a consequence of Move.

⁴ In languages as Welsh, the requirement of having Fin overtly realised at PF is fulfilled by the merger of a declarative particle, while in German it is fulfilled by Move.

The property (5b) derives from the fact that Fin does not only need PF-realisation, but also has a strong EPP feature, which requires movement of a XP to its specifier. Roberts claims that in German the head Fin is defective in substantive features, therefore independent V1 in the left periphery is not allowed in root declaratives. A further XP movement to SpecFinP is necessary to obtain a Spec-head relation. Another crucial aspect is that the fronted XP can be of any type, since any syntactic category can value the unspecified features of Fin (generalised EPP-feature), except for an empty category (null subject, *pro*), which cannot be licensed in that position (see also Vikner 1995).

The local Spec-head configuration of the finite verb with any XP combines with the property (5c), which I consider crucial for the input provided to L1 acquirers and L2 learners of German: only one XP can be fronted to SpecFinP.

However, if we assume an articulated left periphery as proposed in the theoretical framework of cartography (Rizzi 1997, Benincà 2001, Benincà & Poletto 2004), the local configuration of the two elements moved to FinP leaves a range of higher positions potentially available. Nevertheless, we could assume that the restrictions on fronting do not depend on the unavailability of a split CP, but rather arise as a consequence of Relativized Minimality (Rizzi 1990a), which predicts that ‘like repels like’: A'-movement is blocked across a filled A'-position, A-movement across a filled A-position, and head-movement across a filled head. So, in full V2 languages like German, the moved XP blocks further movements to higher specifiers in the CP.⁵ As already pointed out, XP movement to

⁵ V2 Romance languages display different properties and can allow for V3, unlike German. Benincà (2013) shows how in “relaxed V2 languages” more than one constituent can occur before the finite verb. However, this does not mean that the finite verb has not moved to C°. If we apply Roberts’ (2004) analysis to these languages, we may claim that V2 Romance languages are not affected by Relativized Minimality, probably because C° displays different features. Moreover, we could envisage that, even though the activation/availability

SpecFinP occurs just to satisfy Fin's EPP feature, and the fronted XP can belong to any syntactic category; therefore it is able to block all higher specifiers in the CP. Furthermore, Fin blocks movement to all the other heads in the CP, since all of them are Operator-heads, like Fin. In German indeed both the Focus and the Topic fields have heads which host moved elements (I will return to this point of parametric variation between German and Italian in next paragraph). Roberts (2004) thus assume an elaborated left periphery also for German, and relates the V2 effect to the Relativized Minimality.

1.1.3. Holmberg (2012)

Robert's (2004) proposal has been recently resumed by Holmberg in his description and analysis of V2 languages. After going through the properties of several V2 languages with a detailed comparison, Holmberg concludes that a V2 language responds to two fundamental requirements:

- (6) a. a functional head in the left periphery attracts the finite verb
- b. this functional head wants a constituent moved to its specifier

Holmberg proposes that these two properties are probably independent, and V2 is obtained only when they co-occur.⁶ In line with Robert's (2004) analysis, Holmberg claims that property (6b) arises from a 'generalised EPP-feature', so that the fronted XP in Spec-head configuration with the finite verb can virtually be of any kind (NP, PP, AP, adverbs, expletives, but not *pro*). Therefore, it can block movement of any other XP, regardless of its syntactic function, due to Relativised Minimality.

of the projections in CP differs in German and V2 Romance varieties, the general hierarchy of fields in the CP does not change (Cognola 2014).

⁶ Holmberg states that languages can realise property (a) and property (b) independently from each other, and only V2 languages require both. This is why V2 languages represent a small percentage of the languages of the world.

Moreover, Holmberg resumes the split CP Hypothesis, i.e. the idea that the left periphery of the sentence may be articulated also in V2 languages (Benincà 2006 for Romance V2 languages, Benincà & Poletto 2004 for Raetho-Romance, Roberts 2004 for Germanic).

Within a cartographic framework, the left periphery of the sentence is conceived as a hierarchy of heads encoding information-structural functions; this hierarchy is supposed to be at least partly determined by Universal Grammar (UG), and it has thus to be considered as potentially universal. Poletto (2002) provides the following hierarchy of projections for the CP:

(7) [HT [Scene-setting [Force [Topic [Focus [WH [Fin]]]]]]]

Considering the fine-grained structure of CP that Benincà & Poletto (2004) propose for (V2 and non-V2) Romance varieties, Holmberg takes into account the different syntactic properties of the elements occurring in the Topic vs. Focus fields (more details about this “fine-structure” will be given in 1.1.4.).

In conclusion, on the basis of the above mentioned analyses, Holmberg assumes an articulated left periphery also for V2 languages. He attributes the variation within V2 languages to the fact that the heads displaying the properties (6a-b) in the CP can vary in the different languages. Variation thus depends on how high in the left periphery a constituent may move.

1.1.4. Benincà & Poletto (2004)

Benincà & Poletto (2004) investigate the syntax-pragmatic interface in the left periphery of the sentence for some Romance varieties, and identify a hierarchy of specialised functional projections (FPs) within the CP, mainly on the basis of Italian data. If we endorse Holmberg’s proposal of an articulated CP also in V2 languages, the “fine-structure” proposed in

Benincà & Poletto could possibly account for the syntactic and pragmatic properties of German CP.

In their proposal, they assume that the interface between the semantics and the layering of the functional projections in the CP is potentially universal: the highest projections include “known information”, which represents a background shared by the speaker and the hearer; proceeding to the lower projections, there is then a progression toward “new information”.

Benincà & Poletto (2004) start their analysis from the split CP Hypothesis proposed in Rizzi (1997), where the left periphery of the sentence was articulated as follows:

(8) [Force [Topic [Focus [Topic [Fin [IP]]]]]]

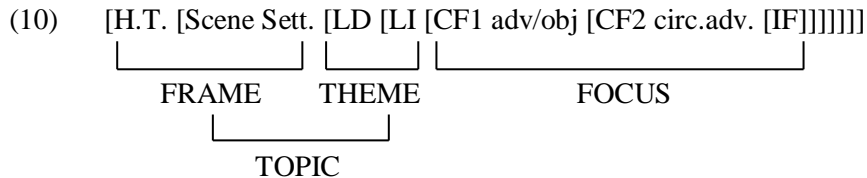
Starting from this structure, they argue for a one-to-one relation between syntactic position and pragmatic function. In a strong theoretical framework, each projection has different semantic properties and can host a single XP; if every projection is specialised, recursion of a projection is not admitted. Hence, the recursion of two Topic projections needs to be revised. Accordingly, Benincà (2001) proposes the following revision to Rizzi’s (1997) structure:

(9) [ForceP [FrameP [TopP [FocP [FinP [IP]]]]]]

Within this structure, the recursion of TopP under FocP is avoided. More than one topic can occur, but only in a position higher than FocP. A crucial aspect proposed in Benincà (2001) is that the hierarchy of projections in (9) is rigid, even though languages as Italian, where the CP is particularly receptive.

Benincà & Poletto propose treating the hierarchy in (9) as a hierarchy of ‘fields’ including a fixed number of highly specialised

projections. First of all, the two main fields in which the CP can be divided are Topic and Focus; they can be further split in hierarchically ordered subfields as shown in (10):



If we analyse this structure in detail, we observe that the higher Topic field can be split in two subfields: Frame and Theme. Frame consists of Hanging Topic (HT) and Scene Setting, while Theme consists of Left Dislocation (LD) and List Interpretation (LI). From the point of view of the information-structure, the topic field is devoted to “known information”.

As to the lower field, the authors assume that Focus is not a single projection, but it can be split at least into two higher Contrastive Focus projections (one for adverbs, the other for DPs), and one lower Focus projection marked as “new information” (Informational Focus, IF).

If the hierarchy in (10) is potentially universal, it could be worth investigating how the fronted XP in German interacts with this layering of projections (see paragraph 2).

Another aspect put forward in Benincà & Poletto that could be significant for the analysis of German CP concerns the pure syntactic properties of the XPs occurring respectively in the Topic and in the Focus fields. Benincà & Poletto propose that the elements located in these two fields display significant syntactic differences: the higher Topic field hosts non-operator elements, while the lower Focus field hosts operator-like elements. More precisely, elements occurring in Hanging Topic and Left Dislocation are not related to a variable (trace) in the source position (in Holmberg’s terms, these specifiers are filled by external merge); instead, they are connected with a resumptive pronoun or a *pro* in the sentence (i.e.

they are doubled with an overt or covert pronoun). On the contrary, elements occurring in the Focus field are moved to the CP, and leave a variable in their source position.

In the varieties considered in Benincà & Poletto, the movement of operator-like elements is thus possible only to Focus positions, whereas elements in Topic positions are either merged there, or moved to the target projection with a different type of movement. Nevertheless, in their conclusions the authors point out that they do not know whether other languages vary in this regard, and display operator-movement for positions higher than Focus. In paragraph 2.1. I would like to further investigate this issue, observing how German behaves in this respect.

1.2. The relation between V2 and null subjects

1.2.1. Vikner (1995)

Vikner (1995) proposes a detailed review of the analysis accounting for the trigger of verb movement to C°, and for the licensing of expletive subjects in V2 languages.

He firstly recalls den Besten's proposal and observes that "there is simply not room for more than one element" in the left periphery of German (Vikner 1995: 43).⁷

Then he deals with the question of what triggers movement of the finite verb to C° in V2 languages. He takes different approaches into account, and observes how a common insight consists in treating C° as a head which attracts the finite verb when it is not filled by something else. The features triggering V-to-C movement vary in different proposals.

In Holmberg (1986: 60), the feature responsible for verb movement to C° is [+V]; V2 languages display this feature in root declaratives but not

⁷ This statement is possibly too strong if we consider the Split CP Hypothesis (Rizzi 1997), the Relativized Minimality (Rizzi 1990a, Roberts 2004) and the potentially universal "fine structure" of the CP proposed in Benincà (2001) and Benincà & Poletto (2004), as I will show in next paragraphs.

in embedded clauses. Koopman (1984) and Platzack (1986) independently claim that C° attracts the finite verb because nominative case is assigned from C° .⁸ This analysis is resumed in Rizzi & Roberts (1989: 25, fn 3), who claim that only V2 languages allow nominative assignment under government from C° (and not via spec-head agreement from I° , as Italian). However, Vikner (1995) suggests that the assignment of nominative case from C° is an effect of V2, and not a trigger for V-to-C movement, although he does not reach decisive conclusions about the nature of the C° -feature causing V2.

Vikner's review of previous analyses on the phenomenon of V2 continues considering how the features of C° are related to the licensing of a null subject (*pro*) in SpecIP:

- (11) a. *(Es) wurde hier getanzt
 it is here danced
 b. Hier wurde *pro*/*es getanzt
 here is danced
 'People dance here'

A crucial aspect for my experiment is that V1 is not possible in German (11a), and that a kind of topic or focus is always required in the left periphery of the sentence. We noticed that a fronted subject can have different information-structural properties: it can be an expletive and be pragmatically neutral (Holmberg 2012) (as in 11a), and in that case it responds just to syntactic requirements; but it can also be a full XP, with discourse-related functions, serving as a topic or a focus. Since the subject in SpecCP fulfils both syntactic and pragmatic functions, it cannot be dropped from first sentence position.

⁸ A similar account could be given for some Medieval Romance varieties such as Fiorentino, French and Northern Italian dialects during their V2 stage: a null subject is licensed only in postverbal position in root declaratives, i.e. only when the finite verb raises to C° and governs SpecIP (see Benincà, Renzi & Vanelli 1985, Benincà 2013).

Interestingly, it seems that L2 learners of German intuitively deduced that a null subject could not occur in first sentence position in German (12b vs. 12c), even though their L1 allows for it (12a):

- (12) a. *pro* mangio una mela
b. **pro* esse einen Apfel
c. Ich esse einen Apfel
'I am eating an apple'

Moreover, the errors produced by the L2 learners showed how they dropped the subject only in non-subject-initial sentences, i.e. only from postverbal position. The theoretical question of how a null subject can be licensed in German is thus relevant for the discussion about the errors registered in my experiment.

Tomaselli (1990a) postulates that C° has tense and agreement features, and for this reason it can license null subjects in V2 languages. Rizzi (1990b: 382) claims that in V2 languages C° has both [+C] features (it is head of a proposition) and [+I] features (it is head of a predication): non-referential *pro* in German is licensed by the [+I] feature, which can be either in C° (root clauses) or in I° (embedded clauses). Vikner (1995) has a stronger proposal: in V2 languages C° is [+C, +I] irrespective of its content (finite verb or complementiser), so that it can always license *pro* in SpecIP under government, both in root and in embedded clauses.

A parallel could be drawn between the licensing properties of C° in V2 languages, and of I° in null subject languages (NSLs) as Italian. However, as Tomaselli (1990) points out, C° in German can only license non-referential *pro*, i.e. a null subject that is non-theta marked. So the mechanisms of licensing *pro* in SpecIP must be different in German and in Italian.

In Italian, a null subject in SpecIP is formally licensed by the nominative assigner (i.e. I°). Moreover, I° also identifies the content of the

null subject, which thus share the features of I°. Since I° has person and number features, Italian *pro* has these features too, and, consequently, it can be both referential (13a) and non-referential (13b) (my examples):

- (13) a. *pro* ho incontrato Laura ieri
 (I) have met Laura yesterday
 b. *pro* bisogna partire
 (it) is.necessary.to leave.INF

With regard to German, C° can also formally license a subject in SpecIP, assigning nominative case (14a). Nevertheless, it is not obvious whether C° has person and number features, as I° has: so in German *pro* can be formally licensed, but its content cannot be identified; as a consequence, only non-referential *pro* is possible in German (cf. 14b and 14c):

- (14) a. Hier wird *pro* nicht geraucht
 here is not smoked
 ‘It is not allowed to smoke here’
 b. *Wo wohnst *pro* jetzt? Hier lebe *pro* jetzt!
 c. Dove abiti *pro* adesso? Qui *pro* abito adesso!
 where live (you) now? here live now
 ‘Where do you live now? (I live just) here’

Cardinaletti (1990) notices that *es* is excluded – and *pro* must occur – in specific and restricted syntactic contexts, such as those involving impersonal passives (14a), passives, and ergative verbs whose subject has not moved to SpecIP, both in root (15b) and in embedded clauses (15c):

- (15) a. Es ist ein Junge gekommen
 it is a guy arrived
 ‘There arrived a guy’
 b. Gestern ist *pro* ein Junge gekommen
 yesterday is *pro* a guy arrived

- c. Hans sagt, dass *pro*/**es* gestern ein Mann gekommen ist
 Hans said that *pro*/**it* yesterday a man arrived is

According to Cardinaletti, *es* is an argument (beyond being an expletive), so it compete with the lexical subject for the assignment of theta role; this is why a *pro* has to occur in SpecIP instead of *es*. The presence of *pro* in SpecIP is to be necessarily postulated, since it is forced by the Extended Projection Principle of Chomsky (1982) (Cardinaletti 1990: 137). On the contrary, *pro* cannot be licensed in SpecCP, since C° only licenses via government. Where *pro* cannot be licensed, a lexical expletive *es* is expected.

To sum up, we have seen that SpecIP is licensed by nominative assignment from C° under government in German; on the contrary, nominative case is assigned from I° under spec-head agreement in Italian. We have also observed that while Italian can license both referential and non-referential *pro*, German can only license non-referential *pro*. Moreover, German allows for (non-referential) *pro* only in non-subject-initial sentences: a null subject can be licensed only when it occurs in post-verbal position (i.e. in SpecIP), and *pro* cannot be fronted to a specifier within the CP layer. Inversely, non-referential *es* (but not a thematic subject) only occur overtly in SpecCP, never in SpecIP. Finally, SpecCP in German must compulsorily be filled by a moved element, which can be either a “full XP” or an expletive.⁹

⁹ According to Vikner, thematic subjects and expletive subjects are licensed in the same way. Following the proposal in Cardinaletti (1990), Vikner assumes that expletives are generated in SpecIP and then obligatorily moved to SpecCP and they must form a chain with an element with a thematic role (i.e. the associate NP); this chain has to include all the specifiers that intervene between them (if the expletive is in SpecCP, also SpecIP is part of the chain).

1.2.2. Clustering properties

On the basis of the syntactic analyses described in 1.2.1, we can conclude that the impossibility to license a null subject in preverbal position in root declaratives is related to the syntactic features contained in the head C° . Therefore, we might conjecture that, when a L2 learner of German discovers the syntactic properties of C° , he possibly also infers that C° licenses *pro* only under government (only in SpecIP).¹⁰

Rizzi (1982) suggests that languages have clustering properties, and that a syntactic property entails the existence of other related syntactic phenomena. Roberts & Holmberg (2010: 15) point out that when a parameter is “valued” – i.e. fixed/set – it includes a cluster of related syntactic features. Certain features are more evident in the input, that is they are accessible to learners even though the linguistic data they are exposed to are impoverished; instead, other features are less accessible in the input. However, the less evident features are fixed as well as the more accessible. This is possible because a parameter value determines both the accessible and relatively inaccessible features, since both reflect the same abstract property of Universal Grammar (UG). The ‘clustering effect’ allows us to account for how the inaccessible feature can be acquired (explanatory adequacy of the theory): a trigger must be accessible in the primary linguistic data (PLD); the related (less accessible) features are automatically acquired since they associated to the more accessible one.

In my experiment, I did not include models with null expletives in SpecIP, so the L2 learners could not derive this property from the input. As I will largely show in chapter 3, null subjects appeared *only* in non-subject-initial sentences (arguably in SpecIP, maybe licensed under government).

¹⁰ In next chapter I will discuss the proposal in VanPatten & Rothman’s (2014), who argue that parameters like V-to-C movement or pro-drop are *inferred* from the input, and they are not *learned*. More precisely, they are not learnt through prescriptive “rules”, but they are derived from the linguistic data, which interfere with the innate linguistic knowledge of a speaker (UG).

However, the L2 learners allowed for *referential* subjects in SpecIP, which is possible in Italian but not in German, as discussed in the previous paragraph. In chapter 3, I will give more details about this issue, and I will try to account for referential null subjects in non-subject-initial sentences.

2. The “fine structure” of CP in Italian and German: the syntax-pragmatic interface

2.1. The syntax-pragmatic interface: insights for a split CP in German

In this paragraph, I will take the syntax-pragmatic interface for German into account. As discussed above, in V2 languages movement to the CP is driven by the syntactic properties of the activated head, which attracts a XP to the local Spec position. However, it is worth considering the interpretive difference associated to the fronting in terms of discourse-informational properties also in V2 languages as German (see Rizzi 2004: 5).

As stated above, the investigation on the syntax-pragmatic interface in German is beyond the purposes of my didactic experiment. However, I claim that this issue could represent a basis for further research in this field. I consider the syntax-pragmatic interface as a crucial aspect for the development of L2 learners’ communicative skills. The didactic methods could be improved providing tutored L2 learners with more effective and less artificial input. The theoretical reflections which I propose in the following paragraphs thus aim to support didactic strategies in L2 teaching. I put faith in further and larger application of these theoretical considerations to new teaching contexts.

In this paragraph, I will treat the left periphery of German as consisting of specialised and hierarchically ordered projections. Moreover, I will follow Holmberg’s proposal, and consider the whole set of Focus and Topic projections as available for Move (cf. Benincà & Poletto 2004).

However, the availability of an articulated CP in German has to be confronted with the syntactic restrictions affecting V2 languages, due to the “generalised EPP feature” and the “Relativised Minimality”.

Holmberg (2012) raises the question of whether the fronting of a category in first-sentence position *always* implies some particular semantic/pragmatic effect in German. He observes that a subject can be the first constituent apparently regardless of its semantic import: both an expletive pronoun and a contrasted DP can be subject in first sentence position. Moreover, an initial sentence adverb has the same semantic and pragmatic properties than its counterpart in post-V2 position. The fronting in these cases seems just to respond to syntactic requirements. Nevertheless, a fronted object has always a particular pragmatic value: they are typically contrastive, and fronting an object is always a marked option. Holmberg concludes that the fronted constituent can be information-structurally neutral, but it can also have a specific pragmatic value.¹¹

If we assume the proposal in Benincà & Poletto (2004), a pragmatic interpretation necessarily corresponds to one syntactic position in the CP; I suggest that this claim has to be extended to German. Starting from this assumption, we can observe that the XP moved to the left periphery can have different syntactic and information-structural functions, as noted by Holmberg. So XP fronting in German is not just the result of syntactic requirements (Fin* and EPP), but it can also entail pragmatic effects.¹² We could envisage that the pragmatic effects in German are vaguer than in Modern Italian (on a par with V2 Medieval Romance languages), but a pragmatic reading of the fronted element does exist.

¹¹ Holmberg (2012) observes that there is variation across V2 languages in this regard, some allowing topics and disallowing focused phrases, others vice versa. I will just consider the syntax-pragmatic interface for German.

¹² When the fronted constituent is information-structurally neutral (for instance with expletives) the operation of Move just responds to the requirement of the generalised EPP feature.

Within the Focus field, a fronted XP can be a Contrastive Focus, i.e. it implies a kind of “contrast” with the interlocutors’ utterance:¹³

- (16) Lucy hat Alice verletzt
 Lucy has Alice hurt.PTCP
 ‘Lucy hurt Alice’
- a. Nein, DEN KARL hat sie verletzt!
 no, the.ACC.MSG Karl has she hurt.PTCP
 ‘No, it is carl who(m) she hurt’
- b. Nein, SICH SELBST hat sie verletzt!
 no, herself has she hurt.PTCP
 Wen hat Lucy verletzt?
 Who.ACC has Lucy hurt.PTCP
 ‘Who(m) did Lucy hurt?’
- c. Den Karl hat sie verletzt
 the.ACC.MSG Karl has she hurt.PTCP
 ‘She hurt Carl’
- d. Sich selbst hat sie verletzt
 herself has she hurt.PTCP
 ‘She hurt herself’

These examples show that in Standard German the positions for Contrastive Foci are available as target positions for XPs and anaphors moved to a specifier position in the left periphery.¹⁴ I will suggest that the internal articulation of the Focus field proposed by Benincà & Poletto for

¹³ Other V2 languages, such as Dutch, display the same properties:

- (i) Wie heft Lucy verwond? - Zichzelf heeft Lucy verwond
 Who has Lucy hurt? – Herself has Lucy hurt
- (ii) Lucy heft Alice verwond. – Nein, ZICHZELF heeft ze verwond!
 Lucy has Alice hurt. – Nein, herself has she hurt

¹⁴ If anaphors must be bound in their governing category (Binding Principle A, Chomsky 1986: 169), they can be fronted in CP only if their trace is appropriately c-commanded in the source position. The position available in the CP for fronted constituents connected to a variable is necessarily the Focus subfield, if we endorse the proposal in Benincà & Poletto (2004).

the Romance varieties is compatible with the syntactic and pragmatic properties of German CP. We can conclude that in German the movement of a XP to the Focus field responds to two requirements: on the one hand, it satisfies the syntactic constraint of V2; on the other hand, it entails specific pragmatic readings.

Also the higher part of the CP is activated in German: in example (17), the temporal adverb is arguably located in Frame:

- (17) Gestern habe ich Apfelstrudel gegessen
 yesterday have I apple.strudel eaten
 ‘Yesterday I ate apple strudel’

It is worth note that, in order to satisfy the EPP feature, the fronted XP in German has to be *moved* to the CP. Therefore, also the Topic field in German implies movement of some kind. It could be interesting to consider the fact that Roberts (2004: 323, fn. 16) treats Topic as an operator head.

The examples in (16) and (17) prove that both the higher and the lower part of the CP are potential landing sites for a fronted XP. The perception of having a reduced CP available in German results from the Relativized Minimality, which blocks movement across the fronted XP both for Focus and for Topic positions:

- (18) a. *Gestern den Karl habe ich gesehen
 yesterday the.ACC.MSG Karl have I seen
 b. *Gestern in der Schule habe ich dich gesehen
 yesterday in the.DAT.FSG school have I you.ACC seen

Moreover, both Roberts (2004) and Holmberg (2012) point out that the generalised EPP-feature can only prevent the V3 orders derived by movement, but not those derived by external merge.¹⁵ Both Left Dislocation (19a) and

¹⁵ See Benincà’s (2006) and Cognola (2014) for more details on “relaxed V2” in Medieval Romance languages.

Hanging Topics (19b) seem to give rise to V3 constructions (see also Vikner 1995: 52).¹⁶ Although these structures are infrequent, they reveal that the “fine-structure” of CP can be fully activated in German. Moreover, they suggest that V3 orders are somehow accessible to speakers of a V2 language:¹⁷

- (19) a. Den Mann, den habe ich gesehen (Roberts 2004: 317)
the.ACC.MSG man, that.ACC.MSG have I seen
‘It is the man who(m) I saw (not the woman)’
- b. Der Peter, ich werde ihn morgen sehen (Holmberg 2012: 14)
the.NOM.MSG Peter, I will him.ACC.MSG tomorrow see
‘(As to) Peter, I will see him tomorrow’

These examples also show that the XPs occurring in the higher field of the CP are related to a resumptive pronoun in the sentence, as well as in Italian. In German, this pronoun can be either a D-pronoun, such as *den*, or a pronoun such as *ihn*.¹⁸ Some native speakers are more prone to accepting structures where the resumptive pronoun is a D-pronoun, rather than a “weak” (or clitic?) pronoun. More precisely, the V3 order seems to be completely acceptable if the resumptive D-pronoun occurs in the CP (20a-c).¹⁹ Instead, the sentence is more difficult to interpret (but still

¹⁶ Hanging Topics can be distinguished from left dislocated items particularly when they would correspond to PPs in the sentence. The property of Hanging Topics is that they occur without a preposition (and also with a default case in German, which corresponds to the nominative case), unlike elements in Left Dislocation, which occur with a preposition if they are related to a PP in the sentence:

- (i) a. Der Peter, ich habe mit ihm gesprochen
the.NOM.MSG Peter, I have with him talked
- b. Mit dem Peter, mit dem habe ich gesprochen
with the.DAT.MSG Peter, with that.DAT.MSG have I talked

¹⁷ Håkansson, Pienemann & Sayehli (2002) observe that L2 learners of German whose L1 is another V2 language (like Swedish) regularly produce non-target-like V3 structures in their German output.

¹⁸ A further investigation on the nature of the resumptive pronoun in German (clitic vs. weak) is beyond the scope of this study.

¹⁹ According to some native speakers’ judgement, sentences like (20a-c) can be used to correct or precise someone else’s statement. In that case, the fronted D-pronoun has to be interpreted as a contrastive Focus, and the sentence appears more natural if the contrast is syntactically realised in a Focus position rather than *in situ*.

grammatical) if the resumptive pronoun is located in the sentence, and the fronted XP occurs in Frame (20d) or in the Focus field (20e):

- (20) a. Den Mann, den habe ich gestern getroffen
 the.ACC.MSG man, that.ACC.MSG have I yesterday met.PTCP
 ‘It is the man who(m) I met yesterday (not the woman)’
- b. Der Mann, der hat den Karl verletzt
 the.NOM.MSG man, that.NOM.MSG has the.ACC.MSG Karl hurt.PTCP
 ‘It is the man who hurt Carl (not the woman)’
- c. (Der) Peter, mit dem hast du gesprochen
 the.NOM.MSG Peter, with that.DAT.MSG have you talked
 ‘Peter is the guy to whom you talked (not John)’
- d. ?Der Mann, gestern habe ich den getroffen
 the.NOM.MSG man, yesterday have I that.ACC.MSG met.PTCP
- e. ??Der Mann, den Karl hat der verletzt
 the.NOM.MSG man, the.ACC.MSG Karl has that.NOM.MSG hurt.PTCP

This confirms that the fronting of an XP is not arbitrary, but can also respond to discourse-related requirements. I suggest that only assuming a fine-grained structure for German CP we can precisely account for the connection between the syntactic properties of the fronted element and the information-structure.

I could add a final consideration. As regards the Hanging Topics, such as those instantiated in (19b) and (20d), both nominative and accusative case are allowed in the varieties of German which require a determiner with proper nouns. If the nominative case is used in these examples, we obtain a mismatch between the case of the HT and the case of the resumptive pronoun in the sentence (*ihn* or *den*, accusative). This can be used to prove that the HT is externally merged, and does not receive thematic role and case within the sentence.

In next paragraph I will compare the properties of CP in Italian and German, considering two main issues: (i) the possibility to connect the topicalised element with a clitic (or a *pro*) in the sentence; (ii) the feasibility of operator-movement to topic positions.

2.2. A comparison between German and Italian CPs

In this paragraph, I will compare the availability of the left periphery and the information-structure in Italian and German, on the basis of the hierarchy of fields proposed in Benincà & Poletto (2004). Since the “fine-structure” of CP proposed in (10) may be potentially universal, I will try to account for the target position of a fronted XP in both languages, considering its syntactic and pragmatic properties.

As stated above, in my didactic experiment I did not consider the syntax-pragmatic interface. However, it could be worth performing a cross-linguistic comparison of the information-structure in Italian and German, so as to make it available for further didactic applications.

I will start my analysis from the leftmost projections and proceed rightwards. So, starting from the Hanging Topic, we observe that in Italian it is non-recursive, and entails an obligatory resumptive pronoun in the sentence (21a-b); the same is true for German (21c), as already observed in 2.1.:

- (21) a. Mario, non ne parla più nessuno
 Mario, not ne.CL.PART (of.him) talks anymore nobody
 ‘Nobody talks about Mario anymore’
- b. Mario non gli parla più nessuno
 Mario not gli.CL.DAT (to.him) talks anymore nobody
 ‘Nobody talks to Mario anymore’
- c. Der Peter, ich habe ihn gesehen
 the.NOM.MSG Peter I have him.ACC.MSG seen
 ‘(As to) Peter, I saw him’

It seems to me that the Hanging Topic share similar syntactic and pragmatic properties in the two languages.

As to Left Dislocation, Italian allows for recursive left dislocated items (22c); a resumptive pronoun is obligatory only for direct or partitive objects (22a). In the other cases, the left dislocated element is possibly related to a *pro* in the sentence, when the resumptive pronoun is not overtly realised (22b-c):

- (22) a. Di patate, ne ho mangiate tre
of potatoes, ne.CL.PART (of.them) have eaten three
‘(As to the potatoes) I ate three of them’
- b. Di Mario, non (ne) parla nessuno
of Mario, not ne.CL.PART (of.him) speaks nobody
‘Nobody talks about Mario’
- c. A Mario, di macchina (gli) ho dato quella rossa
to Mario of car (gli.CL.DAT (to.him)) have given that red
‘(As to the car I gave to Mario) I gave him the red one’

In German (23a-c), the corresponding pragmatic reading is given by simple fronting of the XP to the first sentence position. Interestingly, a resumptive pronoun in the sentence is not present – or at least it is not overt – even though the fronted element is an object (23a):

- (23) a. Kartoffeln habe ich drei gegessen
potatoes have I three eaten
‘(As to the potatoes) I ate three of them’
- b. Von Peter redet niemand
of Peter talks nobody
‘Nobody talks about Peter’
- c. Dem Peter habe ich mein Auto gegeben
the.DAT.MSG Peter have I my car given
‘I gave my car to Peter’

Although the fronting without (overt) pronominal doubling is the preferred option in German, V3 structures which correspond to the Italian Left Dislocation and imply a resumptive weak pronoun in the sentence are not completely ungrammatical (24a-d).

- (24) a. Den Peter, ich habe ihn gesehen
the.ACC.MSG Peter I have him.ACC.MSG seen
- b. ??(Von den) Kartoffeln, ich habe drei davon/von ihnen gegessen
(of.the.DAT.MPL) potatoes I have three of.them/of them.DAT.MPL eaten
- c. ?(Vom) Peter, niemand redet von ihm
(of.the.DAT.MSG) Peter, nobody talks of him.DAT.MSG
- d. ?(Dem) Peter, ich habe ihm mein Auto gegeben
(the.DAT.MSG) Peter I have to.him my car given

To sum up, V3 structures in German are mainly Hanging Topics, and imply pronominal doubling. More precisely, when the resumptive pronoun is located in the sentence, the externally merged XP is preferably considered as an Hanging Topic. However, this construction can be extended to Left Dislocation, even if unwillingly: examples (24b-d) show that also XPs occurring in Theme positions can be doubled with a resumptive pronoun in the sentence. Nonetheless, in unmarked sentences, the XPs interpreted as topics do not imply V3 and do not require doubling with a pronoun.

I attempt to account for the fact that (24b-d) are not completely ungrammatical, even though the native speakers' judgments about these marginal marked oral constructions are often unstable and unclear. The question of pronominal doubling seems to be a crucial issue to analyse the nature of the fronted XP. If we endorse a cartographic viewpoint, we could envisage that a "clitic field" in the CP (hosting resumptive pronouns) is present in German – as well as in Medieval Romance varieties (Benincà 2006) – between the Topic and the Focus fields. We could also make the conjecture that a resumptive pronoun for Topics is always present in this

“clitic field” at an abstract level, and it could optionally receive overt realisation at PF in some sub-standard spoken varieties of German.

More precisely, in the most accurate varieties of Standard German, the verb raises to the head of the Topic projection activated, and pronominal doubling is not overt: from the Topic field, the finite verb can license a *pro*, since it governs the “clitic field” (which is lower than Topic). For this reason, the pronominal doubling of Topics is generally covert in German.²⁰ A parallel may be drawn with V2 Medieval Romance varieties, where Topics (in particular direct objects) were obligatorily doubled by a clitic, which – if the FocusP was empty – was obligatorily enclitic (Tobler-Mussafia Law). More generally, clitics were always enclitic if the FocusP was empty. This has been interpreted as the result of a further movement of the verb in C° to the Topic head.

In the varieties of German allowing V3, instead, the finite verb possibly targets a lower head, i.e. a head in the Focus field. In that case, a pronoun can appear in preverbal position (*Den Peter, den habe ich gesehen*), and it may be located in the “clitic field”, which is higher than the Focus field. The realisation of the resumptive pronoun is overt in this case, since the “clitic field” is not governed by the finite verb, hence a null pronoun cannot be licensed. The examples in (20) indeed show that the doubling seems to be more natural when the resumptive pronoun occurs in the CP and not in the sentence.

To sum up, the highest Topic fields (Frame and Theme) are fully available both in Italian and in German. Hanging Topics and Left Dislocation display similar pragmatic reading in the two languages, while their syntactic properties can vary. As to Italian, both Hanging Topics and left dislocated items are externally merged in CP and doubled with a

²⁰ The possibility of licensing silent pronouns related to Topics makes the XPs in Focus and Topic positions syntactically undistinguishable in Standard German. However, the fronted XP displays different pragmatic readings in the two cases.

resumptive pronoun (or *pro*) in the sentence (Benincà & Poletto 2004). As to German, Hanging Topics are clearly externally merged in the CP and they are related to a resumptive pronoun in the sentence or in the CP (Holmberg 2012); left dislocated items, instead, are moved to the target position and they do not require an (overt) resumptive pronoun. Unlike Hanging Topics, left dislocated items can create a Spec/head relation with the finite verb. This may entail that the type of movement targeting the position devoted to Left Dislocation is different in Italian and German (see Roberts 2004).

We can now consider the lower part of the left periphery, i.e. the Focus field. In Standard Italian the Informational Focus can be activated only if a Contrastive Focus is already present (vs. Sicilian):

- (25) a. Chi arriva domani?
 who arrives tomorrow
 a'. *Gianni arriva vs. Arriva Gianni
 John arrives vs. arrives John
 b. Lucy, chi ha ferito?
 Lucy, who has hurt.PTCP
 ‘who(m) did lucy hurt?’
 b'. *Se stessa ha ferito vs. Ha ferito se stessa
 herself has hurt.PTCP vs. has hurt.PTCP herself
 ‘She hurt herself’
 b. A GIORGIO questo libro devi dare
 to John this book must.PRS.2SG give
 ‘You must give this book to Giorgio (not to Carlo)’
 [Ex. from Benincà & Poletto 2004: 61]

In Standard German, the Focus field shares similar properties, and a fronted XP is located in a position of Contrastive Focus, as instantiated in (26).

- (26) a. Was hast du gestern gemacht?
 what have you yesterday done
 ‘What did you do yesterday?’
 Den Ian habe ich getroffen
 (the.ACC.MSG) Ian have I met
 ‘I met Ian’
- b. Hat Kari (den) Tom getroffen?
 has Kari (the.ACC.MSG) Tom met
 ‘Did Kari meet Tom?’
 Nein, (DEN) IAN hat sie getroffen!
 no, (the.ACC.MSG) Ian has she met
 ‘No, she met Ian’

In (26a), the answer implies a presupposition: the interlocutor should have shared the information with the speaker. Hence the answer is not unmarked, and expresses the speakers’ surprise about the question. In conclusion, both (26a) and (26b) imply the activation of a Contrastive Focus.

As stated above, Focus is the target position for *moved* XPs related to a variable in the source position (and they are never doubled with a pronoun or *pro*). Roberts (2004: 317) points out that Merger into SpecFocP is not allowed in V2 languages, as elements in this position must enter into A’-dependencies (see Rizzi 1997), which can only be created by movement. Benincà & Poletto (2004) state the same for Italian.

In conclusion, the data presented in this paragraph show how the layering of both the highest and the lowest part of the CP in German conforms to the universal hierarchy proposed in Benincà & Poletto (2004). The contexts of parametric variation can be basically confined to the syntactic features of the heads in the CP, as suggested in Roberts (2004).

2.3. Common “fine-structure” and syntactic parameters of variation

If we treat the CP structure as potentially universal, we have to account for the parameters of variation which govern the movement to CP positions in full V2 languages as German and in non-V2 languages as Italian. I thus attempt to summarise how Italian differs from German for the syntactic and pragmatic properties of the left periphery.

First of all, we can consider the pragmatic difference: Italian forces the nominal element moved to CP to have specific pragmatic features; in Italian, the fronting of a XP to the CP responds to discourse-related or pragmatic requirements, but not to syntactic constraints. On the contrary, German necessarily has to move something to CP, even though information-structurally neutral (see Holmberg 2012). XP fronting in German has both syntactic and pragmatic functions: consequently, movement of a XP to the left periphery does not always entail a specific pragmatic reading, as it does in Italian.

Secondly, there is a syntactic difference: Italian does not require verb movement to a head in the CP field when Topic or Focus positions are occupied, as German does. Following Roberts (2004), the German configuration is the result of two specific properties of the heads in the CP fields: they need to be overtly realised at PF, and they have an EPP feature, i.e. they force the movement of an XP to their specifier. So, in German, the XP moved to the left periphery is always in a Spec/head configuration with the finite verb, while in Italian the XP in the Topic or Focus field is not in a Spec/head configuration with the finite verb in I^o.²¹

²¹ More precisely, in Italian a local configuration is not needed between the finite verb and a Topic. However, some elements fronted to the Focus field may have some adjacency requirements with the finite verb. This seems to be the case of the adverb *così* (so), as instantiated in (i). Moreover, the adverbs *so/ainsi* seem to trigger verb movement also in English and French:

- (i) a. *Così ha detto Giorgio/ ?? Così Giorgio ha detto*
 So has said Giorgio / ?? So Giorgio has said

Also a fronted anaphora and a *wh* in main interrogatives must be adjacent to the finite verb.

- (ii) a. *Quando ha chiamato Giorgio? /*Quando Giorgio ha chiamato?*
 *when has called Giorgio / *when Giorgio has called*

Furthermore, the “generalised EPP-feature” in German implies that any XP can create a Spec/head configuration with the finite verb, and block the movement of other constituents to the higher positions within CP, due to Relativized Minimality.

Nevertheless, this does not imply that the whole “fine structure” of CP is unavailable in German, as a deeper analysis of the syntax-pragmatic interface shows. The fronting of a XP in German does not only respond to syntactic requirements, since the constituent which satisfies the EPP-feature can have a variety of information-structural functions (Holmberg 2012). In some cases indeed the fronted XP responds to specific pragmatic requirements.

A crucial point of variation between Italian and German concerns the accessibility of Scene Scetting. Following Roberts (2004) and Holmberg (2012), the V2 requirement in German is satisfied as long as it is obtained by Move: ‘anything’ can satisfy the V2 requirement as long as it is moved to initial position (Holmberg 2012: 38). We thus have to assume that also the XPs located in the Scene Setting sub-field (such as temporal adverbs) have been moved to the target position, even though the type of movement is arguably different from the operator-move which concerns the Focus positions. For Italian, Benincà & Poletto (2004) envisage that Frame and Theme XPs do not entail operator-movement, and they are either base-generated in the Topic field (external merge), or moved to the target position with a different strategy. However, in their conclusions they suggest that, in languages other than Italian, operator-movement may be possible also to the Topic field. This could be the case in German, where the XP in Scene Setting cannot be externally merged, but has to be moved to the target position in order to satisfy EPP. The source position of the adverb in the sentence arguably corresponds to the one in (27b):

- (27) a. Morgen treffe ich Peter
tomorrow meet I Peter
‘Tomorrow I will meet Peter’
- b. Ich treffe morgen Peter
I meet tomorrow Peter
‘I will meet Peter tomorrow’

This point is relevant for my didactic experiment, since the input I proposed to L2 learners mainly consisted in non-subject-initial sentences which included a XP in Scene Setting.

To conclude, we can respond to the issue arisen at the beginning of the paragraph as follows: the parametric variation in Italian and German depends on the syntactic properties of the heads in the CP, related, in particular, to the “generalised EPP feature” (implying Relativised Minimality), which concerns German but not Italian. However, these features are not incompatible with a fine-grained structure of the CP in both languages.

3. Crucial input for the acquisition of V2

On the basis of the theoretical analysis of the previous paragraphs, I will now consider which information in the linguistic input is revealing about the V2 parameter, and can thus support parameter setting in Italian L2 learners of German. The information relevant for L2 learners is arguably the same that guides the setting of the V2 parameter in L1 acquirers of German. The difference is that the input provided at school must be more focused, since the immersion in the Primary Linguistic Data available in spontaneous acquisition is hard to reproduce in an artificial learning context. Linguistics theories can help in improving L2 teaching methods, since they can indicate what kind of input is more significant for L2 learners.

First of all, the asymmetry for the position of the finite verb in root and embedded clauses is relevant in the acquisition of German V2. This asymmetry highlights that the heads in the CP are unavailable for the finite verb when a complementiser already occurs in one head (Relativised Minimality). Consequently, the finite verb in German can rise to the left periphery only in root declaratives. Although this information is crucial for the identification of the V2 parameter, I could not use this input in my experiment, due to the reluctance of the teachers to expose child-L2 learners to structures considered as too complex, and thus inadequate, for the pupils' linguistic competence. Nonetheless, I highlight that the exposure to L2 input that includes the opposition root/embedded should not be neglected. The linguistic theories on V2 have pointed out the relevance of this opposition, hence I encourage L2 teachers to take this issue into account to improve didactic strategies, and to expose L2 learners to more significant linguistic input.

Another crucial information related to German V2 is that the verb cannot appear in V1 position in declarative main clauses (vs. Italian), but it must occur after the first sentence constituent. A XP must be fronted to the specifier position of the finite verb.

Only one constituent can be fronted in first sentence position: the fronted XP and the verb must be in a Spec/head configuration, and once the Spec is filled by a moved element, the access to higher specifiers is blocked.

The fronted element can be of any type. As to the pragmatic reading of the XP moved to the CP, a fronted subject is not pragmatically marked (vs. Italian). Instead, a fronted object is necessarily pragmatically marked: it could be either a focus or a topic. Crucially, if it is interpreted as a topic ("known" information), it does not (necessarily) imply pronominal doubling in the sentence, as it does in Italian.

I consider the above described information as crucial for the identification (and, potentially, for the re-setting) of the V2 parameter in L2 learners.

Within a school context, the input (potentially) provided to L2 learners of German can include different kind of root sentences (28), which are not equally relevant for the setting of the V2 parameter:

- (28) a. Susanne hat am Montag Peter getroffen
 Susanne has on Monday Peter met
 ‘Susanne met Peter on Monday’
- b. Am Montag hat Susanne Peter getroffen
 on Monday has Susanne Peter met
 ‘On Monday Susanne met Peter’
- c. Den Peter hat Susanne am Montag getroffen
 the.ACC.MSG Peter has Susanne on Monday met
 ‘Susanne met Peter on Monday’
- e. Peter, den hat Susanne am Montag getroffen
 Peter, that.ACC.MSG has Susanne on Monday met
 ‘It is Peter who(m) Susanne met on Monday’
- f. Peter, Susanna hat ihn am Montag getroffen
 Peter, Susanna has him.ACC.MSG on Monday met
 ‘(As to Peter) Susanna met him on Monday’

The information-structure in Italian is partly different from the German one. Italian children are exposed to a L1 input which entails a different pragmatic-syntax interface. As stated above, the differences mostly depend on the syntactic properties of a non-V2 language: Italian has no features in C° which attract the verb, and no Relativized Minimality constraints in CP:

- (29) a. Susanna ha incontrato Pietro lunedì
 Susanna has met Pietro Monday

- b. Lunedì Susanna ha incontrato Pietro
Monday Susanna has met Pietro
- c. PIETRO (Susanna) ha incontrato (Susanna) lunedì
Pietro (Susanna) has met (Susanna) Monday
- d. Pietro, LUI Susanna ha incontrato lunedì
Pietro, him.STRONG Susanna has met Monday
- e. Pietro, Susanna I' ha incontrato lunedì
Pietro, Susanna him.CL.ACC.MSG has met Monday

First of all, sentences (28a) vs. (29a) show how subject-initial root declaratives are not particularly telling about the position of the finite verb in the two languages. Subject-initial sentences are revealing about the VO/OV order: the variation between the two languages is detected with the position of the past participle. However, the position of the non-finite verb is not crucial information for the V2 parameter, which involves the finite verb and a XP. Consequently, subject-initial sentences do not constitute crucial input to discriminate the different target positions for the finite verb in the two languages: despite the verb position is linearly the same in the two examples (second sentence position), we know, on the basis of other evidence, that it is located in C° in (28a) and in I° in (29a). Other kind of input is hence more helpful in order to detect the V2 parameter in German.

I consider the opposition between sentences (28b-d) and (29b-d) as particularly relevant. The examples (28b-d) clearly indicate that in German only one constituent can be fronted in preverbal position (i.e. to a specifier in the CP); moreover, when the XP moved to a preverbal position is not the subject, the subject itself cannot occur before the verb, but it has to be located in the position immediately following the finite verb (SpecIP), which corresponds to the third linear position in the sentence. The linear order in non-subject-initial root declaratives clearly shows that the finite verb is located within the CP in German.

For an Italian L2 learner of German it is thus relevant to observe how the two languages differ both for the availability of preverbal positions, and for the position of the subject in non-subject-initial sentences, and the two issues are related.

Example (28c) can be used to show how the subject cannot appear in preverbal position once an object is fronted (syntactic property of German CP); in addition, a fronted object in German can be interpreted both as a focus (CF and IF) and as a topic (LD and LI) (pragmatic reading in German CP); in the latter case, it does not imply the presence of a resumptive pronoun in Standard German, as it does in Italian.

Instead, examples (29c,d) show how Italian allows for the (lexical) subject to follow the object fronted in CF, so that more than one XPs can occur in preverbal position. This suggests that the verb is located in the IP, since the canonical position for the subject in Italian is SpecIP.²²

The same analysis applies to examples (28b) vs. (29b): in Italian, but not in German, the subject occurs in preverbal position when a XP is located in the projection devoted to Scene Setting.

In conclusion, I claim that the comparison of non-subject-initial sentences that include either a fronted object or a fronted adverb in the two languages represents crucial input for L2 learners.

As a further step, the analysis can continue with examples like (28e), which show how only moved XPs produce V2 in German, while externally merged XPs do not; in this case, the Hanging Topic is doubled with a pronoun in the sentence. The Italian example in (29e) displays the same properties. I thus observe that, although theoretically relevant, these examples could be misleading for L2 learners at an initial stage. In examples

²² See Cardinaletti (2004) for the idea of a split subject position. Compare with Benincà & Cinque (1985) for insights about the possibility that lexical subjects are always left dislocated.

(28e) vs. (29e), the linear word order is the same in German and in Italian; however, the underlying verb position differs in the two languages.

I conclude that the most relevant information we can provide to L2 learners of German in order to detect the V2 parameter consists of non-subject-initial sentences. I consider this point as particularly important for didactic purposes, as I will largely discuss in chapter 4: in a context of artificial L2 learning, the input provided to the learners has to be selected; it is thus crucial to expose the learner to focused and significant input, and to compare the L1 with the L2 explicitly. In my experimental lessons I mainly exposed the learners to input which included adverbs or XPs fronted to a projection of Scene Setting, as in the example (28b).

Chapter 2

Pedagogical interventions and didactic strategies in second language acquisition

1. Properties of the grammar instruction provided

The didactic method I adopted in my study aimed to provide the L2 learners with a focused input, formally analysed. In order to select significant L2 exemplars for the learners, I used the syntactic theories elaborated in the three last decades on German V2 within a generative framework. However, the didactic intervention had also to be convenient for child L2 learners. Hence, I attempted to mediate between theoretical formality and pedagogical needs. The grammar instruction had to conform to three main properties.

Firstly, the description of the data provided had to be simplified, but consistent – as far as possible – with the real cognitive operations involved in language processing. It had to reveal how main declaratives were structured in the L2, and provide an explicit and precise segmentation of the sentences in syntactic constituents.

Secondly, the L2 input had to be focused, in order to contrast the poverty of exposure to the primary linguistic data (PLD) (see Chomsky 2005, Roberts & Holmberg 2010), which was particularly problematic at school. The grammar input had to concentrate on crucial aspects of the L2, and guide the learners in the parameter re-setting.

Finally effective grammar instruction had to include cross-linguistic comparison. The L1 and the other languages known by the learners do interact with the L2 grammar under construction; therefore, crosslinguistic

comparison should not be avoided for fear of negative transfer (Cardinaletti 2007, Masutti 2013, 2014).

A relevant aspect which should not be neglected in grammar teaching concerns the target of L2 learning. Learning (or acquiring) a language does not simply entail the development of communicative skills, but also involves the acquisition of a mental representation of the target language, which is abstract and implicit (see White 2003, VanPatten 2014, VanPatten & Rothman 2014). This statement is particularly relevant, and should be taken into larger consideration at school. In the Italian school system, L2 teaching is in fact mainly associated to the development of practical skills. The aim of L2 teachers is to provide grammar notions and lexicon, and the learners are supposed to use these notions autonomously in real communicative contexts.

In the following paragraphs, I will investigate the process at work in the development of the mental representation for German grammar; I will focus on the identification and setting of the V2 and pro-drop parameters, examining these phenomena both in L1 acquirers and in instructed L2 learners of German. In the next two paragraphs I will thus start by analysing L1acq and spontaneous L2acq. I will then move to classroom learners: I will observe which kind of input turns out to be more significant for the identification of the V2 and pro-drop parameters, also considering how the naturalist acquisition takes place. I will finally discuss how the didactic intervention can provide tutored L2 learners of German with the appropriate input.

2. The setting of the parameters of V2 and pro-drop in L1 acquirers and spontaneous L2 acquirers of German

2.1. How do L1 acquirers infer verb movement from the input?

The landing site for verb movement has been traditionally treated as a parameter that L1 acquirers have to infer from the linguistic input they receive. Crucial information concerns the syntactic positions available before the finite verb, and the position of the subject with respect to the finite verb.

As a simplified preliminary intuition, we can observe that L1 learners of Italian infer that more than one syntactic position is available before the finite verb; moreover the subject occurs before the verb even though another constituent is in first sentence position; this is suggestive of the fact that the finite verb occurs in I° ; finally the position of the finite verb is the same in root and embedded clauses (V-to-I movement).

On the contrary, L1 learners of German infer that only one syntactic position is available before the finite verb: on the one hand, any type of XP can target this position; on the other hand, the access to this position is limited to one XP. As a consequence, in non-subject-initial sentences the subject must occur in third sentence position. Moreover, the finite verb has no access to the left periphery in embedded clauses, when a complementiser is present. Both in embedded clauses and in non-subject-initial main declaratives, the subject immediately follows the head C° , i.e. it appears in its canonical position, where it receives nominative case (SpecIP). Non-subject-initial sentences thus illustrate how the finite verb raises across this position (V-to-C movement).

After this general outline, in 2.2. I will describe in more detail the acquisition of German V2 by L1 acquirers.

2.2. The acquisition of German V2 in L1 acquirers

In this paragraph I will compare some proposals put forward in the course of the nineties to account for the acquisition of the V2 structure by German children. These proposals developed within two different approaches to child language, i.e. the Lexical Learning and the Universal Grammar frameworks. Research in both approaches take the first two-word combinations into consideration, and investigate whether parameter setting takes place since the early stages of L1acq.

Within the framework of Lexical Learning, the emergence of syntactic structures is associated to the acquisition of properties encoded in lexical and morphological items. As to verb raising in German, Clahsen & Penke (1992) observe that the acquisition of (generalised) V2 is determined by the development of the verb paradigm. More precisely, the acquisition of subject-verb agreement is considered as a lexical trigger for the setting of the V2 parameter. In particular, the 2nd person singular suffix *-st* seems to be decisive, since verb suffixed with this morpheme are systematically placed in V2 position (around the age of 24 months). Instead, before the appearance of *-st*, only a small number of finite verbs correctly appears in V2 position, namely modals and verbs with *-t*.¹

Clahsen & Penke argue that in the early stages (i.e. before the acquisition of subject-verb agreement) verbs which appear in V2 position are not used in a productive way; in addition, distributional errors are

¹ The affix *-t* is considered as a mark of intransitivity rather than a mark of (third) person, since it refers to intransitive verbs in 92% of the cases. Nonetheless, Weissenborn (1990) points out that the suffix *-t* is not limited to intransitive verbs. In the Simone's corpus (see Miller 1979), sentences like (i) are produced around 22 months:

(i) esst (=ist) was (S. 1;10,20)
eat.3SG. something

Moreover, note that the correct placement of verbs in *-t* involves from 92% to 100% of the utterances produced by Simone since the early stages, namely from 1;07 to 2;08. Also Clahsen & Penke (1992) confirm that verbs inflected with *-t* typically appear in the V2 position since the beginning; however, they also observe that in 3% of the utterances analysed, verbs in *-t* are placed in final position, while verbs in *-st* exclusively appear in an adult-like V2 position.

registered, and most of them concern the suffix *-n*.² For this reason, according to the authors, the affixes *-t*, *-n* or *-o* used before the emergence of *-st* are not to be treated as markers of person agreement.³ As to the modals and the verbs marked with the affix *-t*, they are considered as based-generated in a functional projection where the finiteness feature [+F] is encoded (a general FP, which is not CP). The verbs including a *-n* affix, instead, mainly occur in sentence-final position, so they are analysed as forms not marked with [+F]; therefore they are located in the VP.⁴ This analysis implies that in the early stages neither AGR nor CP are present in the child grammar (see also the *Small Clause Hypothesis* in Radford 1990). Only in a later stage, namely after the acquisition of subject-verb agreement, an AGR-phrase is introduced above the VP, and the former generic FP is specified as a CP.

To sum up, in the approach proposed in Clahsen & Penke (1992), V-to-C movement is not considered as available from the early stages, since the CP – and thus generalised V2 – develops only after the emergence of subject-verb agreement. This entails that the child restructures the grammar at age 2;04. When the affix *-st* appears, and person agreement is acquired, the child productively generates finite forms for all verbal elements, and these forms are moved from AGR to CP, when no complementizer is generated in this position.⁵

² However correct use of V2 with *-n* forms remains relatively low even after *-st* has become a regular agreement affix.

³ The verb forms with the affix *-e* (1st singular) are considered ambiguous by the authors, and thus neglected.

⁴ Non-finite verbs in *-n* can also appear in non-final sentence position, as in (i):

(i) Das erst einpacken da
 that just pack up there
 ‘I am just going to pack that in there’

However, in (i) the non-finite verb has not been moved out of the VP, since the direct object still precedes it (German is an OV language). Instead, the elements on the right of the verb (*da*) can be considered as dislocated in the *Nachfeld*.

⁵ Also the emergence of complementisers is related to the setting of the V2 parameter. In the Lexical Learning framework, this confirms that the acquisition of properties of lexical items such as complementisers, has effects on the development of syntax.

We can now compare the proposal in Clahsen & Penke (1992) with the *Strong Continuity Hypothesis*, developed within an Universal Grammar framework. This hypothesis bases on the claim that the child syntax is adult-like with respect to verb placement from the early stages on (Weissenborn 1990, Roeper 1992, Verrips & Weissenborn 1992, Westergaard 2013).

Weissenborn (1990) rejects the triggering relationship between the acquisition of verbal morphology (i.e. subject-verb agreement) and the emergence of CP and V2. He distinguishes between the notions of verb paradigm and finiteness: the concept of finiteness develops before the complete mastery of the agreement paradigm (see also Verrips & Weissenborn 1992). Morphological errors arise as a natural consequence of paradigm learning, but they do not affect the underlying syntactic representation of AGR. The inflectional paradigm of the verb (morphology) and the finiteness feature (syntax) should thus be treated as two independent phenomena, and the primary distinction the child operates is the one between finite and non-finite forms.

Weissenborn notices that L1 acquirers of German can discriminate between finite and non-finite verb forms almost as soon as they begin to use verbs.⁶ The following examples instantiate how finite verbs regularly occur in V2 position (1a,c), while non-finite verbs occupy sentence-final position (1b,d):⁷

- (1) a. brauche lala⁸ (S. 1;11,13)
 need pacifier

⁶ L1 acquirers of English, instead, need longer to recognise the finite vs. non-finite distinction: they are in fact exposed to a linguistic input which includes less agreement information.

⁷ Finite verbs rarely occur in verb-final structures: less than 2% in the data from Simone (S.) between 22 and 27 months, and less than 3% in the data from B. between 22 and 32 months.

⁸ Weissenborn (1990) states that subject-verb agreement is not evident in the early stages because of the frequent recourse to null subjects in the child language.

- | | | |
|----|-----------------------|----------------------------|
| b. | will lala habe | (S. 1;11,13) |
| | want pacifier to have | |
| c. | geht nich | (S. 1;11,13) |
| | works not | [in Weissenborn 1990: 211] |
| d. | nich aua mache | (S. 1;10,3) |
| | not ouch make | [in Weissenborn 1990: 192] |

Weissenborn suggests that the position of the verb before or after the negation *nicht* allows the child to distinguish between finite (1c) and non-finite (1d) verb forms, since it indicates whether the verb has moved (finite) or not (non-finite).⁹

Furthermore, he argues that the child produces V2 for all verbs from the beginning, since the rule of verb movement is a general one, and does not depend on the type of verb: he rejects the idea that modals are based-generated in FP, as stated in Clahsen & Penke (1992). The following examples from the Simone-Corpus show how the verbs found in V2 position are also lexical since the early stages, i.e. between the age of 1;09 and 2;02:

- | | | | |
|-----|----|--------------------------|-----------------------------------|
| (2) | a. | mir schmeckt nich? | (S. 2;01,12) |
| | | me tastes not | [Verrips & Weissenborn 1992: 298] |
| | b. | malt eier | (S. 1;10,20) |
| | | paints (3 pers.sg) eggs | |
| | c. | baue haus | (S. 1;10,28) |
| | | build (1 pers.sg.) house | |
| | d. | kauft Angela | (S. 1;10,20) |
| | | buys Angela | [in Weissenborn 1990: 197] |

Weissenborn (1990) identifies precise evidence in the child speech which suggest the early availability of the CP: object fronting, the presence

⁹ Pierce (1992) claims something similar for French: she observes that the acquisition of finiteness correlates with the placement of the verb in a pre- or post-negation position.

of postverbal subjects, direct and indirect wh-questions, and finite embedded clauses.

As to object fronting, Weissenborn points out that S-V-O orders emerge before O-V-S ones. Before 24 months O-V-(S) orders are indeed rather infrequent, but still attested, and this is telling about the availability of a SpecCP in the child language.

- | | | | |
|-----|----|------------------------------|--------------------------------------|
| (3) | a. | ein ei malt der | (S. 1;10,28) |
| | | an egg paints he | [in Verrips & Wesseinborn 1992: 292] |
| | b. | bisschen hat der teddy auch | (S. 2;01,19) |
| | | little bit has the teddy too | [in Verrips & Wesseinborn 1992: 297] |
| | c. | ein loch macht die mone | (S. 2;01,16) |
| | | a hole makes DET mone | [in Weissenborn 1990: 197] |

Note that also XPs other than objects (and subjects) can appear in preverbal position since the very early stages. This is particularly the case of locatives (4a-b), which have been analysed by some researchers as elements located in SpecIP (see Weissenborn 1990: 296 for more details). Instead, I am prone to treat them as elements moved to a specifier position in the CP, as well as fronted subjects and objects:

- | | | | |
|-----|----|-------------------|--------------------------------------|
| (4) | a. | hier isse balla | (S. 1;10,20) |
| | | here is ball | [in Verrips & Wesseinborn 1992: 297] |
| | b. | da mach mal | (S. 1;10,20) |
| | | there do ADV | [in Verrips & Wesseinborn 1992: 292] |
| | c. | baun will ich [?] | (S.1;10,22) |
| | | to-build want I | [in Verrips & Wesseinborn 1992: 298] |

Also the occurrence of postverbal subjects in V1 sentences proves that the CP is available. In (5) the subject (both pronominal and lexical) is clearly located in a position higher than VP, since the negation (*nicht*) occurs to its right (5b-c). We can envisage that it is located in its canonical

position, namely SpecIP. If the finite verb is higher than the subject, it must have been raised to C°:

- (5) a. finn ich auch (B. 2;02,09)
 find I also [in Weissenborn 1990: 197]
 b. baut max nich (S. 1;10,3)
 builds Max not [in Weissenborn 1990: 204]
 c. darf er nich (H. 1;11,05)
 may he not [in Weissenborn 1990: 201]

There are finally cases in which the child uses the CP for questions (6a-b) or embedded clauses (6c-d). These constructions doubtless show that the CP (and V-to-C movement) are available to L1 acquirers from the early stages on, even though the verb paradigm is not properly mastered (6b), and the complementiser is not lexicalised (6c-d):

- (6) a. wieviel beine hat de puppa (S. 2;01,16)
 how-many legs has the doll [in Verrips & Wesseinborn 1992: 298]
 b. wo bin (=bist) du? (H. 2;10)
 where are you? [in Wesseinborn 1990: 204]
 c. medizin drauftun _ mag nich _xxx (S. 2;00,05)
 medicine apply_ like not [in Verrips & Wesseinborn 1992: 298]
 d. papi sagt (...) schöne hose anzieht hat (H. 2;01,18)
 daddy says nice trousers put-on has [in Wesseinborn 1990: 204]

Weissenborn (1990) argues that the development of syntax proceeds by bootstrapping: up to the age of 24 months, the child activates the CP only for sentences which include a wh-phrase, whereas SVO declarative clauses entail V-to-I movement. According to Weissenborn (1990), it is object/XP fronting that suggests to the L1 acquirer that the CP must be activated also in root declaratives, and that German is a full V2 language. Weissenborn observes that the acquirers begin making extensive use of non-subject-initial

declaratives around 24 months. Anyway, children arguably find out very early that German is a full V2 language, since the V3 structures produced are extremely rare, in particular after 24 months, as shown in the examples from the Simone-Corpus given in (7):¹⁰

- (7) a. auch frühstück nich (S. 1;10,22)
 also breakfast not
- b. auch kuche backe_ auch (S.1;10,22)
 also cake bake also
- c. mone auch loffe habe' nich (S. 1;11,23)
 mone also spoon have not
- d. maxe teller suche mal_ (S. 1;11,23)
 max plate search ADV
- e. mone auch stuhl holen mal (S. 2;00,03)
 mone also chair get ADV
- f. nein_ mama arm hebe mal (S. 2;00,05)
 no_ mom arm lift ADV
 [in Verrips & Weissenborn 1992: 302]

The idea that root declaratives project to IP, and wh-questions project to CP is abandoned in Verrips & Weissenborn (1992). This proposal indeed raised the question of how postnominal subjects (higher than the negation) were licensed before month 24:

- (8) a. baut max nich (S. 1;10,3)
 builds Max not
- b. kann ich nicht (H. 1;10,28)
 can I not
 [in Weissenborn 1990: 204]

¹⁰ Verrips & Weissenborn point out that in the Simone corpus they found 12 V3 structures out of 1194 utterances containing a verb with an adverbial or negation. That amounts to 1%. Weissenborn (1990) observes that the V3 structures represent 2.7% of the finite clauses in B. between 22 and 30 months.

Verrips & Weissenborn (1992) suggest that L1 acquirers use C° as the landing site for verb movement in main declaratives since the beginning, as in the adult target. Consequently, the preverbal position should be analyzed as SpecCP. They also suggest that possible non-target-like utterances have to be treated as an intermediate step in the derivation of the adult structure. The test used to verify their hypothesis is the following: if a full adult-like structure (including CP) is available to the child in the initial state, the preverbal position (namely SpecCP) should contain any XP: subjects, objects, locative phrases or other adverbials, wh-phrases. The data collected in the Simone-Corpus corroborate this hypothesis:¹¹ non-subject-initial sentences are 28% of the declarative clauses produced.¹²

The early emergence of V-to-C movement in L1 acq is also endorsed in Roeper (1992). However, Roeper suggests that L1 acquirers do not have a full syntactic tree representation from the beginning.¹³ Instead, the early stages of syntactic production are characterised by a full Logic Form (LF) representation.

In this proposal, the CP is thus “abstractly” present since the onset, but its activation is not to be ascribed to syntactic factors, such as the presence of a complementiser, which emerges quite late in the development of the L1 (cf. Clahsen & Penke 1992); the trigger for CP should rather be seen in the semantic information about illocutionary force, which is found in the UG, and does not represent a parameter to be fixed.

Furthermore, Roeper proposes that the distributional information and the notion of subject-verb agreement co-operate in L1acq to support the

¹¹ Verrips & Weissenborn (1992) analyse the Simone’s speech from age 1;09,11 to age 2;02,21.

¹² The relevance of root declaratives including a non-subject in initial-sentence position emerged also in my study: non-subject-initial sentences are crucial V2 information also for L2 learners.

¹³ Consequently the child grammar cannot be considered as a possible adult grammar.

identification of the V2 parameter.¹⁴ ¹⁵ This claim is based on Vikner's (1990) observation that full inflectional paradigms are linked to V2 languages. The data of the Simone-Corpus seem to support this proposal. Roeper observes that at the age of 1;11 the morphological affixes on finite verbs are absent, and 54% of the sentences include non-finite verbs in the VP (final position). The remaining 46% of the utterances have a verb (mostly a modal) located in initial sentence position, since 80% of the subjects are null at this stage. Only two months later, at 2;01, morphological affixes appear, the distribution of verb forms changes, and 75% of the finite verbs have a subject. Roeper concludes that the presence of an agreement morpheme in a functional category (i.e. the finite verb) indicates that movement must have occurred, since only functional categories (IP and CP) require agreement.¹⁶

The acquisition of V2 in L1 acquirers of German has been related to the acquisition of finiteness also in Poeppel & Wexler (1993). The data provided in their study show how the position of the verb is related to its inflectional status: [+finite] verbs systematically appear in second clausal position, while [-finite] verbs systematically remain in final position.¹⁷ These data are extracted from the database CHILDES, and refer to the linguistic production of a German boy (Andreas) at the age of 2;01. According to Poeppel & Wexler the regular pattern observed supports the

¹⁴ Roeper (1992: 350) points out that finding the correct correspondence between affixes and the full range of Phi-features requires extensive learning in L1acq, and the lexical features of agreement are independent from the abstract notion of Agreement (cf. Clahsen & Penke 1992). Note that, for instructed L2acq, VanPatten & Rothman (2014) argue that "learning" precisely involves the forms of morphological affixes (and lexical items).

¹⁵ In languages where agreement has no overt realisation, only distributional information is an indicator of movement.

¹⁶ Roeper (1992: 352) points out that information from one "module" is directly connected to another "module". In other words, clusters of properties exist, and the identification of a (more evident) feature in the input triggers the setting of other related properties (see Roberts & Holmberg 2010).

¹⁷ In the corpus analysed in Poeppel & Wexler (1993), only 1st and 3rd pers. subjects always co-occur with the correct agreement form on the verb. 2nd person singular subjects are rare. All the errors occur with plural subjects.

Full Competence Hypothesis: the child shows to know the finiteness distinction since the early stages of L1acq. The finite verb systematically raised to the second position implies the availability of head movement. Consequently, *at least* one functional projection above VP (i.e. IP) must be activated (cf. Blom 2008 for similar data in Dutch). Furthermore, Poeppler & Wexler (as well as Verrips & Weissenborn 1992) refer to non-subject-initial sentences to prove that also CP is available from the onset, besides IP: as shown in Table 2.1, the child produces utterances with a non-subject constituent in first position (b-c), and his utterances are consistent with the model of the adult German grammar. Table 2.1 shows how the fronting of an adverb is more common (31 occurrences) than the fronting of an object (19 occurrences): the latter seems to entail a more complex operation, since it implies to associate a pragmatic value to the fronted object.

Table 2.1. V2 produced by a L1 acquirer of German in the early stages (Poeppler & Wexler 1993: 14)

	Syntactic structure	Occurrence
a.	S V O (x)	130
b.	O V S (x)	19
c.	Adv V S (x)	31
d.	pro V O (x)	17
e.	O V pro (x)	0
f.	Adv V pro (x)	0

Table 2.1 also suggests that the subject was never dropped when it did not occur in sentence-initial position (e-f); in the earliest stages of production of V2 structures, pro-drop only concerns subjects in first-constituent position (d) (cf. Hamann 1996 and the errors produced by the L2 learners involved in my study).

Finally, when the acquirer uses non-finite verbs, he never produces sentences which include both a fronted object/adverb and a verb in final position. This is suggestive of the fact that the child's grammar allows XP movement to SpecCP only if a finite verb has already been moved to C°. This reinforces the claim that the CP is already activated, and the child recognises the features of the head C°.

At the end of the nineties, the correlation between verb raising and finiteness is also considered in Hamann (2000), always within a Universal Grammar framework. She confirms that in L1acq the emergence of many parameters is very early, i.e. it takes place since the first two-word combinations. Among these parameters, also pro-drop and verb-raising are set correctly from the first pertinent word combinations on, and this is valid not only for German, but also for other languages.

In my study, I attempt to use the information that turns out to be crucial in the development of the V2 structure in L1 acquirers of German. I try to account for how grammar instruction can provide tutored child L2 learners with effective linguistic input, relevant for the re-setting of verb raising (see also Hamann 2000). I cannot provide data from my experiment in regard to the correlation between finiteness and V2, since the production of finite vs. non-finite verbs was not stimulated at school in normal German classes.

2.3. How do L1 acquirers of German treat pro-drop?

The second parameter of variation taken into account in my study is pro-drop. The basic idea of the Extended Projection Principle (EPP) is that UG requires that languages have subjects; nevertheless, UG does not specify the nature of the subject. Therefore, both Italian and German obey the EPP; however, the subject can be phonetically null in Italian, whereas it has to be overtly realised at PF in German. As described in the previous chapter, the finite verb in Italian licenses both referential and non-referential null

subjects (*pro*) in the specifier of IP, while in German the verb in C° can only license null expletives in SpecIP (see chapter 1, 1.2.1.).

2.3.1. *The relevance of null expletives*

As regards pro-drop in L1 acquirers of German, we have seen that it mainly affects referential subjects in subject-initial sentences, i.e. in preverbal position (cf. with the data in paragraph 4.2. in this chapter for tutored child L2 learners of German). As pointed out in the previous paragraph, Poeppler & Wexler (1993: 14, fn. 21) notice that Andreas does not drop the subject in postverbal position at the age of 2;01. Roeper (1992) observes that before the appearance of agreement morphology (at the age of 2;01) Simone produces 4% of overt subjects (9a-b), whereas after the emergence of affixes for subject-verb agreement the overt subjects become 75%.

- | | | | |
|-----|----|---------------------------------|--|
| (9) | a. | muss einkaufe
must buy | (S. 1;11) |
| | b. | will Bett habe
will bed have | (S. 1;11)
[in Roeper 1992: 348-349] |

More precisely, looking at the examples from the Simone-Corpus given in Weissenborn (1990), Roeper (1992), and Verrips & Weissenborn (1992), I observe that, after month 24, overt subjects mainly occur in postverbal position, and these subjects can be both pronominal (10a-b) and lexical (10c-d). Instead, only rare cases of preverbal (lexical) subjects are registered (10e-f), at least in the examples provided by the authors cited above. Note that no pronominal subject in SpecCP is present in these examples, neither before nor after month 24:

- | | | | |
|------|----|--|--|
| (10) | a. | kommt sie nich raus
comes she not out | (S. 2;00,26)
[in Weissenborn 1990: 200] |
|------|----|--|--|

- | | | |
|----|-----------------------------|--------------------------------------|
| b. | neues hat e mitgebracht | (S. 2;02,07) |
| | new one has he brought | [in Verrips & Weissenborn 1992: 297] |
| c. | ein loch macht die mone | (S. 2;01,16) |
| | a hole makes the mone | [in Weissenborn 1990: 197] |
| d. | das macht der maxe nicht | (S. 2;01,12) |
| | this does the Maxe not | [in Weissenborn 1990: 201] |
| e. | mone mag des | (S. 2;01,16) |
| | mone likes this | [in Weissenborn 1990: 200] |
| f. | haschen braucht nich windel | (S. 2;01,19) |
| | bunny needs not diaper | [in Weissenborn 1990: 202] |

Hamann (1996) observes that empty subjects in first-constituent position occur also beyond the early stages of L1acq. The examples in (11) confirm this statement:

- | | | | |
|------|----|-------------------------|----------------------------|
| (11) | a. | schmeckt auch nich | (S. 2;01,12) |
| | | tastes also not | [in Weissenborn 1990: 201] |
| | b. | will auch ein ball | (S. 2;01,12) |
| | | want also a ball | [in Weissenborn 1990: 200] |
| | c. | glaub nich | (B 2;01,07) |
| | | believe(1 pers.sg.) not | [in Weissenborn 1990: 196] |
| | d. | kann viele | (B. 2;03,30) |
| | | can many | [in Weissenborn 1990: 200] |

Furthermore, Hamann observes that German L1 acquirers ranging in age from 3-to-4 years still drop from 10% to 20% of referential subjects in preverbal position. However, she rejects the proposals which treat pro-drop on a par with topic-drop: this is the case of adult German, in which the empty operators are discourse licensed (Weissenborn 1990).

Weissenborn proposes that the contexts in which null subjects frequently occur in the child language are those admitted also in the adult target (12), i.e. the first sentence position.

- (12) a. Was willst du machen? Kuchen essen.
 What do you want to do? cake (to) eat (= (I want to) eat cake)
 [in Weissenborn 1990: 212]

He also points out that in the child grammar null subjects are rare in *wh*-questions, embedded clauses, and postverbal position in declarative clauses (see also Verrips & Weissenborn 1992). The infrequency of empty subjects in contexts that do not allow for the licensing of discourse-bound *pro* (i.e. SpecIP) would corroborate the hypothesis that L1 acquirers of German overuse null subjects in first-sentence position since they have not acquired the pragmatic principles that constrain the use of topic-drop in the adult language.

In contrast, Hamann (1996) observes that topic-drop cannot be the only mechanism at work to license empty subjects. Pro-drop in child German is indeed not only attested in sentence-initial position, as topic-drop in adult German is. She observes that 11% to 17% of null-subject declarative clauses produced by 3-year-old acquirers have empty subjects in postverbal position (SpecIP).¹⁸

The data given in Verrips & Weissenborn (1992: 301) from the Simone-Corpus confirm Hamann's observation. In 37% (44 out of 118) of the non-subject-initial sentences produced by Simone, there is no postverbal subject (13):

- (13) a. zahne hat _ nicht (S. 2;02,20)
 teeth has (somebody) not
 b. das hat _ puttdemacht (S. 2;02,20)
 that has (somebody) broken

Hamann proposes that postverbal referential subjects, which are unattested in early stages (as well as in adult German), are licensed under

¹⁸ Non-target-like null subjects are also produced by L1 acquirers of German in embedded clauses and yes-no questions.

Government in the grammar of 3/4-year-old acquirers. In the adult target, the omission of postverbal subjects is grammatical only in two cases, namely with imperatives and with expletive subjects. In the linguistic input the acquirers receive, indeed, they find postverbal empty expletives licensed under Government (*Hier wurde getanzt*). Therefore, Hamann suggests that the child provisionally extends to (postverbal) *referential* subjects the strategy of licensing (postverbal) empty expletives, which is possible in adult German. Presumably children identify postverbal referential *pro* through fairly rich agreement in Government configurations.¹⁹

This process seems to support the idea that the setting of parameters depends on the discovery of “clustering properties” from the input (Rizzi 1982, Roberts & Holmberg 2010), supported by the innate linguistic endowment of learners (principles of UG). Roberts & Holmberg (2010: 15) point out that when a parameter is “valued”, it includes a cluster of related syntactic features. Certain features are more evident even in impoverished Primary Linguistic Data (PLD); instead, other features are less accessible. More accessible and less evident features are acquired together, since both reflect the same abstract property of UG (features of the verb in C°, in this case).

To sum up, Hamann (1996) proposes that for the licensing of null subjects two strategies coexist: topic drop (for preverbal subjects) and licensing under Government from C° (for postverbal subjects).²⁰ She notices that, after a (relatively short) phase in which postverbal null subjects are

¹⁹ Hamann (1996) observes that the phase of postverbal empty subjects takes place in the course of the third year, i.e. once German agreement is recognized as fairly rich. Note that before this phase postverbal empty subjects are not attested, as the data in Poepler & Wexler (1993) confirm.

²⁰ More precisely, Hamann (1996) assumes that the acquirer initially licenses preverbal *pro* not through discourse identification, but through agreement in a Spec-Head configuration, since I is in C. These strategies are abandoned when the child realises that agreement in German is fairly rich and not pronominal as in Italian (so licensing is not possible under Spec-Head agreement). At this point, drop of preverbal subjects in main declaratives becomes indeed topic-drop.

licensed in the child grammar, they finally vanish again, when the properties of C° are completely acquired. It seems that the distribution of lexical and empty expletives is crucial for the recognition of the properties of C° in L1acq. The acquirers have to learn that C°, and not I°, is the licensing head in German: they have to discover that C° licenses the subject under government, and, in addition, that it has no number and person features, i.e. it is [-pronominal] (unlike I°).

2.3.2. *Pro-drop as evidence for the unavailability of CP*

According to Meisel (1990) and Clahsen (1991), pro-drop in subject-initial sentences correlates to the lack of functional categories in early stages: if German L1 acquirers go through a phase in which the CP is missing, then *pro* in Spec IP cannot be licensed by a higher position, and can be null in SVO utterances. Also Clahsen & Penke (1992) argue for the absence of CP in the Initial State, and, consequently, thematic *pro* has to be licensed by I° in the early stages (or, more precisely, by an undetermined F above the VP). In their proposal, this licensing mechanism operates until the age of 2;06 or 3 years, before the acquisition of the full inflectional paradigm. Only at this stage, the child discovers that agreement in German is not rich enough to license referential null subjects. Prior to acquiring subject-verb agreement, the child does not have person and number features to identify empty subjects, and, consequently, *pro* can be referential.²¹ However in postverbal position, in wh-questions and in embedded clauses null subjects are rare but not unattested, as pointed out in Hamann (1996), and this supports the availability of CP in 3-year-old acquirers.

Finally, another hypothesis about pro-drop in early L1acq is proposed in Rizzi (1993/1994). He claims that the pro-drop in German child

²¹ Weissenborn (1990) rejects this proposals, and argues that the child discovers that C° is [-pronominal] in German on the basis of distributional evidence, namely the absence of postverbal *pro*.

language – as well as topic drop in adult German – depend on a truncated structure: children can truncate structures if there is no material that forces their projection. If the child truncates the structure at the VP level, null subjects can co-occur with infinitives; if the truncation occurs at the IP level, instead, pro-drop can involve finite verbs. Hence, in Rizzi’s proposal, null subjects can co-occur with Root Infinitives, which stem from structures truncated below IP and are used until age 3 (*Truncation Hypothesis*).

2.4. The acquisition of German V2 in spontaneous adult and child L2acq

In the previous paragraphs we have observed that V2 emerges in L1acq from the early stages on. The acquisition of V-to-C movement seems to be particularly related to the emergence of non-subject-initial sentences with PP or DO fronting, around the age of 24 months. I will now briefly consider the situation in spontaneous L2acq.

The data provided in Schwartz (1992) suggest that in spontaneous L2acq the setting of the V2 parameter is not so immediate as in L1acq. Schwartz (1992: 11) identifies significant stages in the development of morphosyntactic structures by spontaneous L2 acquirers of German, whose L1 is a (prodrop) Romance language (14):

- (14)
- a. S V_[+finite] (V_[-finite]) O
 - b. (Adv/PP) S V_[+finite] O
 - c. S V_[+finite] O V_[-finite]
 - d. XP V_[+finite] S ...
 - e. S V_[+finite] (Adv) O
 - f. ... , dass S O V_[+finite]

The stage (14b) shows that spontaneous L2 acquirers go through a V3 phase in which they arguably apply syntactic transfer to the L2 from their L1 (XP S V O). Moreover, no correlation is found between V2 and

finiteness. This fact is particularly significant for my study: the non-target-like utterances produced by my participants largely consisted in adopting the V3 order typical of Italian. Hence, the data I collected seem to give support to the hypothesis of a full transfer from the L1, as I will largely describe in chapter 3.

The stages given in (14) also demonstrate that target-like V2 (14d) appears only after the resetting of the VO-OV parameter (14c): this suggests that the resetting of the parameter of verb raising is gradual in spontaneous L2 acquirers.

Nevertheless, the developmental path in (14) is consistent with the principles of UG at all stage. The data in Schwartz (1992) support the hypothesis that spontaneous L2acq is based on UG (as well as L1acq) and not on problem-solving strategies (vs. Clahsen & Muysken 1986) both in adult and in child L2 acquirers.²²

As to non-spontaneous L2 learning, Hamann (2000) and Smith & VanPatten (2014) point out that, to some extent, classroom L2 learners learn a L2 in the same way as L1 acquirers and spontaneous L2 acquirers do. More precisely, the principles of UG are considered available both in a naturalistic and in an artificial context of acquisition/learning, irrespective of the learner's age.²³ I will endorse this hypothesis, and propose that tutored child L2 learners in the primary school have full access to UG (see also the Full Access/Full Transfer Hypothesis in Schwartz & Sprouse 1996 for untutored child L2 learners).

²² Clahsen & Muysken (1986, 1989) observe – as well as Schwartz (1992) – that L2acq does not follow the same developmental path as L1acq. However, unlike Schwartz, they did not consider that the process of construction of the L2 grammar conforms with UG at all stages; instead, they point to the fact that L1acq and L2acq basically rely on different cognitive strategies (Fundamental Difference Hypothesis). For instance, in L2acq verb placement is not associated with agreement morphology, as it happens in L1acq; instead, L2 learners may use L1 patterns in the distribution of finite verbs.

²³ The role of the critical period is not taken into account in Smith & VanPatten (2014), and the availability of UG is maintained irrespective of the learners' age (the participants in their study are adults).

3. Instructed L2acq based on a generative theoretical framework

3.1. What can be learnt in L2 learning?

In paragraph 2 we have considered how the parameters of V2 and pro-drop are treated in L1acq and in spontaneous L2acq. We have analysed the kind of linguistic information that turns out to be relevant among the Primary Linguistic Data received by the acquirers for the identification and the setting of these parameters. We have considered that the emergence of German V2 is immediate in L1 acquirers, whereas it seems to be more gradual in spontaneous L2 acquirers with a non-V2 language as their L1. We have finally concluded that both L1acq and spontaneous L2acq are guided by the principles of UG. Before considering how L2 teaching can provide classroom learners with significant linguistic input, I would like to touch on the role that both UG and linguistic input play in the development of the L2 grammar in tutored L2 learners.

As mentioned in paragraph 1, L2 learning consists in creating a mental representation of the L2. According to VanPatten (in press), VanPatten & Rothman (2014), this mental representation corresponds to an abstract grammar, which is built through the processing of input data from the environment. The processing is the internal mechanism which isolates a morpho-phonological unit (i.e. lexical and morphological forms) in the speech stream, and attaches to this unit a meaning and a function. These units are internalized along with underlying features (VanPatten & Rothman 2014: 17).

More precisely, in the development of the mental representation for a L2, not all the aspects of the grammar can be learnt from the input²⁴ The

²⁴ Hawkins (2004) suggests that *learning* is referred to activities that are not genetically determined, such as swimming or driving a car; whereas *acquisition* is referred to faculties that imply the recourse to the genetic endowment (UG), such as L1 (or L2) acquisition.

aspects that cannot be learned are those contained in Universal Grammar (UG). This is the case, for instance, of the Theta-role assignment and the EPP feature, which are universal principles of the human language. These principles, or universal features, are not inferred from the L2 data, but they are already part of the innate linguistic endowment of a learner.²⁵ Interestingly, when classroom L2 learners build the L2 grammar, they cannot include features that don't exist in the human Language, and only features sanctioned by UG can be selected. This proves the availability of UG in both spontaneous and tutored L2 learners (Hamann 2000, Hawkins 2004, Smith & VanPatten 2014), as mentioned in paragraph 2.²⁶

Differently, the parameters of variation between languages are inferred from the linguistic data. Parameters are not learned but derived from the L2 input. For instance, the possibility to license a null subject, or the landing site for verb movement, have to be derived from the L2 data the learners are exposed to.

Finally, the learning is restricted to the particular lexical forms and morphological inflections selected by the L2.

In conclusion, the L2 grammar under construction evolves from the interaction of universals (UG) with particular information extracted from the L2 input (VanPatten & Rothman 2014: 9). This implies that L2 learners can potentially acquire/learn a L2 on the basis of the same mechanisms used by spontaneous L2 acquirers or L1 acquirers.

To sum up, L2acq is the result of the interaction of external data, which L2 learners have to process, with the innate implicit linguistic knowledge, which is not learned and guides input processing. Consequently, I propose that, on the one hand, L2 teaching plays no role in the linguistic endowment L2 learners are already equipped with; however, on the other

²⁵ An important issue for instructed L2acq concerns the availability of UG after the critical period, i.e. after the age of 10/12.

²⁶ Cf. Clahsen & Muysken (1986) and the *Fundamental Difference Hypothesis* for a different account on the availability of UG in L2acq.

hand, the pedagogical intervention can influence the kind of input provided to classroom L2 learners. As an instance, in next paragraph I will discuss how grammar instruction can guide tutored L2 learners of German in the identification and setting of the V2 parameter.

3.2. Can L2 teaching support the identification of parameters in the input?

3.2.1. How can the L2 input be selected, segmented and described?

A sentence in a language like German or Italian is the surface manifestation of the interaction between lexical items and underlying features, under constraints provided by the grammar. I gave two examples that instantiate this statement:

- (15) a. Freitags trinke ich mit meiner Mutti einen Kaffee
 b. Di venerdì bevo un caffè con mia mamma
 ‘On Friday I have a coffee with my mum’

In (15a) the surface order XP-V-S is the result of the features in C° , which trigger V-to-C movement and XP fronting; in (15b) the surface order XP-S-V is the result of the features in I° , which trigger V-to-I movement and licence a null referential subject in SpecIP. In both cases, the operation Move is already encoded in the UG and does not need to be learnt. The variation in the two languages has to be inferred from the input, and cannot be interiorised by the L2 learners through the simple memorisation of a rule like: “Put the verb in second sentence position in German” (see also Moro 2006, VanPatten & Rothman 2014). This rule indeed does not match the mental representation of the corresponding operation: the verb in German is

in second position because a head in the CP needs a verb to occupy its space and a XP to occupy its specifier, for the sentence to be “good”.²⁷

Therefore, a more satisfactory rule has to be formulated for L2 learners. I thus attempt to give some precise didactic indications on how L2 data should be presented in L2 teaching.

First of all, I claim that didactic strategies focusing on traditional rule learning do not lead to the construction of an abstract grammar of the L2. Prescriptive grammar, as well as the simple memorization of lexical items, do not directly aid acquisition.²⁸ Hamann (2000) claims that the way language is encountered in the classrooms could even block the recourse to UG. L2 teaching at school often focuses on grammar rules and lexical items to memorise. However instructed learners are likely to treat this information not by means of the language faculty, but by means of the usual cognitive resources used during classes of biology or history. Hamann also considers the age-factor: although UG is potentially available also to adult tutored learners, the age of onset does play a role for the success/rate of L2 learning. Hence, she encourages the intensification of L2 classes starting from the primary school. I endorse this conclusion, and support the claim that L2 learning should be reinforced since the primary school. A reply to this claim could be that the acquisition of certain syntactic structures, as V2, is beyond the general cognitive development of learners in the primary school. Nonetheless, note that the V2 construction is already settled in L1 acquirers of German before the age 3 (Hamann 1996). If we consider that the acquisition of morphosyntactic structures is based on UG and on language specific abilities, the processing of V2 cannot be considered as inadequate for the cognitive abilities of child L2 learners.

²⁷ In Minimalist terms, features on C exist and have to be satisfied. Satisfaction is achieved by Move, in which the verb (i.e. the lexical item with the feature in question) moves to C in order to get the feature checked. This applies every time a root declarative is produced.

²⁸ I specify that in my study the participant’s performance was not assessed in relation to explicit rule learning.

Although I agree with some proposals put forward in Hamann (2000), I do not completely endorse the solution she suggests. According to Hamann, classroom L2 learners should be supplied with a (near) native L2 input, and prosody would represent the solution for effective L2 learning. The ideal L2 input would be provided by a native speaker, or a teacher with (near) native competence in prosody and intonation.²⁹ I recognise the importance of prosody, but I also point to the relevance of grammar reflection, which represents a crucial aspect to enhance in L2 teaching. I admit that native linguistic input could favour the processing of the L2. However, I consider that the training for L2 teachers should largely promote the teacher's ability to perform syntactic analyses.

The L2 teacher should be able to select the significant L2 input to propose to the learners; in addition s/he should guide the learners in performing a correct analysis of the underlying syntactic structures. With regard to the selection of the linguistic data for the learners, I specify that the L2 input needs to be appropriately picked out so as to contrast the quantitatively limited exposure to the L2 data in an artificial learning context. The exposition to significant linguistic input is crucial to trigger a real process of L2acq/learning. VanPatten & Rothman (2014: 17) claim that L2 learners use the input to re-set the parameters of the L2. Similarly, Smith & VanPatten (2014) argue that tutored L2 learners (as well as L1 acquirers and spontaneous L2 learners) process exemplars in the input (under the guide of UG) to fix the parameters of the L2, with immediate effects for the construction of the L2 grammar. As to the ability of L2 teachers to guide the analysis of the linguistic input provided, I point to the importance of the syntactic component (see also VanPatten in press): L2acq consists of syntactic computation, and not only of lexical retrieve. If taken into account,

²⁹ Hamann (2000) concludes that the education for L2 teachers should include a prolonged stay in the country where the L2 is spoken, as well as regular contacts with native speakers. Moreover she recommends language laboratory courses.

this point could play a significant role for the pedagogical intervention in the primary school, where the linguistic input supplied to L2 learners mostly concentrates on the lexicon, and neglects syntax. Therefore, an important didactic indication is that L2 learning cannot only consist in memorizing isolated words or routine expressions.

3.2.2. *Against “rules”*

VanPatten (in press) and VanPatten & Rothman (2014) take into account the effects that pedagogical interventions have on the acquisition of the formal properties of a language. The didactic strategy they propose for L2 teaching (mostly at the early stages) is based on processing-oriented pedagogical interventions (POPIs).³⁰ The central aspect of this method is the input processing, i.e. the process which mediates between the linguistic input (external data) and the internal mechanisms (UG, learning architecture). Although I support the idea that L2acq depends on correct sentence interpretation and not on rule learning, the didactic method I propose is different from POPIs. The differences can be reduced to three main issues.

First of all, I am not against the concept of “rule” in general. As discussed above, I reject prescriptive rules such as “The verb has to appear in second position in German main declarative clauses”, since it does not conform to the real mechanisms producing human language. Nevertheless, a language does have its internal rules. In addition, it functions on the basis of

³⁰ The aim of Processing Instruction (which represents an instance of POPIs) is not rule learning but correct sentence interpretation. VanPatten (in press) provides an example of the PI used to test the correct interpretation of OVS sentences in Spanish, where the object clitic in first sentence position can refer to two possible antecedents. VanPatten describes two kinds of task used in PI: in the first task, the L2 learners are exposed to (manipulated) structured input, which can only entail a right or wrong answer. The learners are then asked to select between two pictures, showing if they have correctly processed and comprehended the sentence. In the second kind of task, PI allows the L2 learners to offer an opinion. However, they are never required to produce the target structure, and they may only produce isolated words or short phrases that do not include the target structure.

operations which can be shown to the learners. Smith & VanPatten (2014) argue that L2 learners do not need explicit grammar instruction (except for the vocabulary), as simple exposure to L2 input allows them to build the mental grammar of the L2 since the earliest stages (see also Hamann 2000). Instead, I think that in a school context explicit linguistic instruction is needed to contrast the poverty of stimulus: the stimulus provided to tutored L2 learners is often not only quantitatively insufficient, but also qualitatively inadequate (Benincà & Penello 2007). In my study, I obtained immediate effects addressing selected exemplars to the children's attention, and proposing some grammar reflections in order support the process of discrimination and internalisation of the input. If the explicit analysis of the input and the formal description of the underlying syntactic operations are considered as "rules" provided to the learners, I cannot get rid of them for L2 teaching in an artificial context of L2acq, such as school. I think that external/explicit "rules" can be part of the pedagogical instruction as long as they conform to the internal "rules" of the language. I suppose that L2 learners do make generalisations while producing or understanding sentences in the L2: through generalisation, they associate the surface lexical forms to the underlying features which govern them, so they progressively build the L2 grammar. To some extent, they "discover" the L2 "rules" (i.e. L2 functioning), and use them to build new sentences.

Secondly, another substantial difference with POPIs concerns how the L2 input was presented to the learners. VanPatten notices that L2 learners can implicitly attach a meaning and a function to a given form, if this form is robustly represented in the grammar, so that it can enter into syntactic computation. However, as anticipated above, the quantity of stimulus is not robust at all in the primary school: the L2 learners involved in my study received usual German classes only for one or two hours a week. Furthermore, the input mainly consisted of songs or nursery rhymes, that the children could hardly understand. With a so reduced

quantity/quality of exposure to L2 data, the learners did not have the possibility to segment the input implicitly: the association between meaning/function and form during real-time comprehension could not take place spontaneously at school (at least until the current quantity of exposure is maintained). Therefore, this process inevitably needs to be guided and somehow accelerated. In general, the input given at school is necessarily artificial, and it cannot equal the input received in a naturalistic context. I argue that crucial L2 exemplars should be presented in an already segmented string, and the morpho-phonological units should be analysed with the learners. In chapter 3, I will describe how I applied this didactic method to my experimental lessons. I do not deny that parametrisation relies on internal mechanisms, which are implicit and not aware; if the segmented input given is analysed, the learners become aware of constituents boundaries, so the operation they perform is not completely implicit, as in POPIs or in spontaneous L2acq. However, I think that explicit exemplars can serve as a trigger for an implicit process of acquisition: taking the given model as a starting point, the learners can be stimulated to produce new sentences autonomously, so as to implicitly associate the lexical items employed with the respective underlying features in the L2.³¹

Finally, a third difference concerns the task proposed to L2 learners. In the processing instruction (PI) supported by VanPatten, learners are never required to produce the target structure. According to VanPatten, the link between form and meaning has to take place during real-time comprehension (at least in the early stages of L2acq). Instead, I think that the link of a lexical item with its function/meaning optimally emerges during real-time production. In chapter 3 I will give more details about the production task I proposed to the learners involved in my experiment.

³¹ I do not exclude that POPIs can represent an useful pedagogical means. In further research, this approach could be used, for example, to investigate the correlation of V2 and XP fronting with the resulting pragmatic effects in German.

4. The L2 exemplars: formal description and crosslinguistic comparison

4.1. How can theories on the V2 parameter be used for didactic purposes?

In the last paragraph I suggested that tutored L2 learners need to be provided with selected input and segmented exemplars, so as to be guided in the identification and the setting of the L2 parameters. I argued that the (non-relevant, non-segmented) input provided in normal classes to tutored child L2 learners is not sufficient to trigger parameter setting: the linguistic exposure has to be supported with didactic interventions that make the link between forms and meaning/functions explicit. The exemplars supplied must be formally described, and linguistic theories can support the grammar reflection. For instance, the theories produced in the last two decades about V2, can be used in the analysis of the input provided to L2 learners of German.

In chapter 1, we noticed that Roberts (2004) resumes den Besten (1983) and identifies four main components for V2 languages:

- (16) a. V-movement to C
- b. XP-movement to SpecCP
- c. The restriction to just one XP
- d. The root-embedded asymmetry³²

If we reformulate these theoretical conclusions, we obtain simplified but effective indications for L2 learners.

First of all, (16b) implies that V1 in main declaratives is not admitted in German, unlike Italian. The crosslinguistic comparison proposed in the models (17a) vs. (17b) clearly exemplifies this point:

³² I will not discuss here the relevance of the asymmetry root/embedded, which was not included in my experiment.

- (17) a. Mangio una mela
b. *Esse einen Apfel
eat an apple

The finite verb cannot appear in first sentence position in German, because a “Position 1” exists before the verb, and it has to be compulsorily filled. The formal reflection on the impossibility to have V1 in German root declaratives turns out to be clear and strong if compared with the traditional rule provided at school: “The subject must be expressed in German”; or, even worst: “The subject is the first word in the sentence”. While the indication about impossible V1 matches real language processes, the traditional rules are misleading. They are not only incomplete, but also unnecessary. VanPatten (in press) points out the *First-noun Principle*: early-stage L2 learners spontaneously tend to process the first noun or pronoun of the sentence as the agent/subject. Therefore, they rather need a “rule” which describes how the fronted element in German can be of any type (except *pro*).

Furthermore, the component (16b) and (16c) punctuate the need for just one constituent fronted in first sentence position (vs. Italian). As already observed, the traditional rule provided at school underlines that “The verb appears in second position in main clauses”. L2 teaching should instead point to the fact that this linear order results from the necessity to front one (and only one) constituent (of any type) in “Position 1”.

4.2. How can theories on pro-drop be used for didactic purposes?

Not all the aspects of grammar need to be explicitly pointed out in the same way. As pointed out in VanPatten & Rothman (2014), the features encoded in UG do not need to be learnt. While V2 is a purely syntactic parameter (to infer from the input), the recourse to null subjects responds to

both syntactic and pragmatic processes. The latter are likely to be encoded in UG.

In the course of my experimental lessons, I did not provide the participants with explicit indications about the pro-drop parameter. Despite the fact that I generally did not point out that the subject is necessarily expressed in German,³³ the participants never dropped the subject from first sentence position, as I will largely show in chapter 3. These data suggest that the L2 learners of a non-null subject language (as German) who have a null subject language (as Italian) as their L1 do not need to learn that topic drop is not admitted. The pragmatic value of a fronted subject is arguably already encoded in the UG endowment of the learners.

Moreover, the participants in my experiment could rely on the universal principle of EPP (Extended Projection Principle, Chomsky 1981): in every sentence a syntactic position is activated for the subject at an abstract level, even though languages differ in selecting an overt or covert phonological realisation of the subject (Rizzi 1982, Roberts 2010). A phonological “null subject” can be licensed only if it is properly governed (ECP, Empty Category Principle, Chomsky 1981). The EPP and the ECP are very general principles of the human language, which are supposed to be part of the UG, and which are thus innate, invariant and common to all languages.

As I will discuss in more detail in chapter 3, the result obtained in my study corroborate the availability of UG to tutored learners.

4.3. Predictions about the learning of V2 and pro-drop in tutored child L2 learners

In chapter 3 I will examine whether the learners reacted differently with respect to the two parameters of verb movement and pro-drop, and

³³ Only 10-year-old participants expressly asked me if the subject had to be mandatorily expressed in German.

whether the two phenomena were mutually related. On the one hand, the V2 parameter requires the re-setting of a syntactic operation, i.e. verb movement. On the other hand, pro-drop involves the overt/covert phonological realisation of a category that is always abstractly present in both languages. In addition, the expression of a subject in the first sentence position has also to be related to the information structure (realisation of a topic). An interesting point of investigation thus concerns the interaction between the EPP principle encoded in the UG and the pro-drop parameter. How did Italian child-L2 learners of German deal with this question? The general hypothesis is that they would never produce sentences inconsistent with the EPP principle, since it is encoded in the universal principles of human language. However, did the L2-learners transfer the pro-drop parameter of Italian into the L2 in some contexts?

With regard to the V2 parameter, if full transfer from the L1 is available, the prediction is that traces of the finite verb in I° will be found. I will thus consider how the V-to-I structure available in Italian was used by the participants in the process of construction of the L2 grammar. Did this structure influence the re-setting of the V-to-C parameter?

Finally, a last question concerns whether verb movement and licensing of pro correlate. Did the licensing of a null subject in SpecIP interact with the position of the licensing head?

In chapter 3, I will present the reaction of the L2 learners to my didactic approach. While describing the results obtained, I will attempt to deal with a more general question, which other researcher had raised before me in their studies on L2 learning (White 1992, Hamann 2000): can classroom teaching lead to real parameter setting? Will the teaching of one set of properties lead to the value of the whole parameter, including all the clustering properties (Roberts & Holmberg 2010)?

5. Previous studies on the acquisition of verb distribution by classroom L2 learners

5.1. Classroom experiments on verb raising in English

In paragraph 2 we have discuss how German children acquire very early the correlation between verb position and verb form. We have also considered that non-subject-initial sentences are particularly significant for the setting of V2 in L1acq. We have then observed that non-subject-initial sentences, where any type of XP can be fronted in preverbal position, turned out to be crucial also for tutored L2 learners of German. On the basis of the L2 components that can be learnt by classroom learners, and considering whether UG is available or not, I attempted to propose a didactic approach where the role of grammar reflection and syntactic analysis is reconsidered and enhanced. Before presenting the modalities of application of this approach in my experiment, I will describe some studies that accounted for the acquisition of verb raising in tutored L2 learners. Among these studies, I will mention White (1992), Hamann (2000) and Valente (2007). Although their research concerned verb raising in English and not in German, it is worth examining the didactic intervention carried out and the results obtained.

The experiment of White involved French speaking children of Quebec, ranging in age from 10 to 12 years, and learning English as L2. The acquisition of verb movement in English was tested through adverb placement. The participants were divided into two groups, and only one group was taught about adverb placement during the experiment, for one month. The other group, instead, received instruction about different but related syntactic properties of the verb, which formed a cluster with verb raising (and verb distribution w.r.t. to adverbs), namely *do*-support in negation and question formation. White aimed to investigate whether the explicit instruction of one set of properties (*do*-support) would lead to real

parameter setting (of verb raising), and influence the rest of the property cluster (adverb placement). After instruction, only the group who received explicit instruction on adverb placement reached near native performance in the two tests performed respectively immediately after the lessons, and three weeks afterwards. With regard to the negation/question group, the tests showed that the learners had not improved in adverb placement if compared to the pretest carried out before explicit teaching. They still had strong recourse to transfer from the L1 for verb distribution. Therefore, White concluded that the information about *do*-support had not become a trigger for the correct re-set of verb movement in the L2. Moreover, a delayed post-test, run after a year, showed that both groups performed equally badly again, with scores comparable to the pre-test preceding explicit grammar instruction. The predominant pattern in both groups was transfer from French. These results suggested that the re-set of the V-to-I parameter had not taken place.

Similar results were obtained in Hamann (2000), who carried out a comparable experiment in two German secondary schools. She involved both beginners and advanced L2 learners of English with German as their L1. The students had no contact with the L2 beyond the classroom. Also in this study, the re-set of the German V-to-C parameter was tested through adverb placement. The distribution of the adverbs in English was not explicitly taught to the participants, and the teaching only concerned *do*-support and negation. Through the acquisition of *do*-support in negative and interrogative contexts, the L2 learners were supposed to set the properties of verb movement in English also for declarative clauses. Since proper adverb placement is the direct consequence of correct verb raising, the participants' performance was expected to be very good in the adverb task, if the parameter of verb movement in English had been appropriately set. Instead, the results showed that the learners of all groups were insensitive to adverb placement, even though they correctly used *do*-support. Hamann concludes

that the cluster of properties related to a parameter is not acquired simultaneously in classroom L2-acquisition, as demonstrated also in White. The transfer from the L1 seems to be the most employed strategy, at least in early phases of L2acq.

I will now take into account the study described in Valente (2000, 2007). The research targeted the whole set of interrogative structures in English, including questions with long wh-movement. In this didactic experiment, verb raising was not tested in root declaratives as in the studies just mentioned, but it was observed in contexts of “residual” V-to-C movement. Moreover, the investigation did not only focus on the acquisition of the target structure, but also aimed to test the effectiveness of the didactic method adopted. The experiment involved nineteen L1 Italian – L2 English 15-year-old L2 learners in a secondary school. The experiment consisted of six lessons, carried out in the course of 2/3 weeks: five lessons were devoted to instruction, and the last one was intended to assess the participants’ performance. The didactic method used to present the target structure consisted of explicit grammar instruction based on a simplified but formal analysis of sentence constituents, as proposed in recent linguistic theories within a generative framework. The learners were encouraged both to consider the syntactic similarities between the L1 and the L2, and to re-set the parameters responsible for the variation in the two languages. Valente took into account nine different interrogative structures in English. She provided the participants with a simplified representation of how these structures were derived from a matrix through V-to-C movement and wh-fronting. The positions targeted by the wh-phrase and the finite verb were indicated in the structure by two colorful empty rectangles, located on the left of the declarative clause, which corresponded to the landing sites for the items moved to the CP. After receiving instruction, the participants were submitted a test, which consisted of 11 sentences to transform from declarative to interrogative clauses, and 5 interrogative sentences to

translate into English. The results obtained were encouraging about the didactic intervention: the non-target-like structures only amounted to 13.2%. The learners involved improved their performance, and the difficulties concentrated on direct subject wh-questions with long wh-movement. The method adopted turned out to be adequate, and failed only with subject wh-questions, hence needed just partial revision.

The positive impact of the didactic intervention was confirmed by the control test submitted to the learners of two classes of the same school, ranging in age from 16 to 17 years. The control subjects had been taught the target structures only with a traditional method prior to being involved in the control test, which consisted in translating 27 interrogative clauses (three for each type) from Italian into English. The non-target-like interrogative structures produced amounted to 28.2%, and mainly affected subject wh-questions, as instantiated in (18):

- (18) a. *Who did the teacher suggest to study the lesson again?
(9 learners)
- b. *Who(m) the teacher suggest (to) that he (must) study the lesson again?
(6 learners)
- [in Valente 2007: 42]

Even though the task assigned to the control groups was partly different from those proposed to the other participants (and thus not completely comparable), the results obtained showed that the control subjects performed worse than the learners involved in the experimental lessons. Despite the fact that the control subjects had been longer exposed to the linguistic input in the L2, and had received more traditional instruction, the younger learners obtained better results only after five lessons in which they had been taught new complex interrogative structures. This result is telling about the potentiality of a didactic method based on formal linguistic theories. Valente clarifies that she could not perform a delayed post-test to

verify the long-term effects of the instruction provided, but the immediate positive results obtained encouraged further application. My study follows the path indicated in Valente, and the results will confirm and support the validity of the didactic method she adopted.

5.2. Classroom experiments on verb raising in German

Among the studies conducted on V2 with classroom L2 learners of German, I will mention Tran (2005) and Håkansson, Pienemman & Sayehli (2002). Both studies involved L2 learners whose L1 was a Germanic language: the L1 was English (with residual V2) in Tran (2005), and Swedish (a V2 language) in Håkansson, Pienemann & Sayehli (2002).

The study in Tran (2005) reports interesting results despite its preliminary nature. The research involved fourteen L1 English-speaking child L2 learners of German, ranging in age from 8;11 to 14;0. Their competence about V2 was tested through two elicited-production tasks, which targeted non-subject-initial sentences with fronted direct objects (DO) and fronted prepositional phrases (PP) respectively. All of the participants in Tran's study had been exposed to German in the kindergarten since the age of 4 or 5 years. From the primary school on, they were supplied with three German classes per week for a period of 40 minutes each, and the instruction they received in the classroom was their only exposure to the target language, without any other naturalistic contact with the L2. The experiment took place in the Honolulu Waldorf School: the children from grades 1 to 3 were taught lists of lexical items and basic verbs through games, songs, and drawings, similarly to the participants involved in my study. The first grammar notions were given in grade 5 in playful ways. At the same time, the learners were first exposed to the basic V2 structure, which mainly included time adverbials followed by the verb. During the German lessons, in which grammar instruction was both implicit and explicit, the teacher mostly spoke in the

L2 to the learners. Tran’s experiment aimed at investigating the developmental interdependence of V2 and verb finiteness in L2 learners of German, so as to observe if the processes involved in L1acq were reproduced in classroom L2 learners. On the basis of a proficiency test, the participants were divided in three groups: higher, medium and lower. The learners did not receive any explicit grammar instruction about the target structure from the investigator prior to the experiment. Tran resorted to two different productions tasks, in which a discourse-appropriate context for the elicitation of V2 was provided. The first task was a “Weekday Activity task” and included the topicalisation of a Time PP, which is very common in German discourse. The participants were asked to orally produce (non-subject-initial) sentences in which they enumerated the activities they carried out in each day of the week. To elicit the topicalisation of time adverbials, they were shown a colorful calendar of the week with the days written in German on it. They were then asked to list the various activities of their week, which could include both transitive and intransitive verbs. As to the results obtained, participants of all proficiency groups produced target-like sentences. However, they also produced non-target-like utterances that included V3 structures (19), and verb-final sentences (20):

- (19) a. Am Sonntag ich schlaf-en (MI,10;3)
on Sunday I sleep-_{INF}
- b. Am Montag ich spiel-e Basketball (KE, 11;6)
on Monday I play-_{PRS.1SG} basketball
- (20) a. Am Sonntag Vaters Auto wasch-en (VI, 12;4)
on Sunday father’s car wash-_{INF}
- b. Am Samstag ich Frühstück ess-en (HAY,11;4)
on Saturday I breakfast eat-_{INF} [in Tran 2005: 16]

Only participants from the lower and medium proficiency groups produced non-target-like sentences which included pro-drop (21), although English is a non-null subject language:

- (21) Am Montag geh-en in ein Auto (MA, 10;2)
On Monday go-_{INF} in a car [in Tran 2005: 16]

As to the task inducing topicalisation of the direct object, a “Stuffed Animal Task” was designed to test direct object fronting, which is a common strategy in German when new information are being listed. Three stuffed animals were shown to the participants, who had to decide which toy they wanted to keep (*behalten*), to give away (*weggeben*) or to throw away (*wegschmeißen* or *wegwerfen*). With regard to the results obtained, participants of all the groups produced V3 structures (22). The other error registered consisted in using non-finite verb forms (23):

- (22) Lusie ich behalt-e
Lusie I keep-_{PRS.1SG}

- (23) Susi behalt-en
Susi keep-_{INF}
[in Tran 2005: 17]

The results obtained led Tran to the conclusion that the developmental pattern in L1 acquirers and L2 learners of German is arguably different. She based this claim on the observation that the participants in her study produced word-order patterns (as V3) unattested in child L1 German. The author considered the V3 structures with both topicalised TimePPs (19) and topicalised direct objects (22) to be compatible with transfer from the L1. Since her study mainly focused on the correlation between finiteness and V2, the analysis proposed principally compared the verb forms used by L2 learners in (target-like) V2 structures

and in (non-target-like) verb-final utterances, like those instantiated in (20).³⁴ This comparison pointed to the alternation between nonfinite and finite verbs in V2 position; as observed in paragraph 2, this alternation is very restricted in L1 acquirers of German since the early stages: in L1acq, V2 is strictly related to finite verb forms. On the contrary, the L2 learners in Tran's study had large recourse to infinitives both in V2 and final position. Nonetheless, since the L2 learners did produce V2 structures (i.e. V-to-C movement), they proved to be equipped with a full activated projection of CP. Consequently, the infinitives in V2 position were not to be considered as non-finite verbs, but rather as uninflected verb forms. Tran noticed that, unlike L1acq, child L2acq does not exhibit a Root Infinitives phase, but rather a phase in which verb inflection is missing. She concludes that finiteness and V2 are not developmentally interdependent in tutored child (as well as adult) L2 learners.

This outcome confirms the result obtained in Haznedar & Schwartz (1997), who analyzed longitudinal data of a Turkish child L2 learner of English named Erdem. They concluded that the uninflected verb forms used by spontaneous L2 acquirers are not root infinitives (i.e. non-finite verbs), but they are actually finite forms with missing inflection (*Missing Inflection Hypothesis*).

Another study on the acquisition of V2 in L2 learners of German is presented in Håkansson, Pienemann & Sayehli (2002). The results obtained in this research are analysed by the authors within the theoretical framework of Processability Theory (Pienemann 1998), in which the L1 is rejected as part of the initial state of L2 grammar, as suggested in Schwartz & Sprouse (1994, 1996) and Schwartz (1998); on the contrary, the L2 learners are supposed to re-construct the grammar of the L2. Although I do not endorse the theoretical approach supported by the authors, and find instead the 'full

³⁴ Note that in my study verb-final sentences are unattested.

transfer/full access' hypothesis of Schwartz & Sprouse more suitable for my data, I will present the results obtained in this study for a comparison with a UG based approach.

The study involved twenty L2 learners of German with Swedish as their L1, with ages ranging from 13 to 14 years. The experiment took place in a Swedish secondary school, and the informants had been exposed to German (L3) from 8 to 16 months. Moreover, all the participants had studied English for 2-3 years as their L2. Note that, although German and Swedish are not mutually comprehensible, the V2 structure is identical in both languages. The participants were asked to carry out a narrative task, which aimed to elicit main declarative clauses with a topicalised adverbial. The learners were interviewed by a native speaker of German, and produced the data in a conversational setting. As to the results obtained, the learners with 8 months of exposure to the L2 produced overall 12 declarative main clauses which included a fronted adverb: among these utterances, none contained the so called inversion (i.e. V-to-C movement), although the V2 structure was both shared with their L1 and present in the L2 input. A partly different result was obtained with learners who had been exposed to German for 16 months: they produced overall 37 declarative main clauses with preposed adverbs, and, among these utterances, 10 included inversion (cf. also the results given in Sayehli 2013: 82-83). An example is provided in (24):

- (24) *Dann er waschen eh der Schlange (Cecilia, 14)
then he wash eh the snake
[in Håkansson, Pienemann & Sayehli 2002: 257]

As correctly pointed out by the authors, the most remarkable finding is the low amount of V2 structures produced by tutored L2 learners after 16 months of instruction. The quality/quantity of linguistic input received at school, as well as the kind of grammar instruction provided to the learners

are not specified by the authors. Also the modalities of elicitation of the data are not clear to me. Anyway, these data are striking if compared with the amount of V2 structures produced by the children in my study after less than thirty minutes of instruction and exposure to selected V2 input, irrespective of the typological distance of German and Italian.

Håkansson, Pienemann & Sayehli precise that a popular explanation for V3 structures given by Swedish school teachers of German alludes to transfer from L2 English. The authors reject this claim and point to the implicational scale which emerged from the results obtained: the learners' interlanguage started out with a canonical word order (SVX), and then evolved into an intermediate V3 structure (adv NPsubj V X), which could not derive from the L1. The data were interpreted as a continuous developmental pattern from SVX, to adverb fronting with V3, to correct inversion. According to the authors, this developmental sequence supports the idea that L2 learners can only produce forms they are able to process, and thus corroborates the *Developmentally Moderated Transfer Hypothesis*. The learning task has a hierarchical nature, and implies reconstruction of the L2 and developmental constraints, which affect also the transfer from the L1. In this proposal, V3 is thus treated as a natural phase in the development of German grammar, irrespective of the learners' L1: V3 emerges as long as the canonical SVX order begins to be accompanied by adverb fronting; when adverb fronting increases, inversion gradually emerges. However, in my study I did not find any spontaneous correlation between V2 and increasingly use of XP fronting.

Chapter 3

The experimental lesson

1. The experiment: aim and general description

1.1. The participants

The experiment involved five classes in the Primary School “Italo Calvino” of Vigo Meano (TN). The participants were 104 schoolchildren with ages ranging from 6 to 10 years. Table 3.1 shows the number of participants in every group.

Table 3.1. Participants’ age and number

Group	Age	Number of participants
Year 1	6	21
Year 2	7	24
Year 3	8	19
Year 4	9	16
Year 5	10	24

All the participants had Italian as their L1. Some learners received input in the Trentino dialect from their families, but nobody had the dialect as her/his L1. Moreover, a few learners were partly exposed to Mòcheno, a Germanic language spoken in a restricted area of Trentino (Valle del Fersina), which is influenced by the surrounding Romance varieties (for syntactic aspects of Mòcheno and for the influence of Romance on this variety see Cognola 2011). Finally, only two learners, whose families came from Albania and Cuba respectively, were bilingual. Since they had native-

like performances in Italian, and reacted to the tasks like the other participants, I include their data in the general discussion.

I also point out that none of the participants had German as their L1, and they were not exposed to German outside the classroom. All the participants learnt German at school as a foreign language (L2). The age of onset for L2 learning was 5 years: the subjects had their first contact with German at the nursery school, where they had been taught lexical classes such as colours or numbers. When the experiment was performed, the learners had thus been exposed to German from between one to five years in the different classes. Since the time of exposure to the L2 was different in the five groups, I will treat their data separately, so as to verify if a longer exposure to the L2 had some effects on the process of language learning.

Such an effect was indeed not to be taken for granted, if we consider the type of linguistic input provided at school. The input in L2 did not include clear syntactic and morphological information, and mostly consisted of lexical items, both at the nursery school and at the primary school. The learners involved in my experiment were principally exposed to *routine formulae* (*Wie geht's? Wie ist das Wetter heute?*), and to lexical items found in isolation rather than included in a morphosyntactic context (lists of animals, food, colours, months...). The lexicon was learnt through recreational activities such as games and songs; however, as far as I observed, the L2 learners were not able to segment the speech stream, and to perform a word analysis.

Meisel (2008) claims that spontaneous L2 acquirers in the nursery school prefer using rote-learned *routine formulae*, which allow them to communicate more efficiently with limited linguistic means. This was only partly replicated in my study: on the basis of the L2 input received, the learners mainly produced one-word utterances (nouns).

The production of one-word utterances does not necessarily entail the activation of syntactic structures. Chomsky (1975) proposes that the

language is modular, i.e. modular principles interact in the production of well-formed sentences. Thus, the lexicon represents an independent module, separated from the syntactic one. In fact, the brain areas activated for syntactic computation differ from those involved in lexical processing (see for example Grodzinsky 2000). In line with this approach, I assume that the mere exposure to lexical items cannot trigger the development of a mental representation for the L2 (see also VanPatten in press for the relevance of syntactic computation).

Several studies argue that in L1acq functional projections are acquired later than lexical ones (Radford 1990, Clahsen & Penke 1992). However, this developmental pattern is not reproduced in L2acq/L2 learning. The L2 learners involved in my study produced sentences that included functional projections since the beginning, if adequately stimulated. Unsworth (2008) observes that spontaneous L2 acquirers skip a stage, or several, if compared with L1 acquirers. This is probably due to the linguistic competence they have already developed for their L1 (see *Full Transfer/Full Access Hypothesis* in Schwartz & Sprouse 1994, 1996). I therefore claim that there is no reason why classroom child L2 learners receive a L2 input that exclusively includes the lexicon. I conclude that the input provided in the primary school is not consistent with the linguistic capacities and the learning needs of child L2 learners.

In sum, the participants of my study were exposed to partial and artificial L2 input, therefore they were not in condition to produce sentences. In general, child L2 learners in the Italian primary school are exposed to insufficient L2 input, from both a quantitatively and a qualitatively point of view (Benincà & Penello 2007).

I also have to consider the grammar instruction provided to child L2 learners. I cannot define the participants of my experiment as pure “tutored learners”, since they did not receive explicit grammar instruction for the L2. For instance, they did not receive explicit indications about the compulsory

expression of an overt subject in German. As described in more detail in the next paragraph, the learners were not expected to develop explicit grammatical competence in the primary school.

However, I cannot treat them as spontaneous L2 acquirers neither, since they did not acquire the L2 in a context of linguistic immersion. It is therefore hard to include my participants in a traditional classification: they were neither instructed L2 learners, nor spontaneous L2 acquirers. I opt for the definition of untutored learners of a L2 in a non-spontaneous context of acquisition.

1.2. The three stages of the experiment

The experiment consisted of three stages: observation, experimental lessons, delayed post-test.

The observational phase was intended to evaluate the subjects' initial linguistic competence.

The experiment itself consisted of 3-4 lessons per group. I first explained the principles governing German V2 by means of a simplified but formal description of a L2 model. I then examined how the learners reacted to the didactic method: I registered the results obtained, and I verified the immediate effects of the pedagogical intervention.

Finally, the delayed post-test aimed at investigating whether formal explicit grammar instruction had long-lasting effects on the participants. The post-test was carried out six months after the experimental lessons.

In the next paragraphs I will describe the three stages in detail, and I will discuss the results obtained. I will also compare the performances registered during the didactic experiment with those emerged in the delayed post-test.

2. The experiment: explicit instruction and data elicitation

2.1. The observational stage

The experimental lessons were preceded by an observational period, which took place between October and November 2013, and consisted of four sessions per class. I attended the ordinary German classes, and I observed how the teacher structured the lesson. I particularly examined the linguistic input provided to the learners. Moreover, I could assess the participants' initial competence in the L2.

I will firstly discuss the linguistic input to which the learners were exposed. The exposure to the L2 consisted of one sixty-minute lesson per week in Year 1 and Year 2, and of two sixty-minute lessons per week in Year 3, Year 4 and Year 5. The classes followed a fixed structure: the learners were first asked some routine questions; they were then involved in games, whose aim was to stimulate word recognition or production; they were finally encouraged either to sing songs or to watch short videos about German culture and traditions. As pointed out in the previous paragraph, the learners were neither exposed to focused morphosyntactic data, nor asked to produce “new” multi-word utterances (except for routine expressions).

The teacher built the German lessons on the basis of a program drafted with the other L2 teachers of the school, in compliance with the guidelines of the Italian Ministry of Education, Universities, and Research. This program outlined the target competence of L2 learners: at the end of the primary school, the pupils were expected to answer routine questions, and to reproduce familiar sentences on the basis of known models; they were meant to produce and understand single words; they were supposed to understand practical instructions and recurring clear information about familiar expressions. Consequently, the L2 learners only had lexical objectives, whereas morphosyntactic instruction was not taken into account.

Interestingly, the production of (new) sentences was not mentioned among the linguistic goals to reach.

In line with this program, grammar instruction was avoided in usual German classes, and only the lexical competence was stimulated. The learners were not invited to reflect on the properties of language, and the comparison with the L1 was completely ruled out. In particular, insufficient attention was devoted to the finite verb, since the learners were never stimulated to produce sentences.

Nevertheless, the German teacher was extremely collaborative, and prepared the groups for my experiment before and during the observational period (September-October 2013). She provided the learners with the finite verbs that I needed for my experiment. The learners were thus exposed to verbal forms usually neglected at school, such as *ich bin/du bist* (I am/you are) for Year 1, *ich esse* (I eat) for Year 2, and some unergative and transitive verbs for Year 4, as exemplified in (1). More precisely, the finite verb forms were stuck in expressions that the learners had to memorise and reproduce:

- (1) a. Ich bin Susanna. Wer bist du? (Year 1)
I be.PRS.1SG Susanna. Who be.PRS.2SG you
'I am Susanna. Who are you?'
- b. Ich ess-e Keks-e (Year 2)
I eat-PRS.1SG biscuit-PL
'I eat biscuits'
- c. Ich hab-e im Juni Geburtstag (Year 3)
I have-PRS.1SG in.the.DAT.MSG June birthday
'My birthday is in June'
- d. Wie ist das Wetter heute? (Year 4)
how be.PRS.3SG the.NSG weather today
'What is the weather like today?'

should be taken into greater consideration for L2 teaching in the Primary School.

In conclusion, the observational period showed how the input supplied to L2 learners was quantitatively insufficient and qualitatively inadequate. Benincà & Penello (2007) pointed out that the input provided at school is necessarily incomplete and artificial, since it cannot reproduce the linguistic immersion typical of spontaneous acquisition. The input that spontaneous acquirers receive is under-informative, but sufficient to trigger parameter setting (see the “poverty of stimulus”). On the contrary, the linguistic input provided at school does not stimulate the acquisition of any relevant morphosyntactic aspects of the L2. On the one hand, the exposure to the L2 is limited to one or two sixty-minute classes per week (quantitatively insufficient input); on the other hand, it mainly focuses on the lexicon (qualitatively inadequate input). The challenge is to investigate whether formal grammar instruction can play a role in providing more effective linguistic input to child L2 learners, in order to support the construction of the L2 grammar within the critical period.

2.2. The experimental lessons

The experimental lessons were performed between 28th November and 13th December 2013. I carried out four sixty-minute lessons in two groups (Year 3 and Year 4), and three sixty-minute lessons in the other groups (Year 1, Year 2 and Year 5). I used Italian to interact with the participants, and to describe the V2 structure. As anticipated in the introduction, the experimental lesson had two main objectives: on the one hand, I aimed at investigating the process of parameter resetting; on the other hand, I tested the efficiency of explicit formal grammar instruction. In order to test the convenience of the didactic method, I used the 8-year-old participants as control subjects during the experiment. This group was not exposed to formal analyses of the L2 models, as the other four groups were.

2.2.1. The L2 input and the grammar instruction provided to the learners

2.2.1.1. The metalinguistic reflection

As stated above, the L2 input provided in the classroom was insufficient both quantitatively and qualitatively. The exposure to German was too poor and artificial to trigger alone the setting of the V2 parameter. Consequently, I had recourse to explicit grammar instruction to support the operation of parameter resetting.

As specified in chapter 1, I built my lessons on the basis of formal linguistic theories that account for V-to-C movement, such as those of den Besten (1983), Tomaselli (1990), Vikner (1995), Roberts (2004), Holmberg (2012). The analysis of the L2 data was conveniently simplified and adapted to the learning needs of child L2 learners, without renouncing formality and descriptive effectiveness.

I firstly explained that a sentence consisted of different positions, devoted to different sentence constituents. When the learners receive grammar instruction at school, they are mainly exposed to functional analyses of the sentence constituents, whereas the underlying syntactic structure is not examined (Vanelli 2010, Masutti 2014). However, words receive syntactic and semantic properties on the basis of hierarchical relations, which govern their distribution in a sentence. I therefore showed how the words were organised in phrases, and had to be analysed beyond their linear order. I avoided abstract concepts and relied on very concrete and immediate examples, which could be easily analysed by the learners. The participants were not familiar with syntactic labels such as verb, subject or complement.¹ The learners of Year 1 and Year 2 had not even explicit knowledge of syntactic categories such as “noun” and “verb”.

¹ Some grammar notions were provided to the learners from Year 3, but mostly concerned the L1.

However, the results presented in the following paragraphs will show how easily the learners became acquainted with grammatical labels, which sounded absolutely natural and concrete for them. Grammar instruction was not beyond the cognitive abilities of the children, who reacted with enthusiasm and curiosity to grammar notions.

Finally, it is worth clarifying that I aimed to investigate only the implicit and not the explicit grammar knowledge of the participants. Nonetheless, I do not exclude that some metalinguistic reflection can be useful in L2 learning.

2.2.1.2. The models proposed and the description of the V2 structure

Once I made the participants aware of the basic syntactic notions discussed above, I specified how a main clause was structured in the L2. I presented to the learners models which mainly included four sentence constituents. I firstly pointed out how the Position 2 had to be reserved to the verb. The implication was that only one syntactic position was available before the finite verb, i.e. Position 1. This position was necessarily filled, but the choice of the “filling” was (relatively) free: it could be either the subject, or the object, or another adverb or “adjunct” (Time PP, for instance).² I also explained that the availability of just one position before the verb entailed a further consequence: if Position 1 was filled with a non-subject constituent, the subject could exclusively occur in Position 3. Finally, I introduced Position 4, which was reserved to the object.

I systematically and explicitly compared the different syntactic properties of the L2 with those of the learners’ L1, as suggested in

² Note that the learners of the Middle School where I performed a similar experiment received misleading instructions about the syntactic distribution of the subject in German. They were generally taught that the subject is the constituent occurring in first sentence position. This rule is not only incomplete, but also unnecessary: according to the *First-noun Principle* proposed in VanPatten (in press), L2 learners already tend to spontaneously process the first noun or pronoun of the sentence as the agent/subject, particularly at the early stages of L2 learning.

Cardinaletti (2007). As already clarified, I principally focused on two parameters of variation.

With regard to the parameter of verb movement, I pointed out that German did not allow for more than one sentence constituent before the finite verb, whereas Italian did. As a general statement, we can observe that the syntactic positions available before the finite verb represent crucial information for the setting of the V2 parameter. More precisely, crucial Primary Linguistic Data for the acquisition of German V2 concern the arbitrariness of grammatical function and thematic role of the constituents in preverbal position (Roberts 2004, Holmberg 2012). Both PP fronting and object fronting represent relevant input. Several studies show that the order XP-V in the input is significant also for L1 acquirers of a V2 language (Weissenborn 1990, Verris & Weissenborn 1992, Poepler & Wexler 1993, Westergaard 2013). As to object fronting, it becomes particularly interesting if the clitic doubling is taken into account: object left dislocation in Italian entails obligatory clitic doubling, whereas object fronting in German does not. Moreover, other crucial information to be inferred from the input is the position of the subject when PP or object fronting occur: in non-subject-initial sentences, the subject immediately follows the finite verb. During the experiment, the linguistic models I provided to learners pointed to these syntactic properties of German, adequately compared with Italian. I claim that this kind of grammar instruction represents focused and relevant linguistic input for L2 learners.

As to the pro-drop parameter, I did not give any explicit rules about the overt realisation of the subject in German. The models given in the L1 and in the L2 showed how a syntactic position was “abstractly” present for the subject in both languages, even though it could remain unfilled in Italian, unlike German.

The syntactic structure was illustrated by means of coloured posters affixed on the blackboard (see Image 1 in the Appendix). The four positions

intended to house the sentence constituents were clearly identified by means of round tags, which contained numbers from one to four. Under each tag I affixed the corresponding constituent.

As to the German model, Position 2 was always related to a red panel with the finite verb, for instance *isst* (eat_{3sg}), *trinke* (drink_{1sg}), *ist* (be_{3sg}). Position 1 corresponded to the subject in subject-initial sentences, and to a temporal PP or adverb in non-subject-initial sentences. In non-subject-initial sentences Position 3 was devoted to the subject.

With regard to the Italian example affixed under the German model, I showed how more than one slot was available before the red panel with the finite verb, so that both the temporal PP and the subject could occur before it. The panel devoted to the subject was always present in the structure, even though it could remain unfilled (simplified representation of the pro-drop parameter).

The examples affixed on the blackboard thus contained both lexical and functional categories, which remained visible for the learners during their first attempts to produce sentences.

I suggest that this didactic method had two main advantages: on the one hand, the learners were guided in the process of word discrimination and recognition in the speech stream; on the other hand, the input provided was focused and helped the learners in the parameter resetting.

2.2.1.3. The morphological variables

Investigating the acquisition of verb inflection is beyond the objectives of my thesis. The number of verbs used in my experiment was relatively limited, so that I could not test the learners' ability to use inflectional morphology productively.

A question which could arise was whether the correct identification of the head related to finiteness correlated with the acquisition of verb

inflection (see the *Missing Inflection Hypothesis* in Haznedar & Schwartz 1997).

In the *Missing Inflection Hypothesis* the uninflected verb forms produced in L2 acquirers are not treated as Optional/Root Infinitives (cf. Rizzi 1993/94 for L1acq): they are rather considered as actual finite forms with missing inflection. According to Haznedar & Schwartz (1997) the realisation of the morphological form of finite verbs represents a challenging operation for L2 acquirers. Moreover, they point out that there is no developmental association between a regular use of verb inflection and the disappearance of null subjects: the uninflected verbs produced by L2 acquirers can co-exist with overt subjects, so they are not non-finite forms.

Previous studies suggest that the finiteness vs. non-finiteness distinction is unrelated to the control of the full paradigm of verb inflection, both in L1acq and in L2 learning. With regard to L1acq, the acquisition of verb morphology is a gradual process³ – as shown, for instance, in Weissenborn (1990) – while the association between V2 and finiteness is immediate. As to L2 learning, morphological items represent parts of the L2 grammar that must be learnt (VanPatten & Rothman 2014). The data presented in Tran (2005) on the acquisition of V2 by English-speaking child L2 learners of German did not show any clear interdependency between the development of finiteness and verb inflection, supporting the *Missing Inflection Hypothesis*: although verb inflections were missing, the L2 learners did produce V-to-C movement, hence had a fully available CP (cf. the *Truncation Hypothesis* in Prévost 1997).

As regards the verb morphology used in my experiment, I mainly stimulated the alternation of the 1st person singular (1sg) with the 3rd person singular (3sg). I decided to concentrate on these persons on the basis

³ The child has to develop the ability to identify the phonological shape, the distribution and the function of the morphemes. In order to do this, the acquirer has to be able to segment the speech stream, and the segmentation of the unit “root+morpheme” is not an easy task, since morphemes are often unstressed.

of the data presented in Poeppler & Wexler (1993) for L1 acquirers of German. Correct verbal agreement forms emerged only for 1sg and 3sg subjects, whereas 2sg subjects were rarely attested in child speech. Plural subjects turned out to be particularly problematic for L1 acquirers, and entailed many morphological errors. Moreover, German verb forms inflected for the 1pl and the 3pl display the same morphological ending as infinitives (-en). For these reasons, I avoided the use of plural persons. Consequently, in my lessons I exclusively employed 1sg and 3sg subjects,⁴ and the forms used were either the 1sg-pronoun *ich*, or a lexical subject (animals, family members, proper nouns).

As already pointed out, prior to performing the experiment the German teacher gave the participants special information about verb forms, so as to provide them with the basic morphological competence required for my lessons. Before and during the observational period, the learners were exposed to verbs inflected for 1sg and 3sg. Consequently, before the experiment the learners became acquainted with finite verb forms, even though the verb was not always recognised as such.

2.2.1.4. The lexical variables

In regard to the lexicon I used for my lessons, I leant on the lexical competences already established in the groups. I aimed to make the learners use the lexical items they knew as phrasal constituents. For instance, animals and food became respectively the subjects and the direct objects of the transitive verb *essen* (to eat). This operation would not have taken place without introducing the finite verb into the sentence.

Considering how the different models of language interact to form a sentence, a practical didactic indication that can be formulated on the basis of formal linguistic theories is the following: the input in L2 provided to the

⁴ Only in Year 1 some sentences involved the 2nd person singular, in the alternation *ich bin/du bist* (I am/you are).

learners at school must include finite verbs selecting nouns as their arguments. The assignment of theta roles by the lexical verb at D-structure, and the assignment of syntactic Case by the finite verb at S-structure are general principles of UG. Therefore the learners are likely to rely on their linguistic innate endowment to apply these two operations to the lexicon (see also VanPatten & Rothman 2014). This is why the production of sentences in the L2 is not an objective beyond the cognitive capacities of child L2 learners in the primary school.

2.2.2. The data elicitation

As already pointed out in the previous paragraphs, my experiment aimed to observe to what extent L2 learners could lean on the UG principles and how the parameter resetting could take place on the basis of the artificial input provided at school. In order to test if the grammar instruction provided had effects on parameter resetting, I encouraged the learners to apply it productively to new contexts. This is in fact the process at work in L1 acquirers: L1acq depends on the ability to use a given structure productively in contexts never heard before. Therefore the task I proposed to learners precisely consisted in producing new sentences on the basis of a given model.

Since the participants were not familiar with this kind of task, I firstly made the learners acquainted with the production of subject-initial sentences in the L2. However, the surface linear order of subject-initial main clauses is the same in German and in Italian. Therefore subject-initial sentences are not (very) telling about the setting of the V2 parameter in German: the production of target-like sentences would not necessarily entail the correct application of V-to-C movement (Tran 2005: 598). For this reason, I stimulated the production of non-subject-initial sentences in a subsequent stage.

The elicitation of the data was carried out as follows: I provided the participants with some L2 models; I then asked the participants to reproduce the V2 structure autonomously, applying it to new contexts. To stimulate the production of sentences, I used posters with words or images that corresponded to the phrasal constituents (see Images 2-5 in the Appendix). Every poster consisted of five to nine images. For instance, I affixed to the blackboard posters representing respectively – from the left to the right – the days of the week, some animals and some food, and asked the participants to combine the concepts to create original sentences. The examples used as models remained visible on the blackboard for the first set of utterances produced after the instruction. In particular, the subject and the finite verb were available during the first attempts to produce sentences.⁵ The models were then removed, so that the participants could no longer rely upon them.

This task was used to elicit the data, but it was also useful from a didactic viewpoint. It showed how easily the lexical items known by the learners could be used as verbal arguments, entering the syntactic computation (see the Projection Principle and the Theta Criterion in Government and Binding Theory, Chomsky 1981). As I will largely show in next chapter, the participants in my study had good lexical knowledge but no syntactic competence. Consequently, they could process lexical but not functional words.⁶ My data confirm VanPatten's (in press) observation that lexical items are subject to processing earlier than functional ones. Thence, during the experimental lessons I explicitly instructed the learners about the meaning and the function of functional categories like the subject pronoun *ich*, which the learners did not manage to identify autonomously (see Smith & VanPatten 2014 for similar instruction in adult English L2 learners of

⁵ Interestingly, the learners seldom recurred to the exposed examples, and they mainly directed their attention to the images in the posters.

⁶ For instance, the participants hardly associated the form *ich* to the 1sg subject pronoun; moreover the forms for the subject pronoun (*ich*) and the definite article (*die*) were easily confused.

Japanese). As shown in chapter 1, the discrimination of the subject in a sentence is indeed crucial information to identify the V2 parameter. Consequently I stimulated the production of syntactic structures that included the subject pronoun. I assume that during production tasks L2 learners can reinforce the correlation between form and meaning of functional words.

The tasks used in the experiment were mostly oral. However, the participants of Year 2, Year 4 and Year 5 were also involved in a writing task: they were asked to produce written sentences on the basis of the same mechanism.

The target sentences the participants were expected to produce are instantiated in Table 3.2.

In a few cases I also had recourse to a Picture Description Task: the pictures represented animals eating or drinking something. However, this kind of task presented some limits in a classroom context: since the task consisted in describing a given image and not in producing original sentences, the participants' reaction was less prompt and enthusiastic. Moreover, the elicitation of non-subject-initial sentence was not guaranteed using this task.

Finally, in Year 1 and 2, I also employed a Stuffed Animal Task: I used stuffed animals to ask questions like those in (2) and to stimulate the production of non-subject-initial sentence.

Table 3.2. Examples of target-sentences

Year	Subject-initial sentences	Non-subject-initial sentences
1	Die Mutti ist schwarz 'The Mum is black'	Heute bin ich zornig 'Today I am angry'
2	Petra isst die Banane 'Petra eats the banana'	Heute trinke ich Milch 'Today I drink milk'
3	Ich habe im Juli Geburtstag 'My birthday is in July'	Im Mai hat Vati Geburtstag 'In May my dad has his birthday'
4	Der Hund trinkt Kakao 'The dog drinks cocoa'	Am Montag isst der Affe (die) Kekse ⁷ 'On Monday the monkey eats (the) cookies'
5	Ich brauche den Kuli ^{8 9} 'I need/use the pen'	Am Freitag habe ich Mathe 'On Friday I have Maths'

- (2) a. Wie fühlst du dich heute? Bist du heute froh? (Year 1)
'How are you feeling today? Are you happy?'
- b. Was isst du am Montag? (Year 2)
'What do you eat on Monday?'

For the collection of the oral data produced in the different tasks, I used tables in which I registered how many utterances each participant produced, and what kind of non-target-like sentences were realised. During

⁷ A more semantically appropriate sentence would have been *Montags isst der Affe Kekse* (Every Monday the monkey eats cookies), but the learners were not familiar with lexical items expressing recursive actions. As explained before, I preferred to rely on the lexical competence the participants had already acquired, in order to concentrate on the syntactic task.

⁸ Definite articles (the default form *die* – the_{fsG} in particular) were used by the learners, even though not systematically. Instead, the participants did not know the indefinite article *ein/eine*.

⁹ I will not take the question of case into consideration. I just would like to precise that the use of determiners tend to be neglected in the input provided to L2 learners at school, so as to avoid the issue of case.

the experimental lessons I transcribed the non-target-like utterances, so as to analyse – at a later stage – the errors registered.¹⁰

As to the amount of the data collected, three oral utterances per hour were produced on average by each learner. My corpus thus consisted in 1060 oral sentences, and it included both subject- and non-subject-initial utterances. With regard to the written production, the sentences produced were 357 on the whole, including both subject- and non-subject-initial sentences.

In paragraph 3.2, the data and the results collected in each group of learners will not be collapsed together, but they will be analysed separately, and then compared. The results from the oral and written tasks will be presented and treated differently. Finally, subject-initial and non-subject-initial utterances will be kept separate. As explained above, I will focus my attention on non-subject-initial sentences. However, some interesting syntactic phenomena emerged only in the comparison with subject-initial sentences. For this reason, I will discuss the data for both types of sentences.

2.3. The delayed post-test

The delayed post-test was performed six months after the experiment and it was intended to verify if the didactic approach I applied had long-term effects. The delayed post-test was performed between 29th May and 5th June 2014 and it consisted of one sixty-minute lesson per each class.

During the six months following the experimental lesson, the learners had not been exposed to non-subject-initial main clauses. During their usual German lessons, they practiced the 1sg, producing SVO sentences like *ich esse...* (I eat) or *ich spiele...* (I play). Instead, they were not trained in the use of 3sg forms.

¹⁰ I am using the term “error” as a synonym for “non-target-like”. My aim was not to assess the learners’ performance, so the term “error” does not entail any moralistic value or negative judgement.

For the elicitation of the data, I employed the same tasks used in December. The learners had to produce sentences, selecting the verbal arguments and the temporal adjuncts from posters that showed the corresponding images. The posters were affixed on the blackboard and included five to nine images. I observed if the learners managed to recollect the V2 rule, and if they produced target-like utterances. All the tasks were oral.

If the group did not remember the target structure, I repeated it, using the same didactic method I adopted during the experiment six months before. The structure of German V2 was explained in a simplified but formal way, encouraging a crosslinguistic comparison between the L1 and the L2. Four positions were affixed on the blackboard, and each position was intended to host a sentence constituent. Position 2, in particular, was reserved to the finite verb. Therefore, only one position was available for other constituents before the verb: either the subject or the Time PP (or the direct object) could be fronted and occupy Position 1, which necessarily had to be filled. If the Time PP (or the direct object) were fronted, the subject had to occur immediately after the verb, in Position 3. Two parameters of variation between the L1 and the L2 were thus pointed out: in German, only one constituent could occur before the verb (V-to-C movement); the subject had to be obligatory expressed (no pro-drop). I affixed to the blackboard two examples of sentences under the four syntactic positions, one for the L2 and one for the L1. Hence, both lexical items and functional categories in the L2 were fully available to the learners during the revision of the V2 structure. The models were removed from the blackboard only when the learners got acquainted with them and began to produce target-like utterances autonomously.

In the following paragraphs I will discuss the results collected in each group, pointing in particular to non-target-like utterances. The application of generative theory can provide testable hypotheses about the

nature of specific error types (see also VanPatten & Rothman 2014). More specifically, the analysis of the syntactic errors registered could allow us to investigate the role of language transfer, as well as the developmental stages of L2 learning/L2acq in tutored L2 learners in the critical period.

3. Data and results of the experimental lessons

3.1. General description

This paragraph will be devoted to the analytic description of the utterances produced by the participants in each group.

As a general result, we can observe that the amount of non-target-like utterances was limited, considering that the participants had never produced sentence in the L2 before the experiment. As described in the subparagraph 2.2.2, 1060 oral sentences and 357 written sentences had been produced overall. Considering just the syntactic errors, I registered 68 non-target-like utterances in oral tasks, and 34 non-target-like sentences in written tasks.¹¹ The rate of error was thus very low, for both oral (68/1060, 6.4%) and written (34/357, 9.5%) sentences.

This result refers to the whole amount of sentences produced, which included both subject-initial and non-subject initial utterances. However, in order to test the acquisition of German V2, subject-initial sentences were not very significant, since they did not necessarily imply V-to-C movement. Italian and German display an identical surface linear order of phrasal constituents in subject-initial sentences (SVO); nevertheless, on a more abstract level, the syntactic position of the verb varies in the two languages: the second linear position of the verb corresponds to the underlying projection I° in Italian and to the underlying position C° in German. On the contrary, non-subject-initial sentences imply obligatory surface V2 in German but not in Italian, so that the

¹¹ The term “error” is to be intended as a synonym for “non-target-like”.

operation of verb movement performed by the learners was clearly visible. Consequently, the errors found in non-subject-initial utterances were more relevant for the investigation of how the parameter of V-to-C movement was acquired.

On the basis of these observations, a special attention will be devoted to non-subject-initial constructions in the following paragraphs. Nevertheless, the analysis of subject-initial sentences will not be excluded, since some relevant phenomena involving non-subject-initial sentences emerged in the comparison with subject-initial ones.

If we just consider the non-subject-initial sentences produced, we obtain 497 oral utterances with 42 syntactic errors (42/497, 8.5%), and 249 written sentence with 33 errors (33/249, 13%). The error rate was higher in non-subject-initial sentences than in subject-initial ones.

It is known that constructions implying subject-verb inversion are more problematic also for spontaneous L2 acquirers. The data presented in Blom (2008) about spontaneous child and adult L2acq of Dutch showed how non-subject-initial sentences implied a larger amount of syntactic errors than subject-initial ones.

In my study, however, the rate of syntactic errors in non-subject-initial sentences remained relatively restricted, involving about one sentence out of ten. Furthermore, I observed that the non-target-like utterances produced by the participants depended on a limited range of syntactic errors, with some differences among younger and older L2 learners. The close list of syntactic errors registered during the experiment is given in Table 3.3. In the following paragraphs I will base on Table 3.3 to describe the errors in non-subject-initial sentences group by group.

Table 3.3. Syntactic errors in non-subject initial sentences

Type of error	Error rate	%
V3		
Verb omission		
Pro-drop		
Drop of all funct. categ.		
Subject right dislocation		

As to subject-initial sentences, the errors registered also represented a limited and systematic set. In the following paragraphs, I will rely on the model given in Table 3.4 to present the errors involving subject-initial sentences in the different groups.

Table 3.4. Syntactic errors in subject-initial sentences

Type of error	Error rate	%
Verb omission		
Pro-drop		
Subj left dislocat (S-AVV-V)		

To conclude the general presentation of the data collected, I suggest that the results obtained seem to promote the didactic method adopted. The explicit grammar instruction had an immediate effect, and it was successfully accepted by the learners. Nonetheless, only the post-test will confirm if the setting of the V-to-C parameter had taken place and had been stabilised in the L2 grammar under construction.

3.2. Description of the data class by class

3.2.1. Year 1

3.2.1.1. The previous linguistic competence and the experimental lessons

During the observational period, I noted that 6-year-old learners were mainly exposed to two different activities that implied the production of sentences in the L2. The first one consisted in singing a song that alternated 1sg and 2sg copulas. The sentences of the song were neither analysed nor translated into Italian: the child just pointed at her/himself or at the desk mate while singing *ich* (I) or *du* (you), respectively. The song is presented in (3):

- (3) Ich, ich, ich; du, du, du. Ich bin (name). Wer bist du?
'I, I, I; you, you, you. I am (name). Who are you?'

The second activity in L2 consisted in a Truth Judgment Value Task. A pupil produced a formula with wrong information about her/his name, and the classmates had to correct her/him, as instantiated in (4):

- (4) Ich bin Carlo. – Nein, du bist Lorenzo!
'I am Carlo. – No, you are Lorenzo!'

In this group I performed three sixty-minute lessons, which I will now describe in detail. As a first interaction with the participants, I proposed some familiar activities. In the first lesson, I began with the Truth Judgment Value Task they already knew, even though I introduced some variables:¹² I used a poster with images of the Barbapapa family, and produced false information about their colour. The participants had to correct my information, as instantiated in (5):

¹² The lexical items (colours, family members) I used had already been presented to the participants. The learners used with ease the lexicon related to colours, while they hardly remembered the family members.

- (5) Ich bin gelb. – Nein, du bist rot!
'I am yellow. – No, you are red!'

The learners' reaction to this task was immediately positive, and they correctly used the formula "*du bist*" (you are) in a (partly) new context. This demonstrated that 6-year-old learners can use linguistic input productively, in spite of their cognitive limits.

At a later stage, I asked the participants to produce subject-initial sentences to describe the nine Barbapapas represented in the poster (see Image 5 in the appendix). I introduced a morphological variable, with which the participants were not familiar, i.e. the copula inflected for 3sg. I gave them an example like (6):

- (6) Der Vati ist rosa
'The dad is pink'

I aimed at stimulating the production of new three-word utterances since the beginning of the experiment, so as to verify if L2 learners skipped the one-word and two-word-utterance stages, as spontaneous L2 acquirers do (cf. Unsworth 2008).

In the second lesson, I firstly used a Stuffed Animal Task to stimulate the production of subject-initial sentences with a 1sg copula. I had recourse to a small dragon, which asked the participants about their mood.¹³ The interaction was supposed to follow the model proposed in (7):

¹³ The lexical items related to mood were new for the learners. However, I needed to teach them these adjectives, so as to trigger the production of non-subject-initial sentences. This operation would have been otherwise impossible, considering the insufficient lexicon known by the learners. They could just combine the copula with either proper nouns or colours. Non-subject-initial sentences like (i) and (ii) would have been too artificial:

(i) ?*Heute bin ich Marco* – 'Today I am Marco'
(ii) ?*Heute bin ich blau* – 'Today I am blue'

I thence decided to introduce the lexical variable of mood adjectives. The process of memorisation of the new lexicon was rather demanding in terms of time and effort. If we follow VanPatten & Rothman (2014), the lexical forms of the L2 must be learnt, i.e. the learner cannot rely on UG for this operation. According to Reffieuna (2012), this effort in

- (7) Bist du froh? – Ja, ich bin froh/ Nein, ich bin zornig/traurig
'Are you happy? – Yes, I am happy/ No, I am angry/sad'

In a further stage, I showed exemplars of non-subject-initial sentences, and I describe them following the guidelines presented in paragraph 2.2.1. Rather than using abstract concepts such as “verb” or “subject”, I focused on the correspondence between the words in the L2 and in the L1, showing how, for instance, *ich* corresponded to *io* (I) and *bin* corresponded to *sono* (am). This operation allowed the learners to properly segment the speech stream. Word discrimination is a rather demanding operation in terms of time, both in L1acq and in spontaneous L2acq. At school, where the exposure to the L2 input is quantitatively and qualitatively poor, this operation must be guided. If the speech stream is adequately segmented in the model provided, the instruction contributes to the discrimination of constituents and words, which is a crucial operation in language acquisition.

The model proposed to the learners is exemplified in (8):

- (8) Heute bin ich froh
'Today I am happy'

I then asked the participants to produce similar sentences, according to their mood. The model remained visible for the first set of utterances, and was then removed. Three posters, which contained a smiling, a sad and an angry face respectively, remained affixed on the blackboard. Interestingly, none of the learners resorted to non-verbal means, like gestures, to point at the selected image.

6-year-old learners could depend on cognitive and psychological limits independent from the language-specific faculties. Until the age of 7 years, children only use a biological memory (connected to their feelings and experiences) and cannot have recourse to external memories (Reffieuna 2012: 291). Therefore, the difficulty in lexical recall is unrelated to the ability to perform syntactic computation.

In the third lesson, I showed the V2 model again, and I reinforced the comparison with the L1. I then invited the participants to produce sentences about their mood, as I did in the previous lesson.

In the next subparagraph, I provide a detailed analysis of the data collected, and I describe the results obtained.

3.2.1.2. Data and results

I will now discuss in detail the non-target-like utterances produced by the participants. The data concerning subject-initial and non-subject-initial sentences will be treated separately.

I start by analysing non-subject-initial sentences. The total utterances produced were 31, and the type of errors registered, with the corresponding rate, are given in Table 3.5.

Table 3.5. Year 1, non-subject initial sentences

Type of error	Error rate	%
V3	0/31	
Verb omission	0/31	
Pro-drop	5/31	16.1
Drop of all funct. categ.	2/31	6.5
Subject right dislocation	0/31	

As regards the error rate, the non-target-like sentences produced were 7 out of 31 total utterances (22.6%).

The types of errors produced in this group were particularly interesting: none of the learners produced V3, i.e. they did not reproduce the surface linear order of their L1. Interestingly, this error was attested in all the other groups.

Instead, 6-year-old learners tended to drop the functional categories related to verb raising: either they dropped the pronominal subject (5/31),

possibly from the post-verbal position (9a);¹⁴ or they dropped both the copula and the pronominal subject (2/31), keeping just the lexical items (9b):

- (9) a. Heute bin froh (Mauro, 6)
today be.PRS.1SG happy
[target: Heute bin ich froh]
- b. Heute traurig (Serena, 6)
today sad
[target: Heute bin ich traurig]

The type of error exemplified in (9b) was rare overall, so it could not be used to prove the lack of CP or IP in the German grammar under construction. On the contrary, the infrequency of this error highlighted the fact that most of the utterances did include functional categories. This implied that also 6-year-old learners had a fully available CP for the L2 (compare the *Minimal Trees Hypothesis* Vainikka & Young-Scholten 1996 with the *Full Transfer/Full Access Hypothesis* in Schwartz & Sprouse 1996). In many cases, the V-to-C movement was correctly applied, showing how the CP was activated in the learners.¹⁵

As to pro-drop, the example (9a) shows that null subjects emerged in non-subject-initial sentences; more precisely, pro-drop *exclusively* involved non-subject-initial sentences. Nevertheless, the L2 models I provided, did not include information about the possibility to license null (non-referential) subjects in SpecIP in German. The possibility to license *pro* under government in German was thus not encountered in the environment.

¹⁴ The linguistic models given to the learners did not include information about the possibility to license null expletives in SpecIP in German. However, the (referential) subject was sometimes dropped in non-subject-initial sentences, and the null subject was arguably located in postverbal position.

¹⁵ I also observed that verb drop independent from pro-drop was unattested in Year 1: in non-subject-initial utterances, I registered cases of pro-drop alone, but I did not find cases in which the copula was omitted independently from the subject pronoun.

Consequently, this aspect of the grammar could not be inferred from the L2 input. I could suggest two possible interpretations of pro-drop in non-subject-initial sentences. On the one hand, I could envisage that the learners applied V-to-C movement (Step 1), but failed to express the subject in SpecIP (Step 2):

(10) [_{SpecCP} Heute [_{C°} bin [_{SpecIP} Ø [_I froh

On the other hand, structures like (10) might represent a tentative stage in the development of the L2 grammar, in which 6-year-old learners licensed *referential* null subjects in postverbal position (as suggested by Hamann 1996 for 3-year-old children in L1acq). This second hypothesis would entail that 6-year-old learners were extremely receptive to L2 data, and could elaborate linguistic information beyond a given L2 model, relying on the principles of UG. The data about pro-drop collected in the other groups will give us a more complete overview of the phenomenon.

We can now move to subject-initial sentences. In Table 3.6, I will provide the results obtained in this regard.

Table 3.6. Year 1, subject initial sentences

Type of error	Error rate	%
Verb omission	8/77	10.3
Pro-drop	0/77	
Subj left dislocat (S-AVV-V)	0/77	

Subject-initial utterances entailed a different type of error, i.e. drop of the copula (especially of 3sg copula). Two considerations emerge: firstly, the omission of the copula was the only type of error found in subject-initial sentences; secondly, the pronominal subject was never dropped in first-sentence position, although the learners did not receive any explicit instruction about the need for an overt subject in Position 1 in German.

The learners of Year 1 were clearly unsupplied with explicit knowledge about concepts such as subject, or non-null subject language (non-NSL). However, subject omission never affected subject-initial sentences, whilst V1 was possible in the L1 (11a). These data could suggest that the learners had intuitions about the nature of German as a non-NSL. They could have insights into the presence of a preverbal subject position to be mandatorily filled in the L2. However, this constraint could be inferred neither from the poor L2 input received at school nor from the L1 structure; consequently I assume that the learners relied on general principles of UG: I could envisage that the learners leant on the universal principle of EPP, irrespective of the overt or covert realization of the subject at the phonological level, which represented a parameter of variation between the L1 and the L2.

- (11) a. Sono contento
 Ø be.PRS.1SG happy
 b. Ich bin froh
 I be.PRS.1SG happy

Moreover, I have already pointed out that pro-drop is a parameter related to the information structure, and this could also determine the absence of pro-drop (or topic-drop) from first-sentence position.

Finally, three learners had recourse to code mixing. The code switching involved only one category, i.e. the copula inflected for 3sg, which was expressed in the L1:

- (12) Barbabo è schwarz (Laura, 6)
 Barbabo be.PRE.3SG (L1) black
 ‘Barbouille is black’

Whilst it was rarely produced, code mixing is rather interesting, since it exclusively involved 6-year-old learners. Similar data on code

switching were collected in Italian nursery schools involving untutored L2 acquirers of Germanic varieties. The absence of code mixing in older learners may reveal that different strategies are at work after the age of 6 years in L2 learning (see Pinker 1994, Hamann 2000).

Ricci Garotti (2010) (13a-c) and Stricker (2010) (13d) provide examples of code mixing produced by children ranging in age from 3 to 6 years, with Italian as their L1, and exposed to L2 German for 5 hours a week during recreational or routine activities (games, songs, nursery rhymes). Ricci Garotti observes that the verb was mainly expressed in the L1, and only a small group of children produced finite (13b) or non-finite (13a-d) verbs in the L2. The recourse to the L1 involved both functional and lexical verbs:

- (13) a. Jessica sta *mal-en*
 Jessica is.doing (L1) draw-INF (L2)
 ‘Jessica is drawing’
- b. *Wo ist der silenzio?*
 where be.PRS.3SG (L2) the.NOM.MSG (L2) silence (L1)?
 ‘Where is the silence?’
- c. *Mi pass-i bitte die brocch+e del Wasser?*
 to.me give-PRS.2SG(L1) please the.FSG (L2) jug+e (L1+L2) of.the (L1) water (L2)
 ‘Could you please give me the water jug?’
- d. *e Donnerstag quando Minimonster deve trommel-n*
 and (L1) Thursday (L2) when Minimonster must.PRS.3SG (L1) drum-INF (L2)
 ‘and on Thursday, when Minimonster has to drum’

This tendency was also observed by Cognola (2011), who collected data from a nursery school in Valle del Fersina (TN), investigating bilingual Italian-Mòcheno children in the age range of 3-5 years (14a-b):

- (14) a. *ont de hòt tirart fuori de spina en de zampa*
 and he have.PRS.3SG take.PTCP out the thorn in the paw
 ‘and he extracted the thorn from the paw’

- b. d`ora bir gea' sul tappeto
 then we GO.PRS.1PL on.the.MSG carpet
 'then we go on the carpet'

Code mixing thus seems to be a linguistic strategy adopted by child L2 acquirers until the age of 6 years.

Although limited in frequency, three crucial data in my corpus only concerned 6-year-old learners: (i) the lack of V3; (ii) the drop of both the pronominal subject and the copula; (iii) code mixing. Although the presence of these strategies in the learners of Year 1 may be considered as statistically insignificant, I emphasized the absence of similar errors in older learners.

3.2.2. Year 2

3.2.2.1. The previous linguistic competence and the experimental lessons

In the German classes conducted during the observational period, 7-year-old learners became acquainted with the finite form of the verb *essen* (to eat), inflected for 1sg and presented in *formulae* like (15a-b):

- (15) a. Die Raupe isst am Montag einen Apfel
 'The caterpillar eats an apple on Monday'
 b. Ich esse Kese
 'I eat cheese'

The example in (15a) was based on the German version of the book "The very hungry Caterpillar", which the teacher read as a routine activity also before the experiment in usual German classes. Although the learners understood the general meaning of the story thanks to the images of the book, they were not able to segment the speech stream; word recognition was not assured, since the morphosyntactic structure of the sentences was

not analysed. The generic understanding of a tale does not necessarily imply the syntactic computation of the string in the L2.

As to the example (15b), the learners were invited to read the expression “*ich esse*” (I eat), which they had to relate to lists of food written on their notebooks. Since they were not guided in the sentence analysis, some learners used “*ich esse*” as a synthetic form that corresponded to the Italian “*mangi-o*” (*pro+eat-PRS.1SG*); other learners interpreted this expression as “I like”.

With regard to the experimental lessons in Year 2, I performed three sixty-minute lessons, and I mainly leant on the lexical and morphosyntactic competences already acquired by the learners.

In the first interaction with the participants I had recourse to a Stuffed Animal Task. I stimulated the oral production of subject-initial sentences (without reading them),¹⁶ but I did not describe how these sentences were structured in the L2. I used a stuffed caterpillar both to propose them an oral model of subject-initial sentences, and to ask questions about their food habits (16):

- (16) a. Ich ess-e ein-en Apfel. Was is-st du?
I eat-PRS.1SG a-ACC.MSG apple. What eat-PRS.2SG you?
‘I am eating an apple. What are you eating?’
- b. Ich trink-e Zitronensaft. Was trink-st du?
I drink-PRS.1SG lemon.juice. What drink-PRS.2SG you?
‘I am drinking lemon juice. What are you drinking?’

¹⁶ The cortical specialisation for different language activities is clearly beyond the purposes of my study. However, I just mention two studies that deal with this issue. Price (1998) observes that in adults oral production and reading require the activation of different brain areas: “the left posterior basal temporal lobe and the left frontal operculum are involved in translating semantics into phonological output, whereas the left anterior inferior parietal cortex is required for translating orthography to phonology”. According to Booth & al. (2001) this distinction is not so sharp in children, and the development seems to be characterized by increasing specialisation. The investigation on the cerebral activity involved in production or reading tasks could support L2 teaching, and contribute in selecting the right didactic intervention to stimulate syntactic computation in the L2.

The model in (16b) was also visible on the blackboard (see Image 2 in the Appendix).¹⁷ To formulate their answers, the learners selected the direct object from two posters affixed on the blackboard, which represented respectively eight images of food and six images of drinks. The lexical item that corresponded to the image was covered by a (removable) tag, which was raised only if the learners could not recollect the corresponding noun (see for instance Image 4 in the Appendix). The two posters remained available to the participants throughout the lesson.

The second task consisted in producing sentences about the desk mate's food habit, following the model given in (17). I stimulated the use of verbs inflected for 3sg, in order to support the discrimination between subject and finite verb. I also made sure that the constituents “*ich*” and “*esse*” – presented in the prior formula “*ich esse*” – could be properly distinguished and analysed. I showed that the verb affix *-e* was related to 1sg subjects (the speaker), while the verb affix *-t* was related to 3sg subjects (another person or animal, who was not present in the conversation but represented the topic of the speech). I used the image of a cat (Petra), which ate a watermelon, and I formulated the oral model in (17):

- (17) Petra iss-t Wassermelone
 Petra eat-PRS.3SG watermelon
 ‘Petra isst watermelon’

The model was affixed on the blackboard, since the learners were unfamiliar with the verb inflected for 3sg. In this model, the sentence was segmented: it consisted of three small coloured posters, which instantiated

¹⁷ In this model, the sentence constituents were not segmented, since the whole sentence was written in the same poster. Note that the model contained the finite verb *trinke*, which was less familiar for the learners. While producing their sentences, the participants concentrated on choosing and expressing their own options, hence they productively used both *essen* and *trinken*. Moreover, they avoided the mere repetition of the given model.

the three syntactic constituents of the sentence.¹⁸ From the left to the right, the posters contained respectively the lexical subject (*Petra*), the finite verb (*isst*) and the direct object (*Wassermelone*). Also for this task, I did not provide any explicit rules about the syntactic structure of subject-initial sentences in German, but the finite verb remained visible until the learners became acquainted with this new verb form.

In the second lesson, I verified if the learners remembered how to produce subject-initial utterances with both 1sg and 3sg subjects, without leaning on a given model. Since the task was carried out with ease, I introduced an exemplar that included V2 and PP fronting. The new task consisted in producing non-subject-initial sentences, in which Position 1 had to be filled with a TimePP. The finite verbs remained constant (*essen* und *trinken*) and were inflected for 1sg; thus the participants could refer to their personal experience. The learners were asked to produce sentences about their food habits in the different days of the week. They had to select the Time PP and the direct object from posters that remained affixed on the blackboard for the whole lesson. A L2 model was visible on the blackboard during the first set of utterances, and was then removed. Therefore, both the finite verb and the pronominal subject were temporarily available to the participants on the exemplar.

The third lesson consisted in a revision of the V2 structure. The exemplars given for the L1 and the L2 were analysed, and then removed immediately after the revision. The task was the same as in the second lesson: the participants were asked to produce non-subject-initial sentences, in which a day of the week was associated with specific food/drinks. I aimed at testing their ability to apply V-to-C movement in a productive way, independently of a given model.

¹⁸ From a didactic point of view, I find this type of model more convenient and effective than a model in which the sentence constituents are not discriminated in different posters.

All the tasks proposed to the participants until this stage stimulated the production of oral utterances. The last task, instead, consisted in writing non-subject-initial sentences, following the same instructions given for the previous oral tasks. It is worth pointing out that the participants had never used the L2 in written activities before, and writing in German was a completely new task for them. Moreover, writing in the L1 was still challenging for some learners. The lexical items for the food and the days of the week were visible on the blackboard, while the finite verb and the subject pronoun were not.

3.2.2.2. Data and results

Also in this group, the data concerning subject-initial and non-subject-initial sentences will be kept separate. Moreover, I will treat separately the errors that concerned the oral and the written tasks.

ORAL TASKS

The total non-subject-initial utterances produced in the three lessons were 78. Table 3.7 provides the types of errors emerged with the corresponding error rate.

Table 3.7. Year 2, non-subject initial sentences (oral tasks)

Type of error	Error rate	%
V3	5/78	6.4
Verb omission	2/78	2.6
Pro-drop	2/78	2.6
Drop of all funct. categ.	0/78	
Subject right dislocation	0/78	

The overall non-target-like utterances produced were nine out of 78 total non-subject-initial sentences (9/78, 11.5%).

The most common error consisted in producing sentences in which the finite verb occurred in the third linear position (5/78, 6.4%). This error suggested that the learners had not applied V-to-C movement, reproducing instead the syntactic structure of the L1 (V-to-I movement). This error mostly occurred when the L2 model was not visible on the blackboard.

- (18) Am Mittwoch ich ess-e Keks-e
on Wednesday I eat-PRS.1SG biscuit-PL
'On Wednesday I eat biscuits'

Two cases of verb omission were also observed (2.6%). While in Year 1 the drop only involved functional verbs (copulas) in subject-initial sentences, here the drop concerned lexical verbs, such as *essen* or *trinken*. I may envisage that verb drop was related to an attempt to produce V-to-C movement, which partly failed.

Finally, subject drop occurred in two cases (2.6%). If we hold that verb movement was a demanding operation for the learners, the drop of the subject may have some connection with the realisation of V-to-C movement.

The non-target-like utterances depending on omission were overall infrequent also in Year 2 (4/78, 5.1%). However, some regularities could be found. In particular, the drop of the subject was not random but predictable: as already pointed out for Year 1, the subject was dropped exclusively in non-subject-initial-sentences, arguably from the postverbal position.

In conclusion, I point out that the participants mainly produced target-like non-subject-initial sentences, and this implied that the CP was available. This revealed that the L2 learners were not to treat as a *tabula rasa*, or as lacking functional projections.

I can now consider subject-initial oral sentences. The total utterances produced were 144. The morphosyntactic errors involving subject-initial sentences could not be classified among the errors registered in the other

groups. The errors observed are presented in (19) and (20).¹⁹ They emerged when the learners were asked to produce sentences with 3sg subjects, and could not lean any longer on the routine formula “*ich esse*”.

- (19) a. Petra ich Schokolade (Davide, 7)
 Petra I chocolate
 [target: Petra isst Schokolade]
 ‘Petra eats chocolate’
- b. Petra Wasser Tee (Daniele, 7)
 Petra water tea
 [target: Petra trinkt Tee]
 ‘Petra drinks tea’
- c. Ich Petra die Keks-e²⁰ (Bruno, 7)
 I Petra the.PL biscuit-PL
 [target: Petra isst die Kekse]
 ‘Petra eats the biscuits’
- (20) a. Ich ess-e Kase (Manuela, 7)
 I eat-PRS.1SG cheese
- b. Gisella ich Kase (Manuela, 7)
 Gisella I cheese
- c. Iss-t Gisella das Eis (Manuela, 7)
 eat-PRS.3SG Gisella the.NSG ice
 [target: Gisella isst das Eis]
 ‘Gisella eats the ice’

It is not easy to account for these errors, which involved not only syntax, but also morphology and phonology. In (19a), I suggest that *ich* was

¹⁹ The errors in (20) refer to the attempts of a single learner to produce a target-like sentence with the verb *essen* inflected for 3sg.

²⁰ In the glosses I will not specify the case of the articles *die* (feminine singular), *die* (masculine, feminine and neuter plural) and *das* (neuter singular) used by the participants. These articles have the same form for both the nominative and the accusative case. The learners probably used the nominative case as a default form, as they did with the masculine (in which the nominative form *der* differs from the accusative one *den*).

confused with *isst*: their phonological proximity could easily give rise to a wrong association of form and function/meaning. The same analysis thus holds for (20b). It is maybe worth noticing that the subject pronoun *ich* was likely to be confused also with other functional categories (*ist, die*), as shown by similar errors registered in other groups.

The error in (19b) instantiated a strategy that a learner used when he could not remember the verb *trinken*: he selected from his lexicon a word (the noun *Wasser*), which had a different syntactic category than the target word (the verb *trinken*), but which was semantically related to it.

Finally, I consider (19c) to be equivalent to (20c), since the subject pronoun *ich* and the verb *isst* were likely to be confused, as shown above. Considering that the target word in these utterances was *isst*, the verb seemed to be located in the first sentence position. We might envisage that V-to-C movement had been applied (Step 1), but the subject was not moved to SpecCP (Step 2). Otherwise, if we hold that the target word was *ich*, the subject pronoun could instantiate a sort of topic, marking the first sentence position. In this case, the verb would not have been expressed. Some occurrences of verb drop in subject-initial sentences were indeed registered in other groups. Alternatively, if we analysed *ich* as a real subject pronoun, the implication would be that the sentence had two subjects, giving rise to an evident violation of UG. Interestingly, no other example of sentence inconsistent with UG was registered in my corpus, confirming the *Full Restriction Hypothesis* proposed in White (2003), and disconfirming the *Fundamental Difference Hypothesis* endorsed in Clahsen & Muysken (1986, 1989). A crucial point in the generative investigation on L1acq, is that the child grammar is a possible human grammar at all stages. If this were true also for L2acq/L2 learning, L2 learners were unlikely to produce utterances which violate UG.

WRITTEN TASK

Let's now consider the errors emerged in the written task. The participants were asked to produce only non-subject-initial sentences, and the overall amount of sentences produced was 66 (Table 3.8).

Table 3.8. Year 2, non-subject initial sentences (written task)

Type of error	Error rate	%
V3	1/66	1.5
Verb omission	0/66	
Pro-drop	16/66	24.2
Drop of all funct. categ.	0/66	
Subject right dislocation	0/66	

The non-target-like sentences were 17 (17/66, 25.7%) and were mainly concentrated on one participant, who produced about 30% of the errors. The errors mostly consisted in dropping the subject (16/17, 94.1%) (21a-d). Pro-drop was much more frequent in the written task (24.2%) than in the oral tasks (2.6%).

On the one hand, this result suggests that the performance of oral and written linguistic tasks entails different cognitive abilities, and involves specialised brain areas.^{21 22} But on the other hand, the written task confirms that the set of possible syntactic errors was limited and predictable, and that

²¹ A recent study on the brain areas activated for speaking and writing suggests that the two activities share conceptual and lexical-semantic processes, but differ in the neurophysiological activity during word-form encoding (phonological or orthographic) (Perret & Laganaro 2012). An older study argued for the specialisation of the brain areas involved in the two activities, on the basis of dissociated disorders of speaking and writing in aphasia (Basso, Taborelli & Vignolo 1978). It is beyond the purposes of this study to investigate the speaking/writing mechanisms in depth. I just note that in the written task the learners produced more null subjects than in the oral tasks.

²² The rate of errors in Year 2 was probably to relate also to the reduced familiarity of the learners with writing activities: older participants indeed did not produce an equivalent amount of errors in written tasks.

pro-drop was significantly connected with V-to-C movement. Instead, only one occurrence of V3 was observed (1/17, 5.9%) (21e).

- (21) a. Am donnerstag trink-e das kakao (Marco, 7)
on Thursday drink-PRS.1SG the.NSG chocolate
- b. Am sonntag trink-st der²³ Kaffee (Barbara, 7)
on Sunday drink-PRS.2SG the.NOM.MSG coffee
- c. Am sonntag trink kakao (Giusy, 7)
on Sunday drink.∅ kakao
- d. Am Mittwoch ess-e eis (Clara, 7)
on Wednesday eat-PRS.1SG ice
- e. Am samstag ich ess-e honig (Mauro, 7)
on Saturday I eat-PRS.1SG honey

Finally, most of the sentences presented V2, irrespective of the correct use of verb inflection, as shown in (22):

- (22) a. Am diensta trink-en ich milch (Roberta, 7)
on Tuesday drink-INF I milk

3.2.3. Year 3

3.2.3.1. The previous linguistic competence and the experimental lessons

As observed in paragraph 2.2., 8-year-old learners were used as control subjects. Therefore, I did not provide them with explicit grammar instruction, as I did with the other groups. The models for L2 sentences

²³ As I have already pointed out, I will not account for errors concerning morphological case. The morphological case represents a point of variation between the L1 and the L2: in Italian, only pronouns reflect case distinctions, while determiners and nouns do not display overt markers of morphological case. Nonetheless, errors concerning morphological case did not entail the misunderstanding of syntactic Case: syntactic marking of a NP's function is universally required. Consequently, both in the L1 and in the L2 the subject receives an abstract nominative Case, while the object receives an abstract accusative Case, irrespective of the overt assignment of morphological case. The L2 learners do not need to acquire how to distinguish the subject from the direct object; they only have to learn how the L1 and the L2 manifest Case assignment: German use morphology to overtly mark the subject and the object, while Italian mainly does it syntactically.

were not given, and the comparison with the L1 was not carried out. During the performance, the participants could not lean on exemplars that included the finite verb in the L2.

From Year 3 on, the linguistic activities increase at school: the learners start learning English as an additional foreign language, and they receive some grammar instruction for Italian, based on a traditional prescriptive method. Nevertheless, the grammar instruction does not involve the L2. The German teacher relies on the explicit linguistic knowledge that the learners develop for the L1, even though explicit crosslinguistic comparison is not encouraged. The parametric variation between the L1 and the L2 is neglected rather than described.

In the months preceding the experiment, the learners had been stimulated to produce subject-initial sentences like (23), using the verb *haben* (to have) inflected for 1sg.

- (23) Ich hab-e im Januar Geburtstag
I have-PRS.1SG in January birthday
'My birthday is in January'

Since the sentences were not analysed, the learners memorised them as a formula, and they only changed the lexical item that corresponded to the month.²⁴ Therefore, the first issue I dealt with was the analysis of the sentence constituents. In order to show that “*habe*” was the finite verb, I pointed out how the agreement inflection on the verb changed if we used a 3sg subject. The first task I proposed to the participants thus consisted in using the formula in (23) with family members.²⁵ I affixed to the blackboard

²⁴ The learners could use this formula with ease, even though some learners failed to express the noun “Geburtstag”.

²⁵ Since the participants were not acquainted with the lexicon related to family members, I first provided them with the necessary lexical items. I affixed to the blackboard a poster that contained images of the Simpson family, and used a sort of True Judgement Task to teach the corresponding lexicon. I made the characters “introduce themselves” by means of speech bubbles like (i):

a poster that contained seven images of the Simpsons, and I asked the participants to produce subject-initial sentences about the character's birthdays. The month of birthday of each character was indicated under the corresponding image (see Image 2 in the Appendix). I provided the learners with an oral example:

- (24) Der Vati hat im Juli Geburtstag
'My dad's birthday is in July'

In the second task the learners had to produce sentences like (24), mentioning the desk mate's birthday. Also this task stimulated the use of 3sg subjects. Interestingly, even though the finite verbs were not visible on the blackboard, the learners never confused the forms "*habe*" and "*hat*".

In the second lesson, I encouraged the production of non-subject-initial utterances. Also in this case, the task consisted in producing sentences that included the classmates' month of birth, so I basically maintained the lexical items used in the previous lesson. In order to trigger the production of these sentences I asked questions like (25):

- (25) Wer hat im Februar Geburtstag?
'Who has his birthday in February?'

The participants were not provided with explicit instruction about German V2, and I just gave some oral examples like (26):

- (26) Im Februar hat Laura Geburtstag
'In February Laura has her birthday'

-
- (i) Ich bin der Bruder
'I am the brother'

The statements were sometimes wrong: the learners were asked to confirm or correct them with sentences like (ii):

- (ii) Ja, du bist der Bruder / Nein, du bist die Schwester
'Yes, you are the brother / No, you are the sister'

Although the model was not available on the blackboard, the reaction was immediately positive, and the learners could easily apply V-to-C movement to a familiar formula (see also 3.2.3.2).

In the third lesson I verified if the participants remembered how to build the non-subject-initial sentences used in the previous lesson. Since the results obtained were encouraging, I prepared the bases to test the application of V-to-C movement in a new context. I presented the verb *essen* (to eat) inflected for 3sg. The learners of Year 3 knew the 1sg form (*ich esse*), but they had never used the 3sg one (*isst*). For this task, I affixed to the blackboard two posters that contained respectively images of family members and images of food.²⁶ I asked the learners to produce subject-initial sentences, which included verbal arguments selected from the posters. I gave them the oral example in (27):

(27) Der Bruder isst die Banane
'The brother eats the banana'

Since the verb form was unfamiliar, it remained visible on the blackboard; moreover, I underlined that the German verb *isst* corresponded to the Italian *mangia*. I then encouraged the learners to produce similar subject-initial-sentences.²⁷

The learners' response was prompt, and they attempted to do more than reproducing the given model. For instance, they tried to produce coordinated sentences like (28), and the results were immediately positive:²⁸

²⁶ Before submitting them this new task, I had to repeat the lexicon related to food, which they only partly remembered.

²⁷ This task showed to the German teacher how easily lexical items could be used as verbal arguments. If inserted in a syntactic structure and used productively, the lists of words known by the learners became linguistically more relevant.

²⁸ Note that also in L1acq, children go beyond imitation. They use the information received in the input to produce novel forms. Here the L2 learners attempted to produce coordinated structures in the L2, on the basis of their L1 grammar.

- (28) Die Mutti isst Käse und trink(t) Wasser²⁹
'The mum eats cheese and drinks water'

I did not give any explicit instruction about coordination, and just supplied the conjunction “*und*” (and), when asked. The coordination spontaneously produced (and not requested) involved both sentences and DPs:

- (29) Der Opa isst Kekse und Honig und trinkt Milch und Kaffee
'The grandpa eats biscuits and honey and drinks milk and coffee'

In order to produce sentences like (29) the L2 learners probably relied on their linguistic endowment (UG) and/or on their L1.

Finally, in lesson four I assessed the participants' ability to apply V-to-C movement to new contexts, using the sentences produced in the previous lesson. The control group was unsupplied with explicit instruction about the syntactic properties of the verb in German. I just gave oral models like (30), repeated several times:

- (30) Am Montag isst die Mutti die Torte
'On Monday the mum eats the cake'

The participants were asked to combine days of the week, family members and food to build non-subject-initial sentences. The lexical items were selected from the images contained in three posters affixed on the blackboard. The finite verb was not visible for this task, since the learners had correctly used it during the previous lesson.

The L2 learners failed to apply V-to-C movement properly. I will give more details about the results obtained in next paragraph, but, in general, I observed that the participants tended to reproduce the L1

²⁹ Since the consonant cluster velar+dental /kt/ is not included in the Italian phonetic system, the participants tended to drop the final /t/, and obtained /trink/.

structure, locating the finite verb in the third linear position.³⁰ My attempts to guide them by means of negative feedback failed.³¹

Before concluding the experiment, I described the V2 structure in the control group. After receiving explicit grammar instruction, the participants started producing target-like utterances.

The simple exposure to the L2 input could probably entail positive effects if it were more robust. However, as I explained in the introduction to this chapter, the participants received only two German classes per week, and the poverty of exposure to the L2 did not allow them to build the L2 grammar solely on the basis of positive or negative feedback, as in contexts of immersion or in spontaneous L2acq.

Explicit grammar instruction and metalinguistic reflection allowed the learners to accelerate and optimise the development of the mental representation for the L2 grammar. Furthermore, I noticed that negative feedback resulted frustrating for the learners: although they realised that their utterances were not target-like, they could not immediately benefit from the feedback provided.

3.2.3.2. Data and results

In this paragraph the data collected in the control group will be presented, and the results obtained will be discussed. Also for Year 3, subject-initial and non-subject-initial sentences will be treated separately.

I start by analysing non-subject-initial sentences. The participants produced 79 sentences overall, which exclusively consisted of oral

³⁰ From this result I may infer that also in subject-initial sentences V-to-C movement was not applied (the finite verb was probably located in I°). A related implication is that the learners used the syntactic structure of the L1 as a default basis for the construction of the L2. This consideration is also coherent with the data concerning the coordination.

³¹ Note that also in L1acq positive or negative feedback does not necessarily play a crucial role in parameter setting. Firstly, not all the parents correct their children; secondly, the parents show to understand the children irrespective of whether the sentence is well formed or not; finally, the children seem to ignore corrections.

utterances. Table 3.9 provides the types of errors registered and the corresponding error rate.

Table 3.9. Year 3, non-subject initial sentences

Type of error	Error rate	%
V3	21/79	26.5
Verb omission	2/79	2.5
Pro-drop	0/79	
Drop of all funct. categ.	0/79	
Subject right dislocation	0/79	

The total errors produced were 23/79 (29.1%). The vast majority of the errors (21/23, 91.3%) consisted in placing the finite verb in the third linear position of the sentence (V3) (26.5% of the total non-subject-initial sentences produced). In (31) I propose some examples of V3 produced by the participants:

- (31) a. Am Montag die Mutti iss-t der Kuchen (Ivan, 8)
on Monday the.FSG mum eat-PRS.3SG the-NOM.MSG cake
[target: Am Montag isst die Mutti den Kuchen]
- b. Im Juni Sofia ha-t Geburtstag (Barbara, 8)
in June Sofia have-PRS.3SG birthday
[target: Im Juni hat Sofia Geburtstag]

The non-subject-initial sentences with V3 mostly involved the new constructions with “*essen*” (20/21) (31a). Only one occurrence of V3 was registered with “*haben Geburtstag*”, inflected for 3sg (31b).

As to phenomena of omission, only two cases of verb drop were registered, and concerned the first non-subject-initial utterances produced in the second lesson. The drop only involved the 3sg verb “*hat*”, as shown in (32):

- (32) Im Juni Alberto Geburtstag (Susanna, 8)
in June Alberto birthday
[target: Im Juni hat Alberto Geburtstag]

If we compare the results of the control group with those of the other groups, we observe that the rate of V3 was higher in the learners who were not provided with the formal description of the V2 structure. As shown above, the rate of utterances with V3 was 26.5% in Year 3 (21/79), while it was 6.4% (5/78) in Year 2 and 0% in Year 1 (0/31).³² In the control group, V3 mostly concerned unfamiliar sentences (31a), whereas V-to-C movement seemed to be easily applied to well-known constructions (31b). Instead, the learners of Year 2 recurred to V3 less frequently also in new unfamiliar contexts.

The constructions that included V3 were particularly significant for the investigation on L2 learning. The position of the finite verb at S-structure revealed that V-to-C movement did not occur, and that two syntactic positions were considered available before the finite verb. In other words, the participants applied the parameter of verb movement activated in their L1 to German: the finite verb was just raised to I^o, and the subsequent cyclic movement of the finite verb from I-to-C did not apply. These data were revealing, since they pointed to the role played by the L1 in the construction of the L2 grammar, and they also suggested how explicit grammar instruction could be involved in parameter resetting.

We could now direct our attention to subject-initial sentences. The total utterances produced were 177. Table 3.10 provides the results registered:

³² In the written task, only one occurrence of V3 was registered in Year 2.

Table 3.10. Year 3, subject initial sentences

Type of error	Error rate	%
Verb omission	7/177	3.9
Pro-drop	0/177	
Subj left dislocat (S-AVV-V)	0/177	

The only error observed in subject-initial sentences was verb omission, which concerned both the 3sg verb “*hat*” in familiar constructions (three occurrences like 33a) and the 3sg verb “*isst*” in non-familiar sentences (four occurrences like 33b):

- (33) a. Der Vati im Juni Geburtstag (Lisa, 8)
the.NOM.MSG dad in June birthday
[target: Der Vati hat im Juni Geburtstag]
‘My Dad’s birthday is in June’
- b. Der Bruder Banane (Barbara, 8)
the.NOM.MSG brother Banane
[target: Der Bruder isst die Banane]
‘The brother eats the banana’

If we consider the data of the three groups examined until now, we observe that the drop of the verb concerned both subject-initial and non-subject-initial sentences. On the contrary, the drop of the subject exclusively concerned non-subject-initial sentences, and only pronominal subjects were dropped. As pointed out in the previous paragraph, the omission of the subject was overall infrequent. Nonetheless, the regularity of pro-drop was striking: irrespective of the age, the subject was never dropped from the first sentence position, and subject drop seemed to be possible only from the postverbal position.

3.2.4. Year 4

3.2.4.1. The previous linguistic competence and the experimental lessons

During the observational period, the German teacher provided the learners with two different lists of lexical items: one included nouns (animals) and the other verbs. The verbs presented to the learners were unergatives (34a) and transitives (34b), both inflected for 3sg:

- (34) a. spring-t / läuf-t / schwimm-t / sitz-t / kletter-t
 jump-PRS.3SG / run-PRS.3SG / swim-PRS.3SG / sit-PRS.3SG / climb-PRS.3SG
 b. iss-t / friss-t / trink-t / spiel-t
 eat-PRS.3SG / devour-PRS.3SG / drink-PRS.3SG / play-PRS.3SG

Prior to the experiment, the German teacher assessed the learners through a test, which was rather telling about the traditional methods adopted in L2 teaching. Each learner received two sheets that included respectively a list of animals and a list of verbs already written on them; then the teacher asked them to cut the words, and to stick them in a different sheet, so as to combine each animal with the corresponding verb, as exemplified in (35):

- (35) a. Der Hase spring-t
 the.NOM.MSG rabbit jump-PRS.3SG
 b. Der Fisch schwimm-t
 the.NOM.MSG fish swim-PRS.3SG

Note that the finite verb was already inflected, and that the task did not consist in writing the sentences, or in producing oral utterances autonomously.³³ I doubt that a (comprehension) task, which consisted in selecting and combining two semantically related words (already inflected),

³³ The teacher did not trust the learners' ability to fulfil written tasks in the L2.

necessarily stimulated the brain areas responsible for morphosyntactic processes (the operation of subject-verb agreement was not stimulated).

In the course of the observational period, the learners were also involved in routine activities, such as singing a song in German or answering routine questions, as exemplified in (36):

- (36) a. Wie ist das Wetter heute? – Es regnet /die Sonne scheint ...
 ‘What’s the weather like today? – It rains/the sun is shining’
 b. Wie geht’s? – Gut/schlecht/so so ...
 ‘How are you? – Good/bad/so so’

With regard to my experimental lessons, I relied on the lexicon which was familiar for the learners. The tasks I proposed to the participants included both oral and written activities.

I mainly focused on transitive verbs, which entailed a more complex syntactic structure, and clearly showed how the V-to-C movement applied. If we compare (37c) with (38c), we observe that in Italian the subject can appear in post-verbal position with unergative verbs (37c), under specific pragmatic conditions (focus on the verb or on the subject). In contrast, (38c) is almost ungrammatical: Italian, unlike German, does not usually allow the external argument of a transitive verb to occur between the verb and the internal argument:

- (37) a. Am Montag schwimm-t der Hund
 on Monday swim-PRS.3SG the.NOM.MSG dog
 b. Di lunedì il cane nuot-a
 of Monday the.MSG dog swim-PRS.3SG
 c. Di lunedì nuot-a il cane
 of Monday swim-PRS.3SG the.MSG dog
- (38) a. Am Montag friss-t der Hund das Eis
 on Monday eat-PRS.3SG the.NOM.MSG dog the.NSG ice

- b. Il/di lunedì il cane mangi-a il gelato
 the.MSG/of Monday the.MSG dog eat-PRS.3SG the.MSG ice
- c. ?Il/di lunedì mangi-a il cane il gelato
 the.MSG/of Monday eat-PRS.3SG the.MSG dog the.MSG ice

For these reasons, I opted for the use of transitive verbs, so as to illustrate in a more effective way how the syntactic structure differed in the L2 and in the L1.

In the first lesson, I repeated the lexicon for the animals and the food, prior to stimulating the production of subject-initial sentences.³⁴ The first task was oral, while the second one was written. For both tasks, I affixed to the blackboard two posters with images of animals and food/drinks (see Images 2 and 4 in the Appendix), and asked the participants to combine them to produce sentences. The lexical items known by the learners were used as verbal arguments of the verbs “*isst*” and “*trinkt*”. The finite verb was not visible on the blackboard. The nouns that corresponded to the animals and the food were covered with a removable tag, which could be raised if the participants did not remember how to pronounce or write it (see Image 4 in the Appendix).

As to the oral task, the participants reacted with enthusiasm, and also produced original sentences like (39), in which they spontaneously used two animals as verbal arguments, being aware that the first one was the agent and the second one was the patient (irrespective of the incorrect use of the morphological case):

- (39) Der Löwe friss-t der Affe
 the.NOM.MSG lion devour-PRS.3SG the.NOM.MSG monkey
 ‘The lion devours the monkey’

³⁴ The participants had memorised the lexicon related to food in Year 3. During the experiment, the recall of the lexicon related to food was initially problematic. This shows that the L2 lexicon is likely to be forgotten, if it is not constantly repeated and productively used. This may sound obvious, but in L2 teaching it is quite common to “abandon” a topic when it is considered as learnt, particularly in the secondary school.

This confirmed that 9-year-old learners could rely on the universal principles governing the assignment of theta roles and syntactic Case. In GB terms, the Theta Criterion mediates between the Lexicon and the Syntax, and allows each argument to be assigned a thematic role (and only one) at D-structure. The assignment of syntactic Case at S-structure, then, provides the subject with nominative Case and the object with accusative Case. As already pointed out, the assignment of syntactic abstract Case is independent from the assignment of morphological case (overt in German but not in Italian).

With regard to the written task, the German teacher did not trust the learners' ability to perform written activities in the L2. Nevertheless, from three to four sentences per participants were produced in a short amount of time (ten minutes), even though the task was completely new for the learners. The written task was not beyond their capabilities; instead, it encouraged a reflection upon the syntactic categories of "verb" and "noun" (the latter requiring a capital letter in German), and stimulated further syntactic analyses of the sentence.

In the second lesson, I firstly verified if the learners remembered how to build subject-initial sentences. As this construction was unproblematic, I proceeded in the experiment and supplied the V2 model, in consistency with the didactic method described in 2.2.1. I provided the models in (40), and compared the syntactic structures in the L2 and in the L1 (see Image 1 in the Appendix):

- (40) Am Mittwoch frisst das Pferd das Eis (L2)
Di mercoledì il cavallo mangia il gelato (L1)
'On Wednesday the horse eats (the) ice'

I showed how the sentence in (40) could be used as an answer to the question:

- (41) Was macht das Pferd am Mittwoch?
Che cosa fa il cavallo di mercoledì?
'What does the horse usually do on Wednesday?'

The participants were then asked to carry out two tasks, an oral one and a written one, which consisted in producing similar non-subject-initial sentences. They had to select the verbal arguments (animals and food) from posters affixed on the blackboard (see Images 2 and 4 in the Appendix). The exemplars, both in German and in Italian, remained visible during this lesson, and the finite verb (*isst*) was thus available to the learners.

In lesson three, I first affixed a V2 model, so as to repeat the V2 structure presented in the previous lesson. I then recurred to two Stuffed Animal Tasks, in order to investigate the application of V-to-C movement in sentences that included morphological or lexical variables.

In the first task I inserted a morphological variable, while the lexicon remained constant. The finite verb had to be inflected for 1sg, and agree with the corresponding subject pronoun (*ich*). I used a caterpillar to ask questions like (42):

- (42) Was is-st du am Montag?
What eat-PRS.2SG you on Monday?
'What do you usually eat on Monday?'

Before the experiment, the German lessons focused on verbs inflected for 3sg, as noted above. The recollection of 1sg morphology and functional categories was initially rather problematic: the participants did not remember how to inflect the verb "*essen*" for 1sg, and they did not realise that "*ich*" correspond to the 1sg subject pronoun. However, after recalling the form-meaning/function association for these words, the learners managed to carry out the task, and produced non-subject-initial sentences using 1sg subjects. The direct object for the sentence was selected

from two posters with images of food and drinks (see Image 2 in the Appendix). During the performance, the finite verb and the pronoun were not visible on the blackboard.

The second task included a lexical variable. The familiar 3sg verbs remained constant, but I introduced new lexical items, i.e. the family members. The question asked by the caterpillar is instantiated in (43):

- (43) Was iss-t der Vati am Dienstag?
What eat-PRS.3SG the.NOM.MSG dad on Tuesday?
'What does the dad usually eat on Tuesday?'

In order to answer question (43), the new lexical items had to receive nominative syntactic Case and the thematic role of agent. The assignment of theta-role and syntactic Case to unfamiliar lexicon was unproblematic for the learners. However, they failed to apply V-to-C movement. The results of this task will be given in more detail in next subparagraph, but a general observation is that the learners initially failed to apply V-to-C movement to new contexts, probably because their attention was focused on the new lexical items. I thus gave a new L2 model. After the repetition of the V2 structure the improvement was immediate.

In lesson four I verified if the learners remembered how to apply V-to-C movement to familiar contexts (animal's food habits), without exposing the L2 model. The task consisted in producing oral non-subject-initial sentences. The learners showed that they were able to raise the verb to C° independently of given models.

The last task was a written activity. I asked the participants to list the different activities that their favourite animal carried out in each day of the week. They could use both transitive and unergative verbs, but they were explicitly asked to produce non-subject-initial sentences: the first sentence position had to be filled with a Time PP. The model provided is instantiated in (44):

- (44) a. Am Montag frisst die Katze Kekse
'On Monday the cat eats biscuits'
b. Am Dienstag läuft die Katze
'On Tuesday the cat runs'
c. Am Mittwoch spielt die Katze Tennis
'On Wednesday the cat plays tennis'

Other similar examples were given for the rest of the week. Prior to performing the task, we repeated all the verbs learnt with the German teacher: I wrote transitive and unergative verbs in two different columns. During the performance, the finite verbs remained visible, but neither the exemplars nor the posters with the images stayed available on the blackboard. The participants had to autonomously select the verbal arguments and apply V-to-C movement. The learners' reaction to this task was enthusiastic, because they could make use of all the lexical items they knew in the L2. They managed to carry out the task with excellent results, as I will show in the next paragraph.

3.2.4.2. Data and results

In this paragraph I will present the types of errors emerged in Year 4, with the corresponding occurrences. The results of the oral tasks will be treated separately from those of the written tasks. For this group only non-subject-initial sentences will be taken into account, since subject-initial sentences did not include any morphosyntactic errors relevant for the investigation on parameter resetting. This was valid for both oral and written tasks.³⁵

³⁵ The errors observed concerned either the accusative case (for food) or the gender (for both food and animals). I will not account for these errors, which were not significantly related to verb movement.

ORAL TASKS

Table 3.11 shows the data that concern the non-subject-initial sentences produced in oral tasks. The overall number of utterances produced was 120.

Table 3.11. Year 4, non-subject-initial sentences (oral tasks)

Type of error	Error rate	%
V3	10/120	8.3
Verb omission	1/120	0.8
Pro-drop	2/120	1.6
Drop of all funct. categ.	0/120	
Subject right dislocation	1/120	0.8

The most common error consisted in locating the verb in the third linear position of the sentence (V3) (10/120, 8.3%). As observed in the previous paragraphs, this error was common to all the groups of learners older than 6 (even though the error rate was higher in the control group, as noted in 3.2.3.2.). This suggested that the L2 learners after the age of 6/7 relied more on the L1, and easily transferred V-to-I movement to the L2. In (45), I provide some examples of utterances with V3:

- (45) a. Am Mittwoch das Pferd friss-t die Banane
on Wednesday the.NSG horse eat-PRS.3SG the.FSG banana
[target: Am Mittwoch frisst das Pferd die Banane]
‘On Wednesday the horse eats the banana’ (Lorenzo, 9)
- b. Am Freitag der Bär trink-t Orangensaft
on Friday the.NOM.MSG bear drink-PRS.3SG orange.juice
[target: Am Mittwoch trinkt der Bär Orangensaft]
‘On Friday the bear drinks orange juice’ (Matilde, 9)

As to the other types of errors observed, I registered only one case of verb omission out of 120 non-subject-initial sentences (0.8%):³⁶

- (46) Am Sonntag der Hund Saft
 on Sunday the.NOM.MSG dog juice
 [target: Am Sonntag trinkt der Hund Saft]
 ‘On Sunday the dog drinks juice’ (Michele, 9)

Furthermore, I observed two occurrences of subject drop in non-subject-initial sentences (2/120, 1.6%). In younger learners, the drop of the subject only involved the pronominal subject *ich*. In Year 4, instead, the omission involved lexical subjects. An example is given in (47):

- (47) Am Mittwoch friss-t Brot (Giovanni, 9)
 on Wednesday eat-PRS.3SG bread
 [target: Am Mittwoch frisst (Tier) Brot]
 ‘On Wednesday (animal) eats bread’

Finally, I registered a case of subject right dislocation, in which the lexical subject occurred after the internal argument, in a new and articulated construction that the participants aimed to produce:³⁷

³⁶ Also in Year 2 and Year 3 the drop of the lexical verb was rare (respectively 2.6% and 2.5%); in Year 1 the copula was never dropped in non-subject-initial sentences.

³⁷ Interestingly, for this particular construction the learner could not lean on the L1, because sentences like (i) are ungrammatical in Italian, unless the subject receives a particular pragmatic value (focus):

(i) *Di lunedì gioc-a a calcio l’ elefante contro il pinguino
 of Monday play-PRS.3SG to football the.MSG elephant against the.MSG penguin
 [target: Di lunedì l’elefante gioca a calcio contro il pinguino]

The example (i) shows the syntactic structure of the German target-like sentence (in line with the antisymmetry proposed in Kayne 1994):

(ii) [_{CP} am Montag [_Cspielt_i [_{IP} der Elefant_j I^o_i [[_{VP} t_j [_V^o_i [_{NP} Fußball] [_{PP} gegen den Pinguin]]]]]]

The cluster [Elefant gegen Pinguin] was kept together by the learner, who probably interpreted the words as semantically related, even though, from a syntactic point of view, they were separated by several syntactic boundaries.

- (48) Am Montag spiel-t Fußball Elefant gegen Pinguin
 on Monday play-PRS.3SG football elephant against penguin
 [target: Am Montag spielt der Elefant gegen den Pinguin Fußball]
 ‘On Monday the elephant plays football against the penguin’ (Marco, 9)

WRITTEN TASKS

I will now analyse the errors that concerned the written task (Table 3.12). The total non-subject-initial sentences produced by the participants amounted to 115. Among these sentences, 84 involved transitive verbs, such as *fressen* (to devour), *trinken* (to drink) and *spielen* (to play). As to the error rate, the participants produced six non-target-like sentences overall (6/115, 5.2%). Five out of six errors concerned transitive constructions (5/84, 6%).

Table 3.12. Year 4, non-subject-initial sentences (written tasks)

Type of error	Error rate	%
V3	2/115	1.7
Verb omission	0/115	
Pro-drop	1/115	0.9
Drop of all funct. categ.	0/115	
Subject right dislocation	3/115	2.6

As regards the types of errors produced, I registered two cases of V3, involving both unergative (49a) and transitive verbs (49b). I also observed one case of subject omission (49c) and three cases of “subject right dislocation”, where the lexical subject followed the direct object (49d-e):³⁸

- (49) a. Am Dienstag der Hund sitz-t (Giovanni, 9)
 on Tuesday the.NOM.MSG dog sit-PRS.3SG
 [target: Am Dienstag sitzt der Hund]
 ‘On Tuesday the dog sits’ (Giovanni, 9)

³⁸ In five sentences I found evidence of errors that the learners corrected autonomously: I observed traces of V3 in two cases, and traces of verb omission in three cases.

- b. Am Montag die Schlange trink-t der Bier
 on Monday the.FSG snake drink-PRS.3SG the.NOM.MSG beer
 [target: Am Montag trinkt die Schlange Bier]
 ‘On Tuesday the snake drinks beer’ (Carlo, 9)
- c. Am Dienstag trink-t der kakao
 on Tuesday drink-PRS.3SG the.NOM.MSG COCOA
 [target: Am Dienstag trinkt (Tier) Kakao]
 ‘On Tuesday (animal) drinks cocoa’
- d. Der Sonntag friss-t Banane der Affe
 the.NOM.MSG Sunday eat-PRS.3SG banana the.NOM.MSG monkey
 [target: Am Sonntag frisst der Affe Banane]
 ‘On Sunday the monkey eats the banana’ (Simone, 9)
- e. Am Donnerstag spil-t Basket der Löwe
 on Thursday play-PRS.3SG basket the.NOM.MSG lion
 [target: Am Donnerstag spielt der Löwe Basket]
 ‘On Thursday the lion plays basket’ (Marco, 9)

The examples (49d-e) reproduced a construction available in the L1: subject right dislocation in Italian entails a specific pragmatic value (focus on the direct object), and it is syntactically marked.³⁹ Consequently, in this case the learners did not simply reproduce a “default” unmarked PPSVO order. This kind of error gives further support the *Full Transfer Hypothesis* (cf. the Processability Theory in Håkansson, Pienemann & Sayehli 2002).

Note that this kind of construction was unattested in learners younger than 9. If we compare the error rate for the written tasks in Year 2 and in Year 4, we observe that the error rate was significantly higher in younger learners (17/66, 25.7% in Year 2 vs. 6/115, 5.2% in Year 4),

³⁹ I would like to precise that the sport is not the direct object of the verb *giocare* in Italian, as shown in example (ib). Anyway, both (ia) and (ib) imply contrastive focalization of the food and the sport, respectively:

- (i) a. La domenica mangia LA BANANA la scimmia
 the.FSG Sunday eat-PRS.3SG the.FSG banana the.FSG monkey
 b. Di giovedì gioca A BASKET il leone
 of Thursday play-PRS.3SG to basket the.MSG lion

although the task proposed was the same in the two groups. Moreover, the types of errors produced were completely different: younger learners mostly dropped the pronominal subject, whereas 9-year-old learners recurred to transfer from the L1, reproducing both marked and unmarked V3 orders.

3.2.5. Year 5

3.2.5.1. The previous linguistic competence and the experimental lessons

During the observational period, I noticed that the grammar instruction provided in Year 5 was more robust than in the other groups, since the learners received some traditional prescriptive instruction. They were thus aware of concepts such as verb and subject. Explicit grammar instruction for the L1 started in Year 3, but only learners of Year 5 showed some explicit grammar knowledge.⁴⁰ Grammar instruction was exclusively provided in Italian classes, while the German teacher mostly relied on the grammar notions learnt for the L1. German sentences were never analysed explicitly, and grammar information about the L2 was not provided. Moreover, crosslinguistic comparison was not considered a possible means for improving the linguistic competence in both the L1 and the L2.

As to the lexicon provided to this group before the experiment, it consisted of nouns (days of the week, classroom objects, school subjects...) and of lexical verbs, mostly inflected for the 1sg present indicative. The learners only knew the pronominal subject *ich*. Before the experimental lesson the participants were able to carry out written or oral tasks (mainly games) about school activities, in which they combined *Ich habe* (I have) with school subjects or with classroom objects.

My experimental lessons were organised as follows: in the first lesson, I immediately showed how German main clauses that included

⁴⁰ The grammar instruction provided at school did not necessarily stimulate the learners' explicit or metalinguistic knowledge: for instance, 10-year-old learners were not able to (explicitly) distinguish between spatial and temporal complements.

transitive verbs consisted of three mandatory positions (the verb, the object and the subject), to which further information could be added, activating other syntactic positions (for my purposes, I just showed four positions). I firstly analysed the structure for subject-initial sentences, which were more familiar for the participants. I integrated a temporal complement in the sentence, and compared the structures for the L2 and the L1 giving the model in (50):

- (50) a. Ich hab-e am Montag Deutsch
 I have-PRS.1SG on Monday German
- b. Ø Ho tedesco di lunedì
 have.PRS.1SG German of Monday
 ‘I have German on Monday’

In the first task, I invited the participants to produce subject-initial sentences conforming to the given model. Since the learners could easily carry out this task, I moved to non-subject-initial sentences. I always used models with familiar lexicon, and pointed out how the verb position varied in the two languages.

With this group, the reflection on the parameter of pro-drop was deeper, since 10-year-old learners seemed to test (or prove) their explicit grammar knowledge. A participant asked me whether the subject pronoun *ich* had to be mandatorily expressed.

After grammar instruction and metalinguistic reflection, I proposed a second task to the learners. I asked them to produce oral utterances with a non-subject constituent in Position 1. To trigger the production of non-subject-initial utterances, I asked questions like (51):

- (51) Welche Schulfächer hast du am Montag?
 ‘What subjects do you have on Monday?’

The fronted element always consisted of a Time PP (XP fronting). The models, which included the finite verb and the subject pronoun, were visible on the blackboard during the first set of utterances. However, the participants' attention focused on the lexical selection rather than on the given model: the learners had to select a day of the week and a school subject from two posters affixed on the blackboard (see Images 3 and 6 in the Appendix).

I finally assigned them a written task. The participants had to produce one subject-initial sentence and one non-subject-initial sentence about their school timetable. The Time PP and the direct object had to be selected from the posters. The models were removed from the blackboard.

In lesson two, I firstly recollected the V2 structure with the learners. I affixed to the blackboard the labels of the four positions that corresponded to the sentence constituents, and gave a familiar example. The participants raised questions about the constituents which could be fronted in German.⁴¹ I explained that either the subject, or the object, or the Time PP could be fronted. I highlighted that, whilst Position 1 was available for different constituents, just *one* constituent could be fronted at a time, before the finite verb.

I then introduced morphological and lexical variables in the familiar sentences discussed in the previous lesson. The first variable was morphological: I presented the verb inflected for 3sg, and used a lexical subject. The learners had never used the 3sg verb *hat* (has) before. I showed them a diary with Mickey Mouse's timetable for the week (see Image 7 in the Appendix); I then asked questions like (52):

- (52) Welches Schulfach hat Micky am Dienstag?
'Which school subject has Mickey on Tuesday?'

⁴¹ Note that questions about the grammar properties of the L2 almost exclusively emerged in Year 5. Only 10-year-old learners sought explicit grammar instruction. They seemed to need explicit knowledge of the L2 grammar.

The task implied the production of non-subject-initial sentences about Mickey Mouse's timetable, which was affixed on the blackboard. The participants were thus forced to inflect the finite verb for 3sg, which was removed from the blackboard after the description of the task. The task implied to carry out three different operations: the learners had to select the verbal arguments and to assign them the correct thematic role and syntactic Case (basing on UG); they had to apply V-to-C movement to a (partly) new context (parameter resetting); the finite verb had not only to be correctly moved to C (syntactic operation), but also properly inflected for 3sg (independent morphological operation). The introduction of a morphological unfamiliar variable, and the unavailability of the finite verb provoked some initial difficulty, but the vast majority of the participants fulfilled the task with ease.

In the second part of the lesson I introduced a lexical variable: I maintained the familiar verb inflection (1sg), but I stimulated the use of new lexical verbs, such as *brauchen* (to use/to need) and *kaufen* (to buy). I initially affixed a model to the blackboard. The exemplar contained the subject pronoun *ich* and the verb inflected for 1sg;⁴² Position 1 was filled with a Time PP (a day of the week); while position 4 was occupied by the internal argument (a classroom object). The task consisted in building non-subject-initial sentences, and the lexical items were selected from two posters with the corresponding images. After exemplifying the task, I removed the model from the blackboard, while the posters with the images remained visible during the performance. The participants produced non-subject-initial sentences with ease, even though they had never used the verbs *ich brauche/ich kaufe* in a productive way before.

⁴² While presenting the model for the task, the participants tried to inflect the verb *kaufen* for the 3sg, following the model given for *haben*. They basically attempted to generalise the mechanism of verb inflection, so as to apply it productively.

In lesson three I aimed to encourage the production of multi-sentence utterances, alternating subject-initial and non-subject-initial constructions. This alternation could show if the fronting of an element in preverbal position exclusively affected one syntactic constituent at a time (either the subject or the Time PP). Therefore, this task allowed me to verify if V-to-C movement applied systematically. To trigger the production of multi-sentence utterances, the context had to be clearly settled. I used a stuffed Mickey Mouse to create the context: it was Monday afternoon, and Mickey Mouse was preparing his satchel for the following day. He planned his activities as exemplified in (53):

- (53) a. Am Dienstag habe ich Kunst
 ‘On Tuesday I have Art’
 b. Ich brauche einen Gummi
 ‘I need a rubber’
 c. Heute kaufe ich einen Gummi
 ‘Today I buy a rubber’

I opted for the use of familiar verb inflection (1sg) and familiar lexical items. The only new lexical item employed was the adverb *heute* (today). I did not affix any exemplars, and only an oral model was provided.⁴³ While we discussed the given example, a learner asked me if a construction like (54) was possible in German:

- (54) *Ich heute kauf-e ... (ungrammatical in German)
 Io oggi compr-o ... (grammatical in Italian)
 I today buy-PRS.1SG

I explained that, although the adverb *heute* was shorter than a Time PP (which included two words), it could not occur between the subject and

⁴³ I just wrote on the blackboard unfamiliar or unclear words, such as the time adverb *heute*, and the finite verb *brauche*.

the verb, because it represented a syntactic constituent itself. I repeated that only one syntactic position was available in German before the finite verb: unlike Italian, only one element could be fronted in preverbal position, and it could have arbitrary grammatical function and thematic role. This question was particularly significant: on the one hand, it showed how the learners tended to apply the L1 parameter of verb movement to the L2; on the other hand, it confirmed that the preverbal positions available for fronted elements represented crucial input to guide the parameter resetting.

After discussing the models, I described the tasks to fulfil. The first task consisted in producing oral utterances with alternated subject-initial and non-subject-initial sentences, on the basis of the oral model provided. A written model was not exposed. The participants could select the lexical items (i.e. classroom objects, school subjects and days of the week) from posters affixed on the blackboard.

The second task consisted in writing similar sentences, without leaning on given models. Also for the written task, only the posters with the images remained available on the blackboard.

3.2.5.2. Data and results

In this subparagraph, I will present the data collected with 10-year-old learners. I will discuss the results of the oral tasks separately from those of the written tasks. Also the errors concerning subject-initial and non-subject-initial sentences will be kept separate.

ORAL TASKS

I will first account for non-subject-initial sentences. In Table 3.13, I present the results for the oral tasks.

Table 3.13. Year 5, non-subject-initial sentences (oral tasks)

Type of error	Error rate	%
V3	3/120	2.5
Verb omission	1/120	0.8
Pro-drop	0/120	
Drop of all funct. categ.	0/120	
Subject right dislocation	0/120	

The total non-subject-initial utterances produced amounted to 120, and the error rate was considerably low (4/120, 3.3%).

Only three cases of V3 were observed, but their occurrence was not random: they exclusively occurred when the morphological variable (the 3sg verb) was inserted in the familiar construction (55a). Some learners failed both in the syntactic operation (V-to-C movement), and in the (independent) morphological operation (verb inflection) (55b):

- (55) a. Am Freitag Mickey Mouse ha-t Kunst
on Friday Mickey Mouse have-PRS.3SG art
[target: Am Freitag hat Mickey Mouse Kunst]
‘On Friday Mickey Mouse has Art’ (Serena, 10)
- b. Am Dienstag Mickey Mouse hab-e Mathe
on Tuesday Mickey Mouse have-PRS.1SG maths
[target: Am Dienstag hat Mickey Mouse Mathe]
‘On Tuesday Mickey Mouse has maths’ (Yuri, 10)

Furthermore, just one case of verb drop was registered. It occurred in the first set of utterances targeting non-subject-initial sentences in the L2:

- (56) Am Montag ich Englisch
on Monday I English
[target: Am Montag habe ich Englisch]
‘On Monday I have English’ (Gigi, 10)

At this stage of the experiment, no cases of pro-drop were found (cf. the results obtained in the delayed post-test).

We can now move to the subject-initial utterances produced for the oral task. I registered 42 utterances overall, and no relevant syntactic errors were present. This result was therefore irrelevant for the investigation of German V2. However, it showed that L2 learners could easily build SVO sentences in the L2, using familiar lexicon productively within a syntactic structure.⁴⁴

WRITTEN TASKS

With regard to the written task, the participant produced 119 sentences overall, that included both subject-initial and non-subject-initial sentences.

The non-subject-initial sentences amounted to 69. In Table 3.14, I present the types of errors registered, with the corresponding rate.

Table 3.14. Year 5, non-subject-initial sentences (written tasks)

Type of error	Error rate	%
V3	2/69	2.9
Verb omission	4/69	5.8
Pro-drop	2/69	2.9
Drop of all funct. categ.	0/69	
Subject right dislocation	0/69	

⁴⁴ Although this result was not significant for the investigation of L2 learning, it could be interesting for didactic purposes. In general, the ease in producing sentences was surprising both in younger and in older L2 learners. The production of new sentences was thus a task consistent with the language faculty of the learners, and it was not beyond their cognitive capacities. Moreover, this task guaranteed the productive use of know lexicon, inserted in a syntactic template. Therefore, it allowed for a more complete and quicker process of construction of the L2 grammar.

The overall number of errors registered was nine (9/69, 13%). The most frequent error depended on verb omission (4/9, 44.4%); two examples are given in (57):

- (57) a. Heute ich der kuli (Paola, 10)
 today I the.NOM.MSG pen
 [target: Heute kaufe ich den Kuli]
 ‘Today I will buy the pen’
- b. Hoite achi fisch
 today I (?) fish
 [target: Heute kaufe ich Fisch]
 ‘Today I will buy fish’

Two out of nine errors consisted in omitting the pronominal subject *ich*, as instantiated in (58) (2/9, 22.2%):⁴⁵

- (58) Heute kauf-e das lineal (Giorgio, 10)
 today buy-PRS.1SG the.NSG ruler

Two further errors depended on V3 (2/9, 22.2%): the learners replicated the L1 structure, and did not apply V-to-C movement:⁴⁶

- (59) a. Am Montag ich hab-e englisch (Ugo, 10)
 on Monday I have-PRS.1SG English
- b. Heute ich kauf-e das Buch (Ilaria, 10)
 today I buy-PRS.1SG the.NSG book

We can now move to subject-initial constructions. The participants produced 50 subject-initial sentences overall in the written tasks. Table 3.15 presents the errors registered.

⁴⁵ In two more cases, the learners initially dropped the pronominal subject; they then realised their error, and autonomously corrected their sentence adding *ich* in the convenient position.

⁴⁶ One more participant initially produced a V3 construction, but eventually corrected his sentences autonomously.

Table 3.15. Year 5, subject initial sentences (written tasks)

Type of error	Error rate	%
Verb omission	0/50	
Pro-drop	1/50	2.0
Subj left dislocat (S-AVV-V)	0/50	

Only one error was registered in subject-initial sentences. However, I point to this error because it consisted in dropping the subject pronoun *ich* from the first-sentence position:

- (60) Ø brauch-e das Buch
 need-PRS.1SG the.NSG book

Only two occurrences of V1 were registered in the whole corpus (this one in a written task, and another one in an oral task of the delayed post-test). I consider the infrequency of pro-drop in subject-initial sentences as particularly suggestive, if compared with the larger occurrence of subject-drop in non-subject-initial sentences. The subject seemed not to be easily dropped from sentence initial position (which may also be a topic position); on the contrary, the drop seemed to affect subjects in postverbal position.

As a general conclusion, I could observe that the participants of Year 5 reacted promptly and precisely to both written and oral tasks. In this group, the time of exposure to the L2 was longer. We could envisage that this fact had positive effects on the participant's performance. In addition, the learners of Year 5 seemed to have developed some metalinguistic knowledge not observed in younger learners. They had also received more explicit grammar instruction for their L1, and had thus developed some explicit linguistic knowledge. We could suppose that all these factors played a role on the good performance registered in this group.

3.3. General overview and interim conclusions

The results obtained in the experiment suggested that the learners disposed of a full available and activated syntactic structure for the L2, including the functional field (IP) and the left periphery of the sentence (CP) (see Schwartz & Sprouse 1994, 1996 for a *Full Transfer/Full Access* in L2acq, which can be extended to L2 learning). I assume that in L2 learners the universal principles of UG are already present at an abstract level, and language acquisition consists in activating the projections and the features of the target language. The learners could lean on both UG and L1. The availability of the L1 was particularly revealed by the errors that included V3 or subject right dislocation.

The experiment showed that, starting from this endowment, the participants attempted to re-set a crucial parameter of variation between the L1 and the L2, which concerned the target position for the finite verb (or the locus of feature checking for the finite verb, in minimalist terms), on the basis of the particular input provided. This input could not be naturalistic, but it had to highlight the crucial points of variation between the L1 and the L2, in order to reinforce the information revealing the position of the finite verb in German root declaratives. The data suggested that Italian child-L2 learners of German could apply V-to-C movement after instruction. However, only the post-test will confirm if the setting of the V2 parameter for the L2 was permanent.

With regard to the didactic indication I could infer from my experiment, I concluded that formal linguistic theories applied to grammar instruction allowed for the formulation of an effective description and analysis of the L2 input. During the experiment, the effectiveness of explicit grammar instruction was immediate and entailed instant positive results. A formal description of the syntactic structure and a rigorous cross-linguistic comparison met the learning needs in all the groups. Although older learners

had developed wider explicit grammar knowledge, this method was adequate also for younger learners, since it relied upon implicit grammar competence. Finally, the reaction of the participants to explicit grammar instruction was prompt and enthusiastic.

Before describing the implementation of the delayed post-test, I will briefly summarize the types of errors registered during the experimental lessons: I will first provide a general overview, and then compare the rate of errors in the five groups. I will just recall the error registered in the oral utterances, since written tasks only involved three groups.

Table 3.16 emphasises the relatively low amount of non-target-like utterances produced by the learners during the experiment.

Table 3.16. Overall error rate in the experimental lessons

Type of error	Total errors	%
Non-subject-initial sentences	58/428	13.5
Subject-initial sentences	16/446	3.5
Total	74/ 847	8.3

If we just consider non-subject-initial sentences, the error rate was 13.5%. On the one hand, this positive result proved that the learners could immediately process the L2 input, and used the L2 model in a productive way. The immediate effectiveness of the instruction provided depended on the fact that the grammar analysis was consistent with the mechanisms of language processing.⁴⁷ On the other hand, the prompt response of the learners suggested that they relied on implicit language-specific abilities. If we compare the results obtained in the different groups, we observe that the general cognitive development of the pupils only partly influenced their

⁴⁷ Also VanPatten & Smith (2014) point to the immediate effects of grammar instruction based on focused models: they show that after 30 minutes of treatment (consisting of 100 input sentences), earliest-stage L1 English – L2 Japanese learners demonstrate projection of head directionality beyond the types of sentences contained in the input received.

linguistic performance. Although the errors produced by younger learners were quantitatively and qualitatively different from those produced by older learners, the overall number of target-like utterances was significant irrespective of the age.

In Table 3.17, I provide a summary of the errors in non-subject-initial sentences (non-SIS), which were very telling about the application of V-to-C movement. I will present the occurrences of each type of error both in relation to the total amount of non-subject-initial sentences, and in relation to the total amount of errors registered in non-subject-initial sentences.

Table 3.17. Error rate in non-subject-initial sentences (non-SIS)

Type of error	/total non-SIS	%	/errors in non-SIS	%
V3	39/428	9.1	39/58	67.2
Pro-drop	10/428	2.3	10/58	17.2
Verb-drop	6/428	1.4	6/58	10
Subject+verb drop	2/428	0.5	2/58	3.4
Subject right dislocation	1/428	0.2	1/58	1.7

If we analyse non-subject-initial sentences in depth, we observe that the errors produced by the learners were not random, but mainly consisted in two strategies:

- (i) reproducing the structure of the L1;
- (ii) omitting the functional categories mainly involved in the operation of verb movement, i.e. the finite verb and the subject.

The most frequent error produced by children was V3 (67.2% of the errors registered in non-subject-initial sentences). In 39 non-subject-initial sentences the finite verb appeared in third linear position, and this entailed that V-to-C movement had not apply. The implication was that the learners

based the construction of the L2 grammar on their L1. Also the rare cases of subject right dislocation suggested that the learners relied on the structures available in their L1.

As to errors depending on the drop of the verb/subject, the overall occurrences of omission were 18, and they represented the 30.6% of the errors produced during the experimental lessons. Whilst subject-drop, verb-drop or subject+verb-drop were infrequent, they could be suggestive of the linguistic strategies that child L2 learners applied to build the L2 grammar. My claim depends on two considerations: firstly, the types of error produced by the learners were not unlimited, but they could be clearly arranged in two main groups – type (i) or type (ii) – as listed above; secondly, the regularity in the types of errors encouraged me not to consider chance as a factor responsible for the production of these errors.

In Tables 3.18-3.21, the different errors registered in non-subject-initial utterances will be treated type by type. The errors produced in each group will be presented separately and compared. During the error analysis, we should keep in mind that the learners of Year 3 (8-year-old learners) represented the control group.

In Table 3.18, I summarize the cases of V3 found in the five groups. The most common strategy adopted by the learners older than 6 in fact consisted in reproducing the L1 structure, applying the parameter of V-to-I movement to the L2. Interestingly, 6-year-old learners seemed not to rely on this strategy.

Table 3.18. V-to-I movement in German non-subject initial sentences (V3)

Year	Error rate	%
1	0/31	
2	5/78	6.4
3	21/79	26.5
4	10/120	8.3
5	3/120	2.5

The error rate was higher in the control group (26.5%) than in the other groups. This result gives further support to the didactic method employed. Among the other groups, 7-year-old learners performed better than 9-year-old learners in relation to this error. This suggested that a longer exposure to the L2 at school did not assure a better performance. The exposure to a non-analysed L2 input for two hours a week seemed not to be effective for L2 learning. In Year 5, the reduction of the error rate was relevant (2.5%). The reasons why 10-year-old learners reacted better to the experiment could be related to the fact that they did not only lean on the advantages of the critical period, but they also had developed other cognitive strategies to learn a L2, including metalinguistic knowledge.

The second most common error depended on pro-drop, and the omission mainly affected the pronominal subject *ich*. The corresponding data are presented in Table 3.19:

Table 3.19. Subject-drop in non-subject-initial sentences

Year	Error rate	%
1	5/31	16.1
2	2/78	2.5
3	0/79	
4	2/120	1.6 ⁴⁸
5	0/120	

The participants of Year 1 seemed to perform differently with regard to the other groups: while they did not produce V3 (cf. Table 3.16), they tended to drop the subject more than older learners (16.1%).⁴⁹ Particularly striking was the comparison with 7-year-old learners (2.5%), considering that both groups mainly used 1sg subjects. If we follow Pinker (1994), the process of language acquisition changes precisely after the age of 6 years.⁵⁰ Also Guasti (2002) cites studies showing that native performance in morphology and syntax can be achieved only by speakers exposed to a L2 before age 7. My data confirm that the passage from 6 to 7 years is crucial for the modalities of L2 learning. The L2 learners younger than 7 seem to be more receptive to the L2 input: they possibly elaborate the L2 data basing more on the potentiality of UG, rather than on the parameters of their L1 (V-to-I). This issue should be taken into larger consideration in the primary school, since it could be crucial for L2 teaching.

⁴⁸ The learners aged from 8 to 9 years mainly used 3sg verbs, which implied the recourse to lexical subjects. The drop of the subject seemed to be sensitive to the functional vs. lexical nature of the subject itself. So, the low rate of subject drop in these two groups could be also related to the syntactic category of the subject.

⁴⁹ Note that learners of Year 5 did not omit the subject in oral tasks, but this error was (rarely) registered in written tasks, both in non-subject-initial (2/69) and in subject-initial (1/50) sentences.

⁵⁰ Also Reffieuna (2012) points out that, at a more general cognitive level, a sudden advancement is registered in 7-year-old children.

Returning to pro-drop, I point out that the drop of the subject only involved non-subject-initial utterances in all the groups.⁵¹ In subject-initial utterances, instead, no case of V1 emerged, and the first-sentence position was always filled with a subject (maybe a topic with a discourse-related function). The data from L2 learners displayed an opposite pattern in comparison with the data from L1 acquirers of German, who drop the subject mostly from first-sentence position (cf. Weissenborn 1990, Poeppler & Wexler 1993, Hamann 1996).

Table 3.20 presents the infrequent errors due to verb drop in non-subject-initial sentences.

Table 3.20. Verb-drop in non-subject-initial sentence

Year	Error rate	%
1	0/31	
2	2/78	2.5
3	2/79	2.5
4	1/120	0.8
5	1/120	0.8

Verb drop was more frequent in subject-initial sentences (16/446). It affected both copulas (Year 1) and lexical verbs (Year 2 and Year 3). Nevertheless, the drop of the finite verb could not be used to support the claim that young L2 learners lacked functional projection for the L2 under construction, since almost 90% of the utterances were target-like and included the finite verb and the subject.

A further error attested in non-subject-initial sentences was the drop of both the copula and the pronominal subject. As shown in Table 3.21, this type of error was extremely rare. Nonetheless I consider it

⁵¹ Only one occurrence of pro-drop in subject-initial sentences was registered in a written task, and was produced by a 10-year-old learner.

revealing about the availability of the syntactic structure in L2 learners: this error was exclusively found in 6-year-old learners, even though older learners could potentially produce the same error, being in the early stages of L2 learning.

Table 3.21. Verb+subject-drop in non-subject-initial sentence

Year	Error rate	%
1	2/31	6.4
2	0/78	
3	0/79	
4	0/120	
5	0/120	

This error might reveal a very early stage in the development of the L2 grammar. However, its infrequency emphasised that all L2 learners in the primary school were in condition to produce non-subject-initial V2 structures. This entailed that the CP was available to L2 learners, already in 6-year-old children.

The errors showed from Table 3.18 to Table 3.21 represented the entire range of syntactic errors produced by the learners during the experiment. The errors were thus predictable and they could be precisely accounted for within a strong theoretical framework. Also non-target-like sentences were possible grammars, namely they were consistent with UG principles: the L2 learners' initial interlanguage representation conformed to the properties of natural language, even though it did not necessarily match the L2 (Selkirk 1972, Schwartz & Sprouse 1994, 1996, White 2003). This result showed how formal linguistic analyses potentially represent a very supportive means for didactic purposes.

4. Data and results of the delayed post-test

4.1. General description

In paragraph 2.3., when I introduced the three stages of my research, I gave a hint of the delayed post-test I performed six months after the experiment, in order to verify if the didactic approach I applied had long-term effects. The post-test was carried out at the end of May 2014, and it consisted of a sixty-minute session per each class.

After the experiment of December 2013, the learners had no longer been exposed to focused L2 input about non-subject-initial main clauses. During the ordinary German lessons, they practiced the 1st person singular (1sg), building SVO sentences like *ich esse...* (I eat) or *ich spiele...* (I play). Instead, they did not use the 3rd person singular (3sg).

In the course of the post-test, the tasks submitted to elicit the data were similar to those used during the experiment. I mainly asked the learners to produce sentences (about their food habits, for instance), selecting the lexical items from posters affixed on the blackboard, which contained five to nine images representing the verbal arguments. The L2 model was not available. During the learners' performance, I observed if they were able to recollect the V2 structure, and I noted the non-target-like utterances produced. All the tasks were oral.

If the group did not remember how to apply V-to-C movement, I provide them with a L2 model, using the same didactic method I adopted during the experiment six months before. German V2 was illustrated with an exemplar, and described in a simplified but formal way, encouraging a crosslinguistic comparison between the L1 and the L2. In the model, both lexical items and functional categories were fully available to the learners during the revision of the structure. The model was removed from the blackboard only when the learners had got acquainted with the V2 structure.

In the following paragraphs I will discuss the results collected in each group, pointing in particular to the non-target-like utterances.

4.2. The results obtained

4.2.1. Year 1

At the time of the post-test, the learners of the Year 1 were 21 and ranged in age from six to seven years. They had been exposed to German for nine months, 60 minutes per week. I elicited the data by means of two oral production tasks.

Both tasks were intended to stimulate the production of non-subject-initial sentences with fronting of the Time adverb *heute* (today). The first task consisted in a short interview, in which the learners were asked about their mood, so as to obtain answers as those instantiated in (61):

- (61) Heute bin ich froh/traurig/zornig
'Today I am happy/sad/angry'

The second task was a picture description task: the learners were invited to describe images in which family members in different moods were represented. The use of 3sg forms was thus stimulated, as exemplified in (62):

- (62) Heute ist die Mutti froh
'Today the mum is happy'

For the first task, I affixed to the blackboard three images which represented three different moods (*froh*, *traurig* and *zornig*). The copula and the subject pronoun were not exposed. The learners easily recollected the adjectives referring to the moods, and they were also able to employ both the subject pronoun *ich* and the copula *bin* (3) for 1sg subjects. During normal German classes, they had been exposed year-round to songs and

games focusing on the alternation 1sg/2sg (*ich bin /du bist*). They firstly produced subject-initial main clauses (SVX), as instantiated in (63):

- (63) Ich bin froh
 ‘I am happy’

One utterance per learner was produced, so that 21 subject-initial sentences were registered on the whole, without syntactic errors.

I thus introduced the Time adverb *heute* (today). The learners were asked to produce sentences that included the adverb, in order to test the recollection of the V2 structure met six months before. I first listened to their “spontaneous” utterances, and then corrected the non-target-like outcomes. The participants produced 34 non-subject-initial main declarative clauses overall (13 before and 21 after the revision of the V2 structure).

I will not discuss subject-initial utterances, since no relevant syntactic errors emerged from the elicited data. The types of errors registered in the first task, and the corresponding quantity, are given in Table 3.22.

Table 3.22. Year 1, non-subject-initial sentences with 1sg copula

Type of error	Error rate	%
V3	13/34	38.2
Pro-drop	4/34 ⁵²	11.8
Verb-drop	2/34	5.9
Drop of all functional categories	1/34	2.9

Each example in (64) instantiates a type of error emerged in the elicited data:

⁵² Two out of the four errors were produced by the same learner.

- (64) a. Heute ich bin zornig (Matteo, 7)
today I be.PRS.1SG angry
- b. Heute bin froh (Camilla, 7)
today be.PRS.1SG happy
- c. Heute ich froh (Alice, 6)
today I happy
- d. Heute froh (Jessica, 6)
today happy

In general, the error rate was significant (20/34, 59%). The most widespread error (64a) consisted in placing the verb in the third linear position of the sentence (V3), and only concerned the utterances produced before providing a L2 model (13/13, 100%). This error arguably depended on transfer from the L1, and showed that the V2 structure could not be properly used before being revised. If the learners reproduced the syntactic pattern of their L1, the inflected verb occurred in I°, and therefore V-to-C movement had not taken place (Tran 2005: 598). From this result we can infer a general statement: following Schwartz (2003), the first phase of L2-acquisition generally relies on syntactic transfer from the L1, even though UG is fully available for data analysis in L2 acquirers (see also Hamann 2000). This claim could be extended to L2 learners (at least after age 6).

Note that 6-year-old learners had not produced V3 structures during the experiment of December 2013, although the elicited production task was the same. The age-factor could possibly play a role in this process: when the post-test was performed (May 2014), some learners were already 7 years old (Pinker 1994, Guasti 2002, Reffieuna 2012). This does not mean that L2 acquirers younger than 6 have not recourse to transfer from their L1: the data in Haznedar & Schwartz (1997) suggest that Erdem already transferred structures from his L1 Turkish to L2 English at the age of 4;3. Further and more detailed

investigation is thus desirable, and could tell us more about how tutored L2 learners react to L2 data/models between the age of 6 and 7 years.

Returning to the results of the post-test, we observe that the learners produced target-like XVS clauses only after the revision of the V2 structure, which was easily recollected. Errors due to V3 were not reiterated, but other kinds of errors emerged (7/21, 33.3%). They concerned the drop of functional categories involved in verb raising, namely the subject pronoun *ich* (64b) and/or the copula *bin* (64c). As regards pro-drop, this kind of error was also attested during the experiment in December, confirming that the range of possible errors was restricted and predictable. Interestingly, also in the post-test, the drop of the subject pronoun only concerned non-subject-initial clauses, although Italian allows for subject drop in SVO main clauses (cf. Hamann 1996 and Weissenborn 1990 for subject-drop in German L1acq).

As to the picture description task, targeting the use of the copula inflected for 3sg, the most interesting datum concerns the inability of the learners to use the copula productively. Even though they had been instructed about the 3sg form *ist* during the experimental lessons, they were not able to recollect it six months later. In fact, in the months following the experiment, learners failed to be regularly exposed to this verbal form, and therefore they obviously forgot it. Consequently, not all the participants responded to this task: the instable variables (kinship nouns and copula) seemed to preclude the production of utterances in some learners (cf. silent period, Meisel 2008: 68). Therefore, in (65) I instantiate the subject-initial clauses produced only by 10 learners, in which some interesting errors emerged.

- (65) a. Oma Ø zornig (Alberto, 6)
 grandma angry
- b. Oma è zornig (Lucia, 6)
 grandma be.PRS.3SG (L1) angry
- c. Der Vat ich froh (target: Der Vati ist froh)
 the.NOM.MSG dad I happy (Ugo, 6)
- d. Du bist die Mutti froh (Alessio, 7)
 you be.PRS.2SG the.FSG mum happy
- e. Ich bin Mutti ist froh (Matteo, 7)
 I be.PRS.1SG mum be.PRS.3SG happy

First of all, the data in (65) confirm that subject-initial sentences never included a null subject, neither pronominal nor lexical. The drop, instead, affected the copula inflected for 3sg, i.e. a form which arguably the L2 learners had not properly discriminated and analysed yet. Three occurrences of verb drop like (65a) were registered. The drop was not the only strategy adopted by the learner to deal with this instable form. Two occurrences of code mixing were found, as instantiated in (65b), where the learner had recourse to the L1 to express the verb (cf. code mixing in Cognola 2010 and Ricci Garotti 2012). Another strategy consisted in picking out a phonetically similar form (three occurrences): in (65c) the learners confused the copula *ist* with the subject pronoun *ich*; therefore, they failed in associating the right meaning/function to the corresponding form. These errors are thus suggesting of the difficulty in carrying out an autonomous discrimination, segmentation and analysis of the sentence constituents in the speech stream (cf. VanPatten in press). Note that the verb was nevertheless placed in the correct syntactic position, even though the wrong form was selected. These errors also suggest that the difficulties were concentrated on functional categories. Moving to (65d), this example becomes easier to analyse if we hold that the child aimed to produce a sentence that corresponded to (66):

- (66) Tu sei una mamma felice
you be.PRS.2SG a.FSG mum happy (du bist die Mutti froh)
'You are a happy mum'

This utterance was thus a case of transfer of the syntactic structure of the L1 to the L2. Finally, in (65e) the learner began the sentence with the routine expression *ich bin*, which occurred in the place intended for the determiner. I interpret this error as another case of wrong association of a form with its meaning/function.

4.2.2. Year 2

At the time of the delayed post-test the participants of Year 2 ranged in age between 7 and 8 years, and had been exposed to German for almost two years, 60 minutes per week. The learners who took part in the post-test were 22.

In order to elicit the data, I submitted two different oral tasks: a picture description task, intended to stimulate the production of 3sg verbs; and a task in which the learners had to refer their food habits to a wooden caterpillar; this task was intended to provoke the production of non-subject-initial sentences with a 1sg verb.

For the picture description task, I showed two images that represented respectively a dog eating chocolate and a mouse eating cheese. I asked the participants to describe the pictures, but they were not in condition to answer, since they could not recollect the finite verb. I consider this reaction rather telling about the mechanisms at work in tutored L2 learning: if a classroom L2 learner is not able to express the finite verb in the L2, s/he is not in condition to produce any sentences, even though s/he remembers the lexical items corresponding to the verbal arguments. This reaction suggests that the finite verb was a crucial element for L2 learners, whose exclusion compromised the production of a sentence in the L2. This clue is

relevant for the improvement of L2 teaching at the primary school: I point out that in Year 2 – as well as in Year 1 – 3sg forms were neglected during the six months following the experiment, although they turned out to be crucial for sentence production. Finally, I notice that 7-year-old learners did not attempt to produce sentences omitting the verb or having recourse to the L1, as some learners of Year 1 did (cf. 65a-b).

With regard to the second task, I affixed to blackboard two posters: the leftmost one was a colourful calendar with the days of the week in German written on it (they constituted the fronted Time PP); the rightmost one, instead, included nine images of food (they constituted the direct object). During the post-test, the finite verb (*esse*) and the subject pronoun (*ich*) were not affixed to the blackboard in the beginning. I employed a wooden caterpillar to ask the learners about their food habits, using questions like (67). The task implied a reply that included a fronted Time PP, i.e. the application of the V2 structure (for a similar “Weekdays Activity Task” cf. Tran 2005).

(67) Was isst du am Montag?
‘What do you eat on Monday?’

Prior to posing the question in (67), I ascertained that the learners remembered all the lexical items necessary to elaborate their answers: they easily remembered the lexicon corresponding to the days of the week and the food. To build their sentences, they mainly picked out the direct object from the images on the poster, but someone had recourse to his/her own vocabulary about food. As to the verb form, I verified if the learners mastered the verb *essen* (to eat) inflected for 1sg (*ich esse*): despite the fact that the learners had already met this form as a routine formula during the ordinary German classes, they were barely able to use it productively in (partly) unfamiliar contexts. The verb *trinken* (to drink) was even more difficult to retrieve; the verb stem *trink* was eventually evoked by a boy, and

this form was probably to be interpreted as a “default” uninflected form. Interestingly enough, learners remembered that *ich* was the subject pronouns for 1sg, but they did not associate the verb morpheme *-e* to 1sg (cf. *Missing Inflection Hypothesis* of Haznedar & Schwartz 1997). I thus made them familiar with the verb inflected for 1sg, and the forms *ich trinke* (I drink) and *ich esse* (I eat) were evoked with a common effort of the class.

At this point, the learners were well-equipped to produce sentences. I had recourse to the wooden caterpillar to pose them the question in (67). All the present learners tried to reply.

I firstly observed their reaction without correcting them, in order to register their “spontaneous” responses. The participants initially produced SVO sentences without including the TimePP, and reproduced the routine expressions learned with their German teacher (22 sentences, one per participant).⁵³ Subsequently I invited them to introduce a day of the week in their sentence: they spontaneously produced SVPPO main clauses, as those presented in (68):

- (68) a. Ich ess-e am Donnerstag Torte (Giulia, 8)
 I eat-PRS.1SG on Thursday cake
 ‘I eat a/the cake on Thursday’
- b. Die ess-e Montag Kekse (Piero and Luigi, 7)
 the.FSG eat-PRS.1SG Monday cookies
 ‘I eat cookies on Monday’

About 20 sentences like (68) were registered, until a learner produced a PPVSO main clause. At this point, the group began to recollect non-subject-initial clauses. However, most of the initial utterances

⁵³ Unlike Håkansson, Pienemann & Sayehli (2002), I do not interpret the initial production of SVO sentences as a consequence of an implicational scale that begins with a canonical SVO order. The learners just reproduced a more familiar structure, namely the only order that the German teacher made them use during ordinary L2 classes. This does not entail a cognitive limit in using fronted adverbs: if appropriately stimulated, the learners showed their ability to employ adverbs or Time PPs.

reproduced the PPSVO structure of the L1 (V3), with the PP fronted to a Frame position and the verb in I° (Benincà & Poletto 2004). The verb-raising paradigm of the native language was thus used as starting point for the L2 (compare White 1992, Schwazt & Sprouse 1996, Hamman 2000, Schwartz 2003 with Epstein, Flynn & Martohardjono 1996, Håkansson, Pienemann & Sayehli 2002 and Meisel 2008). I interpret this result as a proof of the complete availability of the L1 in child L2 learners. Furthermore, my interpretation disconfirms the *Minimal Trees Hypothesis*: according to Vainikka & Young-Scholten (1996), only lexical categories are available to child L2 learners, and L1 transfer is thus to be expected in lexical but not in functional projections. On the contrary, my data showed that the transfer affected IP, and confirmed that tutored L2 learners relied on Italian for the target position of verb raising.

After registering the first reactions of the group, I showed a new exemplar for the V2 structure explained six months before. I affixed to the blackboard the four positions where the finite verb, its arguments and the fronted Time PP were located, and described how their distribution changed in German and in Italian. The learners easily recollected the V2 structure, mostly thanks to the crosslinguistic comparison with the L1.

The participants eagerly accepted to produce a new set of sentences, trying to reproduce the target-like structure just described in the exemplar. Two interesting issues emerged: first of all, several target-like PPSVO clauses were realised immediately after the revision of the V2 structure (69); secondly, only finite verbs were used (inflected for 1sg), except for two cases in which the learners had recourse to the “infinitive” form for the verb *trinken*. This form must not be analysed as a root infinitive, though (see Wexler 1994, Rizzi 1993/1994 and Guasti 2002 for the use of optional/root infinitives in L1acq): note that both forms in *-e* and in *-en* appeared in the position dedicated to the finite verb (see, for instance (70b) below); moreover, all verb forms co-occurred with a subject pronoun, suggesting

that they were actual finite verbs with missing or wrong inflection. Again, this datum supports the *Missing Inflection Hypothesis* proposed in Haznedar & Schwartz (1997) (see also Tran 2005; cf. Prévost 1997). The instable use of the verb paradigm depended on the fact that relating abstract features with the proper morphological forms was a challenging operation for the learners (requiring learning, according to VanPatten & Rothman 2014).

To sum up, we can observe that the results obtained in the second task were much better than those registered in the picture description task. In (69) I exemplify a non-subject-initial utterance lacking syntactic errors:

- (69) Am Mittwoch trink-e ich Kakao (Clara, 7)
 on Wednesday drink-PRS.1SG I chocolate
 ‘On Wednesday I drink chocolate’

Nonetheless, as already preempted, syntactic errors were registered particularly in the set of utterances that preceded the revision of the V2 structure. Hence, I will now discuss the morphosyntactic errors produced by the participants in the second task, considering both subject-initial and non-subject-initial sentences.

I begin by observing non-subject-initial utterances. Table 3.23 is a summary of the errors and their quantity.

Table 3.23. Year 2, non-subject-initial sentences

Type of error	Error rate	%
V3 before revision	20/22	90.9
V3 after revision	6/22	27.3
Pro-drop	5/44	11.4
Verb-drop	2/44	4.5
Drop of all functional categories	1/44	2.3

I registered an average of two non-subject-initial main clauses per participant, namely 44 sentences overall: the first set of utterances preceded the revision of the V2 structure, while the second followed it.

During the performance of the first set of utterances, a significant rate of errors was registered (21/22, 95%). Interestingly, all the incorrect utterances (except for one) were V3 sentences (70), in which the learners reproduced the unmarked syntactic order of their L1 (PPSVO) (20/22, 90.9%).⁵⁴

- (70) a. Am Dienstag ich ess-e Wassermelone (Giacomo, 7)
 on Tuesday I eat-PRS.1SG watermelon
- b. Die Freitag die trink-en Milch (Anna, 8)⁵⁵
 the.FSG Friday the.FSG drink-INF milk
 [target: Am Freitag trinke ich Milch]
 ‘On Friday I drink milk’

Only a learner omitted both the finite verb and the pronominal subject (1/22, 4.5%), maintaining only the lexical categories:

- (71) Am Montag Apfel (Giada, 8)
 on Monday apple

Errors like (71) were extremely rare in my corpus (4 occurrences overall, only in 6 and 7-year-old learners); therefore they cannot be used to prove the lack of functional categories in the initial state of L2 learning (Parodi p.c.).⁵⁶ I report these isolated cases precisely to reinforce the idea

⁵⁴ Note that the code mixing/code switching was totally absent in 7-year-old learners, whereas it was registered in 6-year-old learners.

⁵⁵ In its second occurrence, the article *die* was confused with the subject pronoun *ich*, maybe because they share some phonetic properties. Instead, the first *die* was used in place of the preposition *am* (*am Freitag*). Note that in Italian the days of the week can be preceded by the definite article (*il venerdì*). This kind of error also involved other groups, so it was connected neither to the learners’ age nor to the length of exposure to the L2 input.

⁵⁶ Compare with the *Minimal Trees Hypothesis* in Vainikka & Young-Scholten (1996).

that the syntactic structure of the L1 is fully available for the construction of the L2 grammar in tutored L2 learners. The availability of IP and CP was verified in the vast majority of the utterances produced. Hence, both the frequency of errors like (70), and the rarity of errors like (71) give support to the *Full Transfer/Full Access Hypothesis* (Schwartz & Sprouse 1996).

To be more precise, I could underlying that, despite the full availability of the L1 structure, not all the parameters of the L1 were equally transferred to the L2: whereas Italian V-to-I movement was largely reproduced (70), pro-drop was only partly used by tutored L2 learners. In the course of the first set of utterances the drop of the subject pronoun *ich* was completely unattested, and it emerged only after providing a L2 model. This means that non-subject-initial sentences in which V-to-I movement was applied, did not imply the drop of the subject pronoun, although Italian allows for this. Hence, the participants used the Italian parameter of verb-raising, but not the pro-drop parameter typical of their L1. This datum seems to suggest that the two parameters were treated differently: only the purely syntactic parameter of V-to-I movement was reproduced in the L2, while pro-drop was avoided, possibly due to pragmatic reasons.

Returning to the collection of the data in the second task, I point out that I did not correct the participants during the first set of utterances, until a girl produced the target-like PPVSO order given in (72), after that 21 non-target-like utterances had been produced:

- (72) Am Montag trink ist Kakao (Rachele, 6)
 on.DAT.MSG Monday drink- \emptyset be.PRS.3SG chocolate
 [target: Am Montag trinke ich Kakao]
 ‘On Monday I drink chocolate’

I first clarify that the form *ist* employed here is not to be analysed as the phonological realisation of the copula (is), but as the subject pronoun *ich*. As we have already observed, the form *ist* was sometimes confused

with *ich*, and this misinterpretation probably relied on phonological grounds: this learner plausibly did not intend to introduce two verbs in the same sentence, which would constitute a strong violation of UG; instead she just selected the incorrect form for the corresponding function. I thus consider (72) as a target-like sentence from a syntactic point of view.

Taking advantage of this correct sentence, I revised the V2 structure with the learners. During the performance of the first set of utterances, the functional categories (the verb and the subject pronoun) were not available on the blackboard, and only the two posters with the weekdays and the food were visible. Therefore, I affixed to the blackboard the two missing positions that corresponded to the finite verb and the subject, in order to illustrate an exemplar of the V2 rule. I also compared the syntactic structures of German and Italian. The learners reflected on the differences between the L1 and the L2, and the crosslinguistic comparison was an effective means to understand how root declaratives had to be structured in the L2.

After providing a V2 model, both the rate and the type of errors changed. I firstly observed a reduction in errors due to syntactic transfer from the L1: the learners mainly avoided the PPSVO constructions, even though five participants still tended to produce V3 utterances (6/22 27.2%) (as in 70). As noted before, in the first set of utterances, 90.5% of the sentences were V3; after giving a model, the rate of V3 was reduced to 27.2% (6/22).⁵⁷ In addition, new types of errors – unattested in the first set of utterances – emerged after the revision of the V2 structure.

⁵⁷ A deeper analysis of the V3 utterances produced after the revision reveals that three out of six non-target-like utterances were ambiguous:

- (i) Am Montag esse ich trinke Kakao (Rachele, 7, 2 times)
on Monday eat I drink chocolate
[target: Am Montag trinke ich Kakao]
- (ii) Am Montag die trinke ich Milch (Giorgia and Laura, 7)
on Monday the drink ich milk
[target: Am Montag trinke ich Milch]

First of all, I registered five cases of subject-drop (5/22, 22.7%), concentrated in three participants (73):

- (73) a. Mittwoch trink-e Bananensaft (Denis, 8)
Wednesday drink-PRS.1SG banana juice
b. Am Montag iss-t Zwiebel (Sonia, 7)
on Monday eat-PRS.3SG onion

Although the amount of sentences with pro-drop was restricted, it regularly appeared only in non-subject-initial sentences – confirming the data collected during the experiment six months before. Both the examples in (70) and in (73) include the fronting of a Time PP, but in (70), where the finite verb is in I^o, the subject in SpecIP is not null, producing V3. Pro-drop seems to be an alternative option to V3. We must remember that it only affected the non-subject-initial sentences produced *after* the revision of a L2 model, when the learners were supposed to make an effort to produce V-to-C movement; as noted above, before revising the V2 structure, pro-drop was not produced. In L1acq, pro-drop in non-subject-initial sentences is analysed as the consequence of the licensing of *pro* in postverbal position (Hamman 1996): for a short period, German L1 acquirers can provisionally license referential *pro* in SpecIP under government from C^o (see chapter 2, paragraph 2.3.). If we extend the same analysis to my data in (73), pro-drop can be related to V-to-C movement. This would imply that the same mechanism of licensing null subjects under government from C^o is available

In (i) I may envisage that the verb *essen* was moved to C, and the subject pronoun correctly followed it in the linear order; however, when the learner realised that she had selected the wrong verb (*Kakao essen* instead of *Kakao trinken*), she placed the correct verb (*trinke*) after the subject pronoun. However, I may also envisage that the learner had analysed *esse ich* as the subject: in this case, the result would be a V3 sentence, with the inflected verb *trinke* in I^o, as in Italian. Anyway, I exclude that the learner aimed to produce a sentence with two verb forms, which would represent a violation of the universal principles of grammar.

With regard to (ii), I suggest that the determiner for the feminine singular *die* was mistaken for *ich*. The learner possibly realised her error, and tried to correct her utterance: *ich* was maybe realised to correct the first, non-target-like, subject pronoun *die*.

both to L1 acquirers and to tutored L2 learners. I point out that during the post-test pro-drop (in postverbal position) mostly concerned 6 and 7-year-old learners. In learners older than 7, this strategy was completely excluded after the revision of the V2 structure, when the learners were encouraged to apply V-to-C movement. Again, this datum is suggestive of a modification in L2 learning after the age of 6/7 years.

Another type of error which emerged only in the second set of utterances was the omission of the finite verb (74):

- (74) Donnerstag ich Kakao (Gabriele, 7)
 Thursday I chocolate
 [target: Am Donnerstag trinke ich Kakao]
 ‘On Thursday I drink chocolate’

I found only two occurrences of verb-drop in this group. Unlike pro-drop, the omission of the finite verb involved both subject-initial and non-subject-initial utterances. Moreover, this error did not exclusively concern 6 and 7-year-old learners.

We can now briefly consider subject-initial SV(PP)O sentences. The errors are shown in Table 3.24.

Table 3.24. Year 2, subject-initial sentences

Type of error	Error rate	%
Pro-drop	1/40	2.5
Verb-drop	1/40	2.5
Discrepancy form/function	4/40	10.0

All the learners produced two types of subject-initial utterances: they firstly produced SVO clauses (about 20 sentences), and then SVPPO clauses (about 20 sentences).⁵⁸

No relevant syntactic errors were observed in SVO sentences. As to SVPPO main clauses, the error rate was close to insignificance if we just consider the syntactic errors (2/40, 5%). It is worth pointing to the unique case of pro-drop attested in my corpus in subject-initial sentences (75a). The other error consisted in omitting the finite verb (75b):

- (75) a. Ø ess-e am Donnerstag Schokolade (Giada, 8)
 eat-PRS.1SG on Thursday chocolate
- b. Ich Samstag die Schokolade (Sonia, 7)
 I Saturday the.FSG chocolate
 [target: Ich esse am Samstag die Schokolade]
 ‘I eat chocolate on Saturday’

The remaining errors were not real syntactic errors, but they rather depended on an improper analysis of the sentence constituents.

- (76) a. Die ess-e Montag Kekse (Riccardo and Luca, 7)
 the.FSG eat-PRS.1SG Monday cookies
 [target: Ich esse am Montag Kekse]
 ‘I eat on Monday cookies’
- b. Die Milch Schokolade
 the.FSG milk chocolate (Marta, 7, 2 times)
 [target: Ich trinke Schokolade]⁵⁹
 ‘I drink chocolate’

⁵⁸ I point out that none of the participants placed the Time PP after the direct object, in final sentence position, even though Italian allows for this construction.

⁵⁹ As regards the use of a substantive (*Milch*) in (78b) where a verb form should be expected, the learner admitted that she could not remember the verb *trinken*, and thus used a word that she associated to that action.

The learners tentatively associated a form with the wrong meaning/function; I point to this phenomenon because it mainly affected functional categories, as observed also for Year 1. The learners were likely to confuse the determiner *die* and the subject pronoun *ich*, and easily overlapped the subject pronoun *ich* and the copula *ist*, as we have already noted. Smith & VanPatten (2014) point to the importance of identifying the meaning/function of a vocabulary item for the construction of the mental representation of the L2. They argue that L2 learners need to learn the vocabulary items for both lexical and functional categories. They also claim that no prescriptive rule about the syntactic properties of the lexicon are necessary, since classroom L2 learners can infer them from the input, on the basis of their language-specific abilities. I agree with these authors in pointing to the relevance of the correct association of both lexical and functional forms with the corresponding meaning/function, but I also argue that the didactic intervention can help the learners in this operation, which cannot take place implicitly in an artificial context of exposure, where the input is quantitatively and qualitatively insufficient.

4.2.3. Year 3

The delayed post-test involved 17 participants of Year 3, ranging in age from 8 to 9 years. Four learners out of 17 did not produce any utterance, therefore the error rate presented here concerns 13 participants.

I point to the fact that the learners of this group had been used as control subjects during the experiment, six months before. In this group, I did not exemplify and formally describe the V2 structure, as I did with the other four groups.

The data were elicited through an oral task, in which the participants were asked to produce non-subject-initial main clauses, selecting the lexicon from a set of images affixed on the blackboard. The affixed posters included the days of the week, six images representing family members and nine

images representing food, from which they could select the verbal arguments, and the Time PP to be fronted. The inflected verb was not exposed.

Before asking the participants to answer questions like (77),

- (77) Was isst die Tante am Sonntag?
 ‘What does the aunt (usually) eat on Sunday?’

I verified if they remembered the necessary lexical items: the learners easily recollected the lexicon and the nonfinite forms *trinken* (to drink) and *essen* (to eat). Since they knew the verb, they were immediately effective in producing sentences (cf. with opposite results in Year 2).

In Table 3.25, examples of non-target-like utterances produced before providing a L2 model are presented.

Table 3.25. Year 3, non-target-like utterances produced before the revision of the V2 structure

Type of error	Error rate	%
PP S V O (V3)	4/9	44.1
Verb omission	1/9	11.1
PP V O S	1/9	11.1
S PP V O	2/9	22.2

Nine utterances were produced before the revision of the V2 structure. The rate of syntactic errors was relevant (8/9, 89%).⁶⁰ This result was probably unrelated to the fact that these learners represented the control subjects at the time of the experiment. The error rate for this group was indeed similar to the result registered in the other groups before providing

⁶⁰ Before describing the V2 structure, only one learner produced one target-like V2 structure out of his two utterances:

- (i) Die Donnerstag essen die Mutti Kekse (Vittorio, 8)
 the Thursday eat the mum cookies
 ‘On Thursday the mum eats cookies’

the L2 model, as observed for the learners of Year 2 and Year 1 in the previous paragraphs (see also White 1992 for similar results in her delayed post-test).

The non-target-like sentences produced before the revision of the L2 model were both subject-initial and non-subject-initial.

I will not describe in detail the errors affecting subject-initial utterances (4/9); I will just observe that these errors confirm the full availability of the L1 to tutored L2 learners. Moreover, the transfer from the L1 seems to be even more robust after the age of 8: in Year 3, I noted types of transfer unattested in younger learners.⁶¹ This is the case of the sentences in (78):

- (78) a. Die Mutti im Dienstag ess-en die Torte (Roberto, 8)
 the.FSG mum in Tuesday eat-INF the.FSG cake
 [L1: La mamma il martedì mangia la torta]
 [target: Die Mutti isst am Dienstag die Torte]
 ‘My mum eats a cake on Tuesday’
- b. Die Mutti ess-en die Torte im Freitag (Serena, 9)
 the.FSG mum eat-INF the.FSG cake in Friday
 [L1: La mamma mangia una/la torta di venerdì]
 [target: Die Mutti isst am Freitag die Torte]
 ‘My mum eats a cake on Friday’
- c. Die Bruder im Dienstag die Apfel (Lucia, 8)⁶²
 the.FSG brother in Tuesday the.FSG apple
 [target: Der Bruder isst am Dienstag den Apfel]
 ‘My brother eats an apple on Tuesday’

⁶¹ Note also that the range of syntactic structures transferred from the L1 was rather large, and included also SPPVO and SVOPP structures unattested in younger learners.

⁶² I point out that the omission of the finite verb in the utterances preceding the repetition of the V2 structure involved a subject-initial sentence.

Syntactic transfer from the L1 was also found non-subject-initial utterances (5/9). The transfer did not only concern the unmarked order PPSVO (79a), but also included right dislocation of the subject (79b).

- (79) a. Am Dienstag der Vati trink-e Kaffee (Yuri, 9)
 on Tuesday the.NOM.MSG dad drink-PRS.1SG coffee
 [target: Am Dienstag trinkt der Vati Kaffee]
- b. Die Mittwoch ess-en Kekse die Mutti (Vittorio, 8)
 the.FSG Wednesday eat-INF cookies the.PL mum
 [L1: Il mercoledì mangia i biscotti la mamma]
 [target: Am Mittwoch isst Kekse die Mutti]

If I consider the verb forms used in (79a) vs. (79b), I notice that also in Year 3 – as well as in Year 2 – the position of the verb did not seem to be sensitive to the finite/non-finite alternation: in both cases, the verb was placed in the a position intended to host the finite verb, which was I° in (79a), and (possibly) C° in (79b). I do not consider the *-en* form in (79b) as a root infinitive, since it co-occurred with an overt subject.⁶³ Again, the *Missing Inflection Hypothesis* proposed in Haznedar & Schwartz (1997) for spontaneous child L2acq is applicable to the results obtained in tutored L2 learners: the 1sg *trinke* in (79a) was used as a sort of default form in a 3sg context (in place of *trinkt*). However, the mastery of the verb inflection was independent from the concept of finiteness (cf. Clahsen & Penke 1992 for L1acq).

After registering this first set of utterances (dominated by transfer from the L1), I described the V2 structure, and I affixed to the blackboard an example that included the four positions, with fronting of the Time PP. The example was both in German and in Italian, in order to trigger a crosslinguistic comparison. Afterwards, I stimulated the production of a

⁶³ I remember that in L1acq the alternation finite/nonfinite is crucially related to V2 (Weissenborn 1990, Poeppler & Wexler 1993, Hamann 2000, Tran 2005).

second set of utterances, in which different types of errors arose, as usual. Each participant produced three sentences, so that I registered 39 utterances overall. The model remained exposed on the blackboard during the first performance, and it was then removed.

In Table 3.26, I will present some errors produced in the set of utterances following the revision of the V2 exemplar.

Table 3.26. Year 3, non-target-like utterances produced after the revision of the V2 structure

Type of error	Error rate	%
V3	4/39	10.3
Verb omission	6/39	15.4
PP (V) O S	2/39	5.1
Verb+object omission	1/39	2.6

From a quantitative point of view, the error rate was significantly reduced: the learners' reaction to the instruction was immediate (11/39, 28%). With regard to the type of errors registered, the range of possible non-target-like structures was reduced, and the types of structures transferred from the L1 were limited (becoming more predictable). The transfer mainly involved "unmarked" V3 sentences with the subject in SpecIP and the verb in I° (4/39, while it was 3/9 before instruction), as instantiated in (80):

- (80) Am Samstag ich trink-e Milch (Sara, 9)
 on Saturday I drink-PRS.1SG milk

The participants who produced utterances like (80) clearly did not apply V-to-C movement; hence they did not use the exemplar productively, but continued to rely on the syntactic structure of their L1.

The omission of the verb (81) was more frequent in the second set of utterances (6/39, 15.4%) than in the previous one (1/9, 11.1%). After the

revision of the V2 structure, the drop of the finite verb only concerned non-subject-initial sentences, and it was possibly related to the special effort made to apply V-to-C movement, which arguably represented a challenging operation to fulfil.

- (81) a. Am Montag die Tante die Kekse (Aurora, 9)
on Monday the.FSG aunt the.PL cookies
[target: Am Montag isst die Tante (die) Kekse]
- b. Am Montag die Schokolade der Opa (Eleonora, 8, 2 times)
on Monday the.FSG chocolate the.NOM.MSG grandpa
[L1: Il lunedì mangia la cioccolata il nonno]
[target: Am Montag isst der Opa (die) Schokolade]

In (81b) the omission of the verb was associated to subject right dislocation, which is possible in Italian with a particular pragmatic value; the learners probably transferred it from the L1. Finally, only one participant omitted both the finite verb and the direct object. This error is not very significant, but it is worth observing that this kind of error was unattested in younger learners.

- (82) Dienstag Mutti (Riccardo, 8)
Tuesday mum

Finally, I would like to remark the absence of code mixing/code switching in all the utterances registered: even though the syntactic structure of the L1 was reproduced, learners did not resort to the L1 for the lexicon. The verb, in particular, was omitted but never expressed in the L1 (cf. copula in Year 1).

4.2.4. Year 4

At the time of the delayed post-test, the fourth group was composed of 15 students, whose age ranged from 9 to 10 years.

The data were elicited through two different oral tasks: a picture description task, and an interview about the food habits of their favourite animals. The picture description task was carried out before repeating the V2 structure, while the questions were posed after the revision.

For the picture description task, I showed the image of a dog which ate some chocolate, and asked them the question in (83):

- (83) Was isst der Hund heute?
 ‘What is the dog eating today?’

Only five participants out of 15 answered the question, and all of them failed to move the verb to C°. The results are shown in Table 3.27

Table 3.27. Year 4, non-target-like utterances produced before the revision of the V2 structure

Type of error	Error rate	%
V3	5/5	100

Although the number of learners who attempted to produce a sentence was restricted, the error rate was considerable (5/5, 100%). In terms of the type of errors attested, all the participants produced V3 structures, and placed the verb in I°, irrespective of the verb agreement marker used (compare (84b) with (84c)).

- (84) a. Heute der Hund ichess-e Schokolade (Alex, 9)
 today the.NOM.MSG dog I.eat-PRS.ISG chocolate
 b. Heute der Hund ess-en Schokolade (Laura, 10)
 today the.NOM.MSG dog eat-INF chocolate
 c. Heute der Hund ess-e Schokolade (Emma, 9)
 today the.NOM.MSG dog eat-PRS.ISG chocolate
 [target: Heute isst der Hund Schokolade]
 ‘Today the dog eats chocolate’

Unlike L1 acquirers of German, these L2 learners – as well as younger participants – did not use root infinitives; moreover, they associated finiteness with I°, reproducing the L1 parameter of verb raising in the L2 (White 1992, Schwartz 2003, Hamann 2000); finally, they did not master the verb paradigm in German (cf. Clashen & Penke 1992, Poepler & Wexler 1993, Rizzi 1993/1994, Wexler 1994, Haznedar & Schwartz 1997, Hamann 2000, Guasti 2002, Tran 2005). My data reveal that the transfer from the L1 mainly affected the syntax and not the vocabulary, and it was concentrated in functional projections (especially after the age of 6).

Since none of the participants managed to recollect the V2 structure, I opted for an immediate presentation of a new model, before submitting the second task. I repeated the same formal analysis that I provided six months before.

As soon as the V2 structure was recalled, I affixed to the blackboard three posters for the second task, that included the days of the week in German, five images of animals, and nine images of food, respectively. A further poster with the finite verb *isst* (eats) was also pasted under the label “Position 2”. The participants were invited to select the verbal arguments and the Time PP from the images represented in the posters. The task consisted in producing sentences with PP fronting, in order to verify if the movement of the verb to C° was properly applied after instruction. I posed questions like (85):

- (85) Was isst der Tiger am Freitag?
'What does the tiger eat on Fridays?'

Each participant produced four utterances on average, so that 60 sentences were collected overall. The model with the finite inflected verb was available on the blackboard for the first two performances (30 utterances), and was then removed.

Some learners sought to employ different verbs, like the verb *fressen* (to devour) or *spielen* (to play), that they had learned in the course of the year. The learners correctly placed these verbs after the fronted TimePP and before the subject. Consequently, they proved that they were able to apply V-to-C productively to original contexts. They also selected the right arguments for these verbs (for instance, they properly combined sports with the verb *spielen*, without relying on given images or hints). Nevertheless they needed special support to correctly inflect the verbs for 3sg, since they only knew the forms for the 1sg.

In Table 3.28, I provide the type and the quantity of errors produced after the instruction.

Table 3.28. Year 4, non-target-like utterances produced after the revision of the V2 structure

Type of error	Error rate	%
V3	5/60	8.3
Verb omission	3/60	5.0
PP V O S	2/60	3.3
Discrepancy form/function	2/60 ⁶⁴	3.3

Also in this group, the rate of syntactic errors was significantly reduced after instruction (10/60, 16.6%). The regular and immediate

⁶⁴ I will not specifically analyse these errors, but I point to a curious verb form produced by a learner, due to a mistaken analysis of sentence constituents.

(i) Ich Montag isstesse der Kamaleon Apfel

I (=on) Monday eat-3SGeat-1SG the chameleon apple (Daniel, 9, 2 times)

'On Monday the chameleon eats an apple'

The verb *isstesse* could be analysed as *ich-esse*, which may correspond for this learner to the stem form of the verb "to eat" (see also example (84a)). The form *isstesse* was produced also during the experimental lessons by two learners of Year 3 (*Die Mutti isstesse Brot*). However, in (i) we do not have a syntactic error, since the form *isstesse* was correctly placed in the second position. The sentence-initial *ich* was probably not to be understood as the subject pronoun (a lexical subject was indeed present), but as the preposition *am* (on). This example also confirmed how functional categories were often wrongly analysed or confused.

improvement following the description of the V2 structure confirms that a formal grammar analysis could be promptly acknowledged and easily applied by classroom child L2 learners.

The errors produced by the learners of Year 4 after instruction were similar to those produced by younger learners, including those of the control group. The most common errors consisted of V3 sentences (five occurrences), due to transfer from the L1:

- (86) Ich Montag Zebra trink-t Wasser (Gabriele, 9)
 I Monday zebra drink-PRS.3SG water
 [target: Am Montag trinkt das Zebra Wasser]
 ‘On Monday the zebra drinks water’

Moreover, three cases of verb omission were registered (87). Also this error was produced in all the groups only after (and exclusively after, except for one case in Year 3) the description of the V2 structure, irrespective of the age factor.

- (87) Am Donnerstag der Hase die Karotte (Giulia, 10)
 on Thursday the.NOM.MSG rabbit the.FSG carrot

Finally, I registered two cases of subject right dislocation. I point out that this structure (also attested in Year 3) was not produced by L2 learners younger than 8, at least in my study.⁶⁵ In (88), I report a particular case of subject right dislocation:

- (88) Am Montag spiel-t Fußball Elefant gegen Pinguin
 on Monday play-PRS.3SG football elephant against penguin (Marco, 10)

⁶⁵ I must specify that learners of Year 1 and Year 2 mainly used the pronominal subject *ich*; learners of Year 3 and Year 4, instead, mainly used lexical subjects. Anyway younger learners never used the pronoun *ich* in right dislocations like (i):

(i) Am Montag esse die Torte ich (unattested)
 on Monday eat the cake I (Il lunedì mangio la torta IO)

The sentence in (88) is very difficult to analyse, and cannot be included in cases of transfer from the L1: this structure is impossible in Italian (at least without focusing “*a calcio*”):

(89) ?? Il lunedì gioca a calcio l’elefante contro il pinguino

I can conclude pointing out that also the data collected in this group confirmed how learners older than 6 had not recourse to code mixing/code switching. The finite verb was omitted but never expressed in the L1. The participants relied on the L1 for the syntactic structure but not for the lexicon.

4.2.5. Year 5

The delayed post-test involved 24 learners of Year 5, ranging in age from 10 to 11 years. Since five out of 24 participants did not produce any utterance during the elicitation of the data, only the performances of 19 learners will be considered to calculate the error rate.

The data were elicited through an oral task: the participants were asked about the classroom objects they used or bought for their school needs in a particular day of the week. The task consisted in building non-subject-initial sentences that contained a fronted Time PP. The participants could select the lexical items from two posters affixed on the blackboard, which represented respectively the days of the week and six images of classroom objects. The lexicon used for the post-test was the same used during the experiment six months before. The finite verb and the subject pronoun were not visible on the blackboard.

Before beginning the performance, I verified if the group remembered the lexical items necessary to produce their utterances. The participants recollected with ease the days of the week and the classroom objects, but they could hardly remember the verbs *brauchen* (to use) and *kaufen* (to buy). However, once we recollected the infinitive forms, they

selected the right 1sg inflection, used six months before (*ich brauch-e, ich kauf-e*): they remembered the form for the subject pronoun *ich*, and correctly associated the verb affix *-e* to the 1sg subject (vs. Year 2 and Year 3). Instead, they did not recognise the affix *-t* as the 3sg inflection, since they had not practiced this form during the six months following the experiment (on a par with the learners of Year 4).

Despite the fact that the learners had all the elements to formulate a sentence, only six participants tried to fulfil the task. I thus registered only six utterances (four XVS and two SVO) before the revision of the V2 structure. The learners produced no target-like utterances, as the data in Table 3.29 show.

Table 3.29. Year 5, non-target-like utterances produced before the revision of the V2 structure

Type of error	Error rate	%
S PP V O	2/6	33.3
Pro-drop	4/6	66.7

Although the utterances were quantitatively restricted, the error rate was relevant (7/7, 100%), and the non-target-like sentences produced contained interesting errors. Unlike the learners of all the other groups, the participants of Year 5 did not produce non-subject-initial V3 structures with an *overt* subject pronoun in SpecIP. They did recur to syntactic transfer from the L1, but the transfer they applied was partly different from that of younger learners. In 10/11-year-old learners, the transfer concerned not only the parameter of verb raising (V-to-I movement), but also the parameter of pro-drop. The sentences in (90) exemplify how the subject in SpecIP was null:

- (90) a. Die Freitag brauch-e das Lineal (Giulia, 10)
 the.FSG Friday use-PRS.1SG the.NSG ruler
 [target: Am Freitag brauche ich das Lineal]
 ‘On Friday I use/need a/the ruler’
- b. Am Montag brauch-e der Bleistift (Serena, 10)
 on Monday use-PRS.1SG the.NOM.MSG pencil
 [target: Am Montag brauche ich den Bleistift]
 ‘On Monday I use/need a/the pencil’

Instead, when the subject pronoun had a phonetic realisation, it was left-dislocated, as shown in (91):⁶⁶

- (91) a. Ich Montag brauch-e der Radiergummi (Raffaella, 11)⁶⁷
 I Monday use-PRS.1SG the.NOM.MSG rubber
 [L1: Io lunedì uso la gomma]
 ‘On Monday I use the rubber’
- b. Ist Mittwoch brauch-e das Buch (Carlo, 10)⁶⁸
 be.PRS.3SG Wednesday use-PRS.1SG the.NSG book
 [target: Ich Mittwoch]
 [L1: Io mercoledì uso il libro]
 ‘On Wednesday I use the book’

During the post-test, pro-drop in non-subject-initial sentences concerned two groups of learners: the youngest participants (6/7-year-old learners) and the oldest ones (10/11-year-olds learners) (Table 3.30).⁶⁹

⁶⁶ This particular kind of V3, with left dislocation (topicalisation) of the subject (S PP V O) was also registered in learners of Year 3 (see example (78a)), but was not found in younger learners (6-7 years). Note that, in learners of Year 3, the topicalisation involved lexical subjects (family members), while in this group the topicalisation involved a subject pronoun (*ich*).

⁶⁷ Instead, if we envisage that the learner got *ich* confused with *am* (see fn. 55), the examples in (91) include pro-drop, and match (90).

⁶⁸ We have already observed that the learners easily failed to distinguish the forms *ist* and *ich*.

⁶⁹ I did not register any case of pro-drop with learners of Year 3 and Year 4, who mainly used lexical subjects. In my study, the omission of the subject did not involve DP subjects, but only the subject pronoun *ich*. This suggests the omission was neither random nor due to negligence.

Table 3.30. Pro-drop in non subject-initial-sentences (post-test)

Year	Before instruction	After instruction
1	0/13	4/21 (19%)
2	0/22	5/22 (22.7%)
3	0/5	0/39
4	0/5	0/60
5	4/4 (100%)	1/37 (2.7%)

However, pro-drop was arguably the result of different cognitive operations in younger and older learners. It is thus preferable to treat the two cases differently.⁷⁰ In the participants of Year 1 and Year 2, pro-drop emerged *after* the revision of the V2 structure, when the learners were supposed to apply V-to-C movement while producing non-subject-initial sentences. Consequently, pro-drop in these groups was arguably related to the licensing of a null subject in postverbal position (cf. Hamann 1996 for L1acq). Instead, the participants of Year 5 used pro-drop *before* giving the L2 model: in this phase, the participants of all the other groups just relied on transfer from the L1. The empty subjects employed in Year 5 were thus likely to be licensed under spec/head agreement from I°, and not under government from C°. Consequently, the finite verb was possibly not moved to C°, and the L1 transfer involved both V-to-I movement and the licensing of the referential subject *ich* from I°: both operations were borrowed from Italian.

This entails that, although child L2 learners can rely on the syntactic structure of the L1 irrespective of their age, the older L2 learners seem to use a “more radical” L1 transfer than the younger ones.⁷¹

⁷⁰ The younger tutored L2 learners seem to be in a more privileged phase of L2acq, whereas the effects of the critical period tend to vanish around the age of 10/11 (see Pinker 1994, Guasti 2002). Consequently, it is more convenient to account differently for the two cases.

⁷¹ Note that only the learners of Year 5 explicitly asked me whether the subject had to be mandatorily expressed in German, whereas younger learners did not. This question was posed during both the experiment and the post-test, when the V2 structure was described.

Finally, we could observe that the participant of Year 5 reacted differently also in relation to verb inflection: they did not have recourse to “default” nonfinite verb forms, and they mostly employed correct verb inflection since the beginning (cf. with the other groups).⁷²

Since none of the participants managed to produce target-like non-subject-initial sentences, I provide an exemplar, affixing to the blackboard the four positions intended to host the sentence constituents. The participants’ reaction was immediate: they not only realised that the finite verb occurred in Position 2, but they also remembered that German was not a pro-drop language, unlike Italian. Also in this case, the crosslinguistic comparison represented an effective means to point to the parameters of the L2.

After the revision, a second set of utterances was stimulated. The model was removed from the blackboard, and was no longer available to the participants. Two utterances per learner were produced on average, so that the total sentences were 38 (37 XVS + 1 SVO). For the first performance (19 utterances) the participants employed 1sg subjects, while for the second one (19 utterances) I stimulated the use of 3sg subjects, asking questions like (92):

- (92) Ich kaufe den Spitzer am Donnerstag. Was kauft die Lehrerin am Donnerstag?
'I buy the pencil sharpener on Thursday. What does the teacher buy on Thursday?'

In Table 3.31, some examples of the errors produced in this second sets of utterances are presented.

This could suggest that 10/11-year-old learners were more prone to metalinguistic reflection, due to a general cognitive development, or as a consequence of the grammar instruction they received for Italian. However, this attitude could also imply that 10/11-year-old learners considered pro-drop (or topic-drop) as their preferred option, and tended to extend it to the L2, if possible.

⁷² In the course of the post-test, after the revision of the V2 structure, two participants used the verb *gehen* (to go), as they tried to productively apply the structure just revised to original contexts: they correctly produced the PPVS order, but failed to select the correct 1sg affix (*geh-e*).

- (i) Am Samstag geh-t ich nach München
on Saturday go-PRS.3SG I to Munich
'On Saturday I will go to Munich'

Table 3.31. Year 5, non-target-like utterances produced after the revision of the V2 structure

Type of error	Error rate	%
Pro-drop	1/37	2.7
V3 (PPSVO)	2/37	5.4
S PP V O	1/37	2.7

The error rate was considerably reduced after the revision of the V2 structure (4/38, 10.5%), confirming the immediate effectiveness of the given model and of the formal description provided. With regard to the types of errors produced, I will firstly treat the three cases of V3 I noted, which are exemplified in (93):

- (93) a. Am Montag die Lehrerin kauf-t der Radiergummi (Marco, 11)
on Monday the.FSG teacher buy-PRS.3SG the.NOM.MSG rubber
- b. Am Donnerstag die Lehrerin brauch-e ich das Lineal (Gianni, 11)
on Thursday the.FSG teacher use-PRS.1SG I the.NSG ruler
- c. Paolo Dienstag brauch-t der Kuli (Matteo, 10)
Paolo Tuesday use-PRS.3SG the.NOM.MSG pen
[L1: Paolo martedì usa la penna]
[target: Am Dienstag braucht Paolo der Kuli]
‘On Tuesday Paolo uses/needs a/the pen’

In these examples the subject was either in SpecIP (93a-b) or in the Topic field (93c), while the finite verb was placed in I^o.⁷³ The result was V3 in both cases. Both constructions are clearly transferred from the L1: the recourse to L1 transfer is particularly corroborated by errors like (93c) (cf.

⁷³ The example (93b) is rather curious: the learner used a lexical subject, but then selected a finite verb inflected for 1sg (*brauch-e*), that he automatically related to the subject pronoun *ich*, located after the verb; hence, he obtained a sort of “cluster”, i.e. *brauche-ich*. This form had been repeated several times by the classmates during the second set of utterances, and was extended to a 3sg context by this learner. The subject pronoun might have been incorrectly analysed as a verbal morpheme.

the *Full Access Hypothesis* in Epstein, Flynn & Martohardjono 1996, and the Processability Theory in Håkansson, Pienemann & Sayehli 2002).

Moreover, only a case of pro-drop was registered in a non-subject-initial sentence (94), in line with the data collected in the other groups. Also in this case, the drop concerned the pronominal subject *ich*, while the lexical subject (*die Lehrerin*) was never dropped. In the whole corpus, the omission exclusively affected pronominal subjects, implying that this operation was neither accidental nor due to inattention.

- (94) a. Am Mittwoch brauch-e das Heft (Giulia, 10)
on Wednesday use-PRS.1SG the.NSG exercise book

Finally, I also point out that the learners of Year 5 never omitted the finite verb, as the learners of the other groups did. I conclude observing that also 10/11-year-old learners had not recourse to the L1 to express the finite verb, as well as the other learners older than 6 years. However, in Year 5 some cases of code mixing were attested, and concerned lexical items (such as weekdays or classroom objects) which were expressed in English, i.e. the other L2 studied by the participants.

4.3. Interim conclusions

The delayed post-test aimed to investigate the long-term effects of the pedagogical intervention carried out during the experimental lessons. Since the participants had not been exposed to the V2 structure in the six months following the experiment, they showed initial difficulties in recollecting the target structure autonomously (see White 1992 and Hamann 2000 for similar results). However, a hint of instruction was sufficient to trigger an “information retrieval”. Although the post-test did not show immediate positive results, the instruction received may support further/future contacts with the V2 structure: the process of identification of V-to-C movement in new contexts could be faster or easier in the long term,

as a result of delayed (but permanent) effects of the instruction received during the critical period.

The didactic implication was that only a regular exposure to the target structure could trigger a real process of parameter resetting. Specifically, in this case the learners should have been constantly exposed to non-subject-initial sentences, and regularly stimulated to use the V2 structure productively. A longitudinal study would verify if this didactic method, systematically applied, entails a permanent re-set of the target parameter in tutored learners within the critical period.

I will now summarise the results obtained during the post-test. First of all, I point out that the error rate in the utterances preceding the provision of L2 model was similar in all the groups (from 80% to 100%). The improvement after instruction, instead, seemed to be conditioned by the age of the learners: if we except 6-year-old learners, the improvement progressively increased from Year 2 to Year 5, as shown in Table 3.32.

Table 3.32. Error rate before and after the revision of the L2 model in non-subject-initial-sentences

Year	Before instruction	After instruction
1	100%	33.3%
2	95%	54.5%
3	80%	28%
4	100%	16.6%
5	100%	8.6%

This result may entail that also cognitive mechanisms were at work, and influenced the correct application of the rule. The response of Year 5 was more precise than that of the other groups, who probably needed more time to elaborate the rule. Nevertheless this issue did not imply that younger learners could not internalise V-to-C movement in an even deeper way. In

addition, we cannot neglect the general positive response and the improvement that also younger learners displayed after instruction. Finally, we should also consider that the length of exposure to the L2 was more restricted in younger learners.

The age factor played a role also in the types of errors produced, as I will shortly show. I will now provide a brief list of the main results emerged in the course of the post-test. The data collected allowed me to evaluate previous theories put forward in the last two decades to account for the cognitive mechanisms at work in L2 learning/L2acq.

Broadly speaking, the participants of all the groups relied on syntactic transfer from the L1, irrespective of the age factor, and regardless of the length of exposure to the L2 input. This results supports the *Full Transfer/Full Access Hypothesis* of Schwartz & Sprouse (1996): although UG is fully available to tutored L2 learners (Hamann 2000, VanPatten & Rothman 2014, among many others), the first phase of L2 learning mostly relies on L1 transfer. The *Minimal Tree Hypothesis* of Vainikka & Young-Scholten (1996) is disconfirmed in all the groups: generally speaking, L1 transfer affected the functional projections (IP) more than the lexical ones.

A more detailed analysis shows that L1 transfer did not equally affect all the parameters of the L1: purely syntactic parameters like V-to-I movement were indeed transferred from Italian by all the groups, from Year 1 to Year 5 (especially before instruction). Pro-drop, instead, was never transferred to German subject-initial-sentences, possibly due to its relation with the information structure. Note that null pronominal subjects were exclusively attested in non-subject-initial sentences. The learners produced referential null subjects in German, even though this construction was not

encountered in the environment.⁷⁴ However, the cases of pro-drop registered in older and younger learners arguably stemmed from different cognitive operations.

This datum points to the role of the age factor in L2 learning within the critical period: while learners older than 10 years tended to adopt a more “radical” syntactic transfer from the L1, learners younger than 7 years made types of errors unattested in the other groups.

First of all, only learners of Year 1 and Year 2 seemed to drop the subject in postverbal position, possibly as a consequence of V-to-C movement. The learners of Year 5, instead, probably dropped the subject from preverbal position. However, in both cases, the omission of the subject regularly involved only pronominal subjects: this suggests that the drop arose as a consequence of a syntactic process, and was unrelated to negligence.

Secondly, the learners younger than 7 years did not recur to left or right dislocation of the subject, while older learners did (with both pronominal and lexical subjects). This marked construction was clearly transferred from the L1, and this gives further support to the *Full Transfer Hypothesis*.

Finally, only 6-year-old learners had recourse to code mixing, and expressed the finite verb in the L1. In the other groups, the transfer from the L1 indeed affected syntactic structures, but did not involve the lexicon. The finite verb could be omitted or wrongly inflected, but it was never expressed in the L1. Note that also the omission of the finite verb, as well as the omission of the pronominal subject, only arose after instruction, when L2 learners put effort into the reproduction of V-to-C movement.

⁷⁴ Only further investigation could shed more light on this phenomenon, clarifying if pro-drop in non-subject-initial sentences resulted from the effort produced to move the finite verb to C°, or from the discovery of “clustering properties” in the L2 (Roberts & Holmberg 2010), supported by the innate linguistic endowment of the learners.

These data may suggest that a modification in L2 learning takes place after the age of 6/7 years within the critical period. The ability to acquire a language progressively declines in the critical period, from birth to puberty. However, we might envisage that learners in the primary school could still be in condition to acquire, and not just to learn, a L2, especially before the age of 7 years. If this hypothesis was confirmed, the repercussion on L2 learning would be relevant, and the role of L2 instruction in the primary school should be reconsidered.

With regard to verb finiteness and verb inflection, the participants did not use root infinitives, irrespective of their age. The verb forms always appeared in the position related to finiteness either in the L1 (I°) or in the L2 (C°). The widespread use of V3 before instruction showed that the finite verb was spontaneously related to I°, as in the L1: finiteness and V2 were not developmentally interdependent, as they are in L1acq of German (see Tran 2005 for similar results). Moreover, the verb was in C° or in I° irrespective of the verb inflection used, and mostly co-occurred with non-null subjects: this outcome gives support to the *Missing Inflection Hypothesis* proposed in Haznedar & Schwartz (1997). Only learners of Year 5 seemed to master the verb paradigm with more ease than younger learners.

To conclude, I will provide two tables (3.33 and 3.34) in which I summarise the error rate and the types of errors produced during the post-test, before and after the revision of the V2 structure, respectively. I will just consider non-subject-initial sentences (non-sis).

The data in Table 3.33 reveal that 98% (48/49) of the utterances produced before instruction were non-target-like. More precisely, 88% of the errors (43/49) depended on syntactic transfer from the L1, and precisely

they mostly consisted of V3 (42/49).⁷⁵ This datum point to the robust association of verb finiteness with the syntactic position I°, that the learners transferred from their L1.

Table 3.33. Non-target-like non-sis BEFORE instruction

Type of error	Year	Errors/total utterances
V3 (PP S V O)	1 / 2 / 3 / 4	42/49
Subject right dislocation (PP V O S)	3	1/49
Pro-drop (PP V O)	5	4/49
Verb+subject omission (PP O)	2	1/49

Table 3.34. Non-target-like non-sis AFTER instruction

Type of error	Year	Errors/total utterances
V3 (PP S V O)	2 / 3 / 4 / 5	17/179
Subject right dislocation (PP V O S)	3 / 4	4/179
Pro-drop (PP V O)	1 / 2 / 5	10/179
Verb omission (PP S X)	1 / 2 / 3 / 4	13/179
Verb+subject omission (PP O)	1	1/179
Verb+object omission (PP S)	3	1/179

After the revision of the V2 exemplars, the error rate was reduced from 98% (48/49) to 26% (46/179). My data reveal the immediate improvement that followed the formal description of the L2 input. In particular, the instruction seemed to limit the transfer from the L1: the V3 construction was reduced from 86% (42/49) to 9.5% (17/179). Although the L2 learners continued to rely on Italian – as subject right dislocations confirmed (4/179) – a strong decrease of L1 transfer was observed. Instead, the learners (and younger learners in particular) had larger

⁷⁵ The results described in White (1992) and Hamann (2000) showed that L1 transfer was the predominant pattern also in the delayed post-test they carried out in their didactic experiments on verb-raising in English.

recourse to the omission of the elements mainly involved in verb raising; the overall cases of omission increased from 10.2% (4/49) to 14% (25/179). In particular, the finite verb was dropped only after instruction. Moreover, the omission of the subject produced after the instruction was arguably related to different cognitive mechanisms than the omission produced before the instruction in Year 5.

Conclusions

The purposes of this study were to investigate the acquisition of V2 in tutored child L2 learners. As pointed out in the introduction, I had a theoretical aim, which concerned parameter (re)setting in L2 learners; and a didactic aim, which concerned the effectiveness of the pedagogical intervention carried out in the experiment. To summarise the results obtained, I will answer to the questions emerged in the introduction.

Could tutored child L2 learners rely upon the principles of UG?

The grammars of the L2 learners were always consistent with the principles of UG, and the non-target-like utterances produced never violated the UG constraints. This result disconfirms the *Fundamental Difference Hypothesis* proposed in Clahsen & Muysken (1986, 1989), and gives support to the *Full Restriction* in L2acq endorsed in White (2003). I conclude that instructed L2 learners of the primary school have full access to the UG.

What was the role of the L1?

Tutored child L2 learners relied on the syntactic structure of the L1 for the construction of the L2 grammar. The full availability of the L1 syntactic structure and the transfer from the L1 particularly emerged in two types of errors: V3 and subject right dislocation.

The total amount of oral non-subject-initial sentences produced in the course of the experiment plus the post-test was 656; the non-target-like utterances were 151 out of 656 (23%). Table 1 shows how V3 was the most common error registered in non-target-like utterances: it involved all

the learners older than 6 years. Instead, the recourse to subject right dislocation was much more restricted, and emerged only after age 8.

Table 1. Total amount and types of errors produced in non-subject-initial sentences

Type of error	Rate	%
V3	98/151	64.9
Subject right dislocation	6/151	4.0
Pro-drop	25/151	15.9
Verb-drop	19/151	12.6
Subject+verb drop	4/151	2.6

Table 1 allows us to reflect on the accessibility of the L1. On the one hand, the infrequency of subject + verb drop proves that the learners had a fully available syntactic structure, including IP and CP. Therefore, my data suggest that the *Truncation Hypothesis* of Prévost (1997) – who argues for a truncated L2 structure in the early stages of L2acq – cannot be extended to L2 learning.

On the other hand, sentences containing V3 corroborate the hypothesis of *Full Transfer* from the L1. My results confirm that the L1 plays an important role in the initial state of L2 grammar. This gives further support to the *Full Transfer/Full Access Hypothesis* put forward in Schwartz & Sprouse (1994, 1996). Instead, my data are incompatible with the hypotheses that predict the absence of syntactic transfer from the L1, i.e. the *Full Access Hypothesis* in Epstein, Flynn & Martohardjono (1996).

However, to be more precise, the absence of V3 in 6-year-old learners seems to challenge the idea that L1 transfer influences the L2 syntax irrespective of the age of first substantial exposure to the L2 (see the *Domain-by-Age Model* proposed in Schwartz 2003). Hence, the

production of the V2 structure in 6-year-old learners calls for further investigation.

Did the setting of German V2 parameter take place?

The immediate positive response shows the L2 learners were likely to enter an actual process of parameter resetting. The non-target-like utterances produced during the experimental lessons were limited (13% in oral non-subject-initial sentences) and, as we have already observed, they always fell within the restrictions of UG. This result suggests that the learners were able to extract linguistic information from the L2 model provided, and could productively apply it to new contexts. I could thus envisage that the learners used the L2 data to develop a representation of the L2 grammar. Nevertheless, the construction of a mental representation for the L2 demands regular access to significant L2 input (it is a matter of immersion, in spontaneous L2 acquirers). If the L2 learners are not adequately supplied with relevant L2 data in a constant way, the conditions for parameter (re)setting disappear, as emerged in the course of the post-test.

Finally, the data collected in my experiment prove that language acquisition changes after the age of 6/7 years (Pinker 1994). The non-target-like sentences produced by 6-year-old learners entailed different data processing (no V3, more omission); this suggests that younger learners were possibly more reactive to L2 data, and more likely to acquire (and not just to learn) a L2. Further investigation could shed more light on the process of parameter resetting in 6-year-old learners, which is possibly faster or deeper than in older L2 learners.

How did child-L2 learners react to formal linguistic instruction?

The reaction of the learners to the didactic intervention was prompt and encouraging: on the one hand, the participants enthusiastically responded to grammar instruction; on the other hand, the quick reaction of

the participants led to immediate positive results. The method adopted was not beyond the cognitive skills of the learners.

This demonstrates that explicit grammar instruction is adequate for the learning needs of child L2 learners in the primary school. Grammar instruction becomes particularly effective if L2 models are formally described on the basis of formal linguistic theories, which ought to be adequately simplified. Also the crosslinguistic comparison between the L1 and the L2 should not be avoided but rather stimulated, in order to point out the parameters of variation in the two languages.

Finally, from this result I can infer a fundamental didactic indication: only a productive use of the target structure entails the recourse to language-specific faculties. During production tasks, L2 learners could reinforce the correlation between form and meaning, particularly for functional words. This stimulates the syntactic computation, which is crucial for developing a mental representation of the L2 (VanPatten & Rothman 2014). The production tasks are absolutely consistent with the cognitive possibilities and the linguistic abilities of child L2 learners. This potentiality is currently neglected in the Italian primary school despite its relevance for L2 teaching.

What kind of L2 input has to be provided to tutored child-L2 learners?

Broadly speaking, the L2 input cannot be naturalistic in an artificial classroom context. Therefore the pedagogical intervention must contrast the poverty of exposure. The input provided has to be focused, and point to the crucial parameters of variation between the L1 and the L2: for this reason, I selected a segmented input, which I analysed with the participants, and I guided them in an explicit grammar reflection.

In particular, relevant L2 data to detect the V2 parameter consist in non-subject-initial sentences, and in the opposition root/embedded (the latter not considered in this experiment). Crucially, the input cannot include only lexicon or non-analysed *routine-formulae*: the lexical items have to be

inserted into a syntactic structure. Moreover, a particular attention must be given to finite verbs: the post-test showed how the learners did not manage to produce sentences, prior to recollecting the finite verb.

Moreover, if the L2 learners are only confronted with a system of rules and items to memorise, the language faculty is not sufficiently stimulated, and they merely rely on the cognitive resources used for the other subjects (Hamann 2000).

Did this method entail immediate effects?

The data collected in the course of the experimental lessons demonstrate that the instruction provided had immediate effects. This corroborates the effectiveness of minimal exposure to L2 input pointed out also in Smith & VanPatten (2014). On the one hand, this results would be impossible without UG guidance. On the other hand, the learners' positive reaction proves that the L2 input provided was adequate and significant. The description of the L2 model guided the learners in the identification of the V2 parameter, and a process of parameter resetting was (at least) activated.

Did this method assure long-term effects?

Since the participants had not been supplied with relevant L2 input in the six months following the experiment, the recollection of the V2 structure initially failed (see White 1992 and Hamann 2000 for similar results). However, a hint of instruction was sufficient to trigger an "information retrieval". Therefore, the results of the post-test would have been more positive, if the exposure to the V2 structure had been more constant. This observation is interesting from a didactic point of view, because it implies that only a regular exposure to the target structure guarantees a real internalisation.

Furthermore, even though during the post-test the immediate response of the learners seemed to disclaim the validity of the didactic

intervention, I envisage that the instruction received may entail some implicit effects. These effects could emerge, for instance, in future contacts with the target language or with different L2s. The effects of a grammar reflection which targets segmented exemplars are likely to leave permanent unconscious traces on the association between forms and functions/meanings. More precisely, I assume that grammar reflection could have lasting effects on the learners' ability to segment the L2 input, to identify functional categories, and to extract morphosyntactic information from the L2 data. I was not in condition to verify this hypothesis in the course of the current study, which only consisted of a few hours of didactic trial (see also Valente 2000). Consequently, further and broader application would tell us more about the long-term effects of the didactic method, especially if the length of exposure to the treatment was extended. Moreover, the method would probably be more effective if applied to more a homogeneous learning context, with better coordinated instruction for the L1 and the L2.

Anyway, the immediate positive reactions to the pedagogical intervention are encouraging about the long lasting potentiality of grammar instruction based on formal linguistic analyses. To conclude, the data collected in my study support the necessity to reinforce L2 teaching in the primary school, especially for the youngest learners.

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Appendix

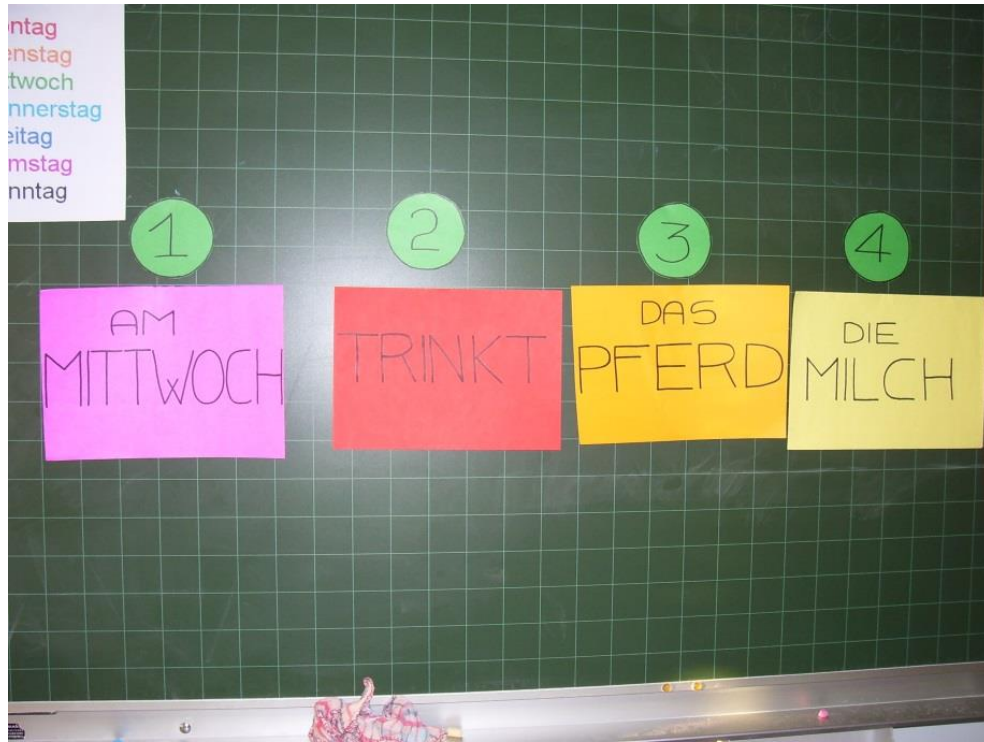


Image 1. Segmented L2 input: the four positions for the sentence constituents.



Image 2. Posters with family members, food and drinks.



Image 3. Posters with months and days of the week.



Image 4. Poster with animals.



Image 5. Poster with family members.



Image 6. Poster with school subjects.



Image 7. Mickey Mouse's diary.