Translation universals in the oral production of bilingual children

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Abstract

This paper investigates two of the most widely analyzed universals in translation research, namely simplification and explicitation. We examine the oral production of bilingual children with different language pairs as available in the CHILDES project (MacWhinney 2000) (i.e. the FerFuLice, Ticio, Deuchar, Vila, Genesee and Pérez-Bazán corpora) as well as in other compilation forms (i.e. Ronjat 1913; Leopold 1939-1949; Swain 1972; Lanza 1988, 1997, 2001; and Cossato 2008). We address two main issues: whether instances of simplification and explicitation appear in the production of non-instructed interpreters and, if so, how their occurrence relates to the type of data (i.e. spontaneous or experimental) and the language pair involved. The results show that children acquiring two first languages often translate and use simplification and explicitation at varying degrees irrespective of the language pair. We conclude that the analysis of acquisition data can contribute to shed light on the nature of these translation universals.

1. Introduction

The existence of universal features of translation has been extensively

debated in the last two decades (e.g. Baker 1993, 1995; Toury 1995; Laviosa

1998, 2002, 2008; Kenny 2001; Olohan 2004; Chesterman 2004, 2012; House

2008; Mauranen 2008). The occurrence of regularities in translated texts is

seen by some scholars as evidence for properties that may be inherent in the

translation process and invariable across languages (e.g. Baker 1993; Laviosa

2002; Halverson 2003; Mauranen and Kujamäki 2004). Other scholars refer to these regularities as non-absolute tendencies that nonetheless are worth studying (e.g. Tymoczko 1998; Kenny 1999). It is also suggested by some that translation universals as such do not exist because they are rather universals of language, not inherent to the translation process and, therefore, a result of language-pair specific factors (e.g. House 2008; Baumgarten et al. 2008; Becher 2010, 2011). The debate is ongoing and has been enhanced since corpora have gained ground in translation studies (Baker 1993, 1995). Malmkjær (2008) suggests that corpus studies are well suited to tease apart norms (which can be explained on socio-cultural grounds) and universals (which can be explained on cognitive grounds).

The present study complements previous research and taps on the very nature of translation universals (TUs) in that it analyzes whether, and if so how, TUs are instantiated in the translation practice of untrained bilingual speakers.[1] More specifically, the analysis of explicitation and simplification in the translation process of these bilinguals can contribute to shed light on the emergence of translation in general and on the occurrence of these two TUs in particular. We assume that if simplification and explicitation appear in the bilingual production of speakers with no knowledge of translation norms, they may be posited as good candidates for the status of translation universal rather than being a by-product of translation education.

The paper is organized in five sections. Sections 2 and 3 provide background information about the two research fields that constitute the backbone of this work: translation universals and natural translation/interpreting. Section 2 offers a review of the works that have discussed the existence as well as the nature of the so-called translation universals and, as the present work focuses on simplification and explicitation, part of section 2 will be devoted to these universals. Section 3 presents the notion of natural interpreting linked to bilingual acquisition contexts as well as previous works conducted in this field using the corpus methodology.[2] A note on how the study of natural interpreting ties with translation universals is also made. Our empirical study appears in sections 4, 5 and 6. The initial hypotheses are formulated in section 4, linking previous works to the present study. The selection of available bilingual acquisition data involving English, Spanish, Catalan, French, German, Norwegian, Hungarian, Swedish and Italian is presented in section 5. These data are analyzed in terms of explicitation and simplification and the results are presented and discussed in section 6. Finally, in section 7 we summarize our main findings and point to future directions.

2. Translation… universals?

What follows does not attempt to be a comprehensive account of TUs and of the numerous works that have addressed this issue. Rather, the sections below

aim at showing the complexity involved both in determining the existence of TUs (or lack thereof) and in defining the differing properties of the two specific TUs we set to analyze.

2.1. TUs: regular patterns or absolute principles?

After three decades of research, the question whether TUs actually exist remains unanswered. In this regard, two positions illustrate the extremes of the continuum. On the one hand, some translation scholars (e.g. Baker 1993; Laviosa 2002; Halverson 2003; Mauranen and Kujamäki 2004; Puurtinen 2004) support the existence of linguistic features that typically occur in translations rather than in original texts and which are "not the result of interference from specific linguistic systems" (Baker 1993, 234), hence they are inherent in translation per se. Other scholars (e.g. Tymoczko 1998; Kenny 1999) tone down what these regularities evidence and consider TUs to be non-absolute tendencies. On the other hand, other scholars (e.g. House 2008; Becher 2010, 2011) reject the idea of searching for universals in translation as "futile" (House 2008, 11) or "unparsimonious" (Becher 2010, footnote 1).

In an attempt to find a balance between these divergent views, Toury (2004) proposes that a distinction should be made between *regularities*, more general translational behaviors found in particular cases, and *universals*, more specific translational behaviors that are governed by norms and that occur

under certain conditions. He argues that research work is required in order to step up from the low-level individual regularities of translation performance to the higher-level conditioned probabilistic propositions of what translation is "*likely* to involve" (Toury 2004, 28, original emphasis). The possibility of finding exceptions among the probabilistic propositions leads Toury to prefer the term *laws* rather than *universals*. He affirms that, if a probabilistic proposition represents a law, it is necessary to observe the quantitative frequencies (and the qualitative nature) of particular behaviors in translation through different types of corpora compiled according to different sets of variables (e.g. linguistic, cognitive, communicational).

Baker (1993, 235) had already proposed a similar line of thinking in her seminal work when she stated that translational corpora help researchers to explore "the principles that govern translational behavior and the constraints under which it operates." Both scholars encouraged research that aimed at making generalizations through the accumulation of relevant and consistent empirical data.[3]

Another view of TUs, held by House (2008) and pointed out by other translation scholars (e.g. Chesterman 2004, 2010; Mauranen 2008; Malmkjær 2008; Becher 2010, 2011), is that translation may not differ from other types of linguistic behavior and so, translation-specific features are in fact not unique to translation per se but part of the nature of language or of communicative interactions in general.

In spite of these different approaches to the existence and nature of TUs, a point of agreement can be found: the importance given to empirical studies analyzing corpus data. In the case of translation, corpus-based translation studies (CTS) have adopted a descriptive approach to the investigation of the product and process of translation, thus contributing to deepen our understanding of what translation is and how it functions (Tirkkonen-Condit 1991; Baker 1993, 1995; Chesterman 2007).

In the next section, we review empirical research on TUs analyzing corpus data, with particular reference to simplification and explicitation.

2.2. Simplification and explicitation as TUs

Most CTS research on TUs has adopted a linguistic approach to translation and has focused on (i) *Source-Universals* (S-Universals), which capture the differences between translation and its originals (tested through parallel corpora); and (ii) *Target-Universals* (T-Universals), which capture the differences between translated and comparable non-translated texts (tested through monolingual comparable corpora) (Chesterman 2004, 2010).

For the purpose of the present study, we will consider S-Universals and, in particular, we will focus on simplification and explicitation (e.g. Baker 1993; Laviosa-Braithwaite 1996; Olohan 2004; Pápai 2004; Mauranen 2008; Pym 2008; Chesterman 2010).[4]

Simplification, as defined by Baker (1996, 181-182), is "the tendency to simplify the language used in translation", which means that translational language is supposed to be simpler than native language lexically, syntactically and/or stylistically. Simplification has been studied both before and after the advent of CTS using in both cases the corpus methodology, as the following (non-exhaustive) chronological review will show. Blum-Kulka and Levenston (1983) and Vanderauwera (1985) find evidence of lexical and syntactic simplification respectively and they argue that it is a tendency common to maybe all language combinations. However, Klaudy (1996a) attributes the instances of simplification in the literary texts she analyzes to the lexical properties of the languages involved (i.e. Hungarian). Simplification as a TU has been studied by Laviosa-Braithwaite (1996) and Xiao et al. (2010). In particular, Laviosa-Braithwaite (1996) shows that, largely independently of the influence of the source language, translators tend to use a relatively lower proportion of lexical words versus grammatical words and a relatively higher proportion of high-frequency versus low-frequency words. She also argues that translated texts are characterized by greater repetition and less lexical variety, a finding more recently confirmed by Xiao et al. (2010). Inconclusive results are found by Jartunen (2004) whose study on fiction texts reveals contrasting patterns and includes a note of caution in that languages other than English can show different tendencies.

Works on explicitation (e.g. Øverås 1998; Olohan and Baker 2000; Pápai 2004; Puurtinen 2004; Chen 2006; Moropa 2011) generally assume that "[t]he process of interpretation performed by the translator on the source text might lead to a TL text, which is more redundant than the SL text" (Blum-Kulka 1986, 19). As with simplification, explicitation has been studied both before and after the advent of CTS. In some analyses, explicitation is seen as "a universal strategy inherent in the process of language mediation" captured in Blum-Kulka's (1986, 21) Explicitation Hypothesis, a view shared by Klaudy (1996b, 2008). Shlesinger (1995) also points out that the Explicitation Hypothesis may hold not only in written translations but also in interpreting, as shown by the stylistic preferences of interpreters she analyzes. Vanderauwera (1985) acknowledges the use of syntactic explicitation (e.g. expansion of condensed passages, additions of modifiers and of extra-information) but does not refer to this as a TU. More recently, evidence for explicitation is found in the CTS research conducted by Øverås (1998), Olohan and Baker (2000) and Chen (2006) who argue that it is in fact a universal feature of translation, thus supporting the Explicitation Hypothesis. In other works (e.g. Pápai 2004; Mauranen 2008; Moropa 2011) a tendency to explicitation is seen at the grammatical level (i.e. lexical, syntactic and textual) although it is considered a common feature of translations. A more critical approach is offered by Puurtinen (2004), Xiao et al. (2010) and Becher (2010). Puurtinen's (2004) analysis of children's literature fails to

support the Explicitation Hypothesis although she acknowledges the existence of differences between translations and their corresponding source texts. Xiao et al. (2010) point out that the question of explicitation as a TU remains unanswered because the existing evidence has largely been provided by studies performed with English and related European languages. Becher (2010) places the focus on the methodology used to analyze explicitation and calls for a distinction in terms of Klaudy's (2008) four-way typology whereby only type four would actually constitute translation-inherent explicitation. Under this approach, the results of his study do not lend support to explicitation as a TU since the explicitation cases found correspond to the language pair-specific types (i.e. the first three in Klaudy's typology). The analysis done on the residue cases (2 of the 5-to-10 acknowledged) concludes that (i) "it is impossible to decide whether we are dealing with optional or translation-inherent explicitation" (Becher 2010, 19); and (ii) "it is generally unclear how cases of translation-inherent explicitation may be identified, since no independent criteria have been proposed […] that would make their attribution to the (hypothesized) category of translation-inherent explicitation seem plausible" (Becher 2010, 10). This is in line with Baumgarten et al.'s (2008) "filtering method" and with Steiner's (2005) multifunctional perspective who argue that, before deciding on whether explicitation is a TU or not, a clearly motivated classification procedure and the subsequent

analysis must be followed in order to tease apart translation-inherent explicitation from language-specific explicitation.

Summing up, simplification and explicitation have been analyzed using an array of text types in both CTS and pre-CTS works. However, although some consensus exists as to their broad definition, no such clear characterization is provided when it comes to actually present a more refined account of the linguistic features that identify them.[5] So the question remains: how can we define these (and other) TUs? If they are not adequately operationalized, how can we search for them? As Becher (2010) points out, since TUs are vaguely defined, overlapping or contradicting categories emerge. In this regard, some scholars, such as Toury (2004), connect these two TUs as manifestations of the same phenomenon.

Following Toury's (2004, 23) terminology, simplification and explicitation are *a pair of shifts* that can be found simultaneously in the same translated text. They complement each other and contribute to improve comprehensibility. So splitting sentences, for example, can lead to a higher level of explicitation with the use of more connectives (Moropa 2011). Other scholars have adopted the same viewpoint (e.g. Pápai 2004; Mauranen 2008; Pym 2008), claiming that both notions are closely linked. In fact, it has been suggested they may be complementary manifestations of the same universal (Toury 2004; Pym 2008). As Mauranen (2008, 40) points out, the major problem in interpreting the results of empirical studies is that "what is simple

at one level of language use may cause complexity at another." And so, for instance, converting long, complex sentences into shorter sentences with fewer subordinate clauses may lead to greater complexity at text level because this type of syntactic transposition may render the text fragmented and less difficult to follow (Mauranen 2008).

We believe that there are (at least) two key issues in this debate that can contribute to shed light on matters such as the existence and nature of TUs. First, as we said earlier, corpora can help us identify regularities in translation behavior under a set of conditions (in the spirit of Toury 2004) and move from the particular to the general following a bottom-up approach (in the spirit of Chesterman 2004). Secondly, the analysis of other types of data such as bilingual acquisition data may enable us to search for potential universals from the initial stage, i.e. in language emergence. This translator-bound criterion (i.e. children acquiring two languages from birth) may give reasonable grounds for unveiling the nature of TUs, as has been done with language universals (Pesetsky 2009), and contribute to disentangle this body of hard-wired knowledge about translation, or language in general, that we do not acquire through instruction or exposure but come equipped with in a way. This issue is discussed in the next section.

At this point, we would like to clarify that our aim is not to propose a refined definition of the TUs we are concerned with but rather to contribute to the current debate by analyzing bilingual acquisition data through a bottom-up

approach. Therefore, in what follows we use the tag TUs for our convenience and we do not necessarily assume they are universals as such.

3. TUs in language acquisition data: natural interpreting in the production of bilingual children

Empirical studies analyzing corpus data have also considered what Harris (1977) referred to as natural translation, later reformulated as natural interpreting (NI) given its oral dimension (Harris 2003). NI refers to the translation "done by bilinguals in everyday circumstances without special training for it" (Harris 1977, 6). Several studies have shown the actual "universality" of the translation activity as a pervasive phenomenon in the production of L1 bilingual children (e.g. Harris 1977, 1980a, 1980b, 2003, 2013; Harris and Sherwood 1978; Lozes-Lawani 1994; Bullock and Harris 1997; Sherwood 2000; Álvarez de la Fuente 2008; Cossato 2008; Álvarez de la Fuente and Fernández Fuertes 2012a, 2012b, forthcoming).[6] In particular, these works based on the analysis of corpus data show that translation is a sort of inherent feature in the acquisition of two first languages (henceforth L1 bilingual acquisition) and that, therefore, no only professional (or professional-to-be) translators translate.[7] Even in the case of very young L1 bilingual children, the analysis of corpus data has shown that they translate between their two languages as early as at the age of one year and two months

(e.g. Ronjat 1913; Álvarez de la Fuente and Fernández Fuertes 2012a). Bilingual acquisition data that appear in different studies concerned with how bilingual children deal with their two languages (e.g. Leopold 1939-1949; Vihman 1985; Saunders 1988; Lanza 1988; Döpke 1992; Köppe and Meisel 1995; Comeau and Genesee 2001; Albrecht 2004) reveal how L1 bilingual children are able to use their two first languages both simultaneously (e.g. performing code-switching) and sequentially (e.g. performing NI) in the discourse.

There are still, however, issues that need to be further addressed in the study of NI since studies analyzing longitudinal acquisition data are still scarce and few works address the formalization of a specific research methodology (involving issues such as data collection, data transcription systems and data codification procedures for the automatic analysis of the data). Exceptions do appear in Beckmannova (2004), Álvarez de la Fuente and Fernández Fuertes (2012a), Álvarez de la Fuente and Fernández Fuertes (forthcoming), or in the reviews provided by Cencini (2002) as well as Bendazzoli and Sandrelli (2009).

In the context of NI and given that our present study is concerned with TUs and how these materialize in L1 bilingual acquisition data, we outline below some basic ideas connecting TUs to acquisition in general and to NI in particular.

One of the most controversial issues concerning TUs, as discussed in section 2 above, deals with the very existence of these universals conceived as regularities, laws or common features of translation products. If understood as norms or tendencies they could be seen as being established *a posteriori* and thus linked to translation instruction or training. If they are language universals they should be set *a priori*, that is, inherent in the translation process regardless of language pair or instruction (although this could tone down their frequency) and thus traceable in data from both trained and untrained translators. What is more, their occurrence in acquisition data in general and in child NI data in particular could shed light on their actual nature as universals. This, we believe, constitutes a research venue worth exploring. First, it is worthwhile to find out whether these features appear in the data from children exposed to two languages from birth before they are ready to receive any training on translation. Secondly, it is worth discovering, through the analysis of longitudinal NI data, how these features emerge and interact.

This is precisely where our study stems from. By focusing on the analysis of simplification and explicitation as two potential TUs posited as translation-inherent processes that appear in the production of young L1 bilingual children, we target the "genuine" (i.e. non-instructed, *a priori*) mechanisms underlying the nature of translation. Hence, our study adopts an innovative approach. It provides a broader scope of research both into the nature of

translation in general - since data from the onset of language development are analyzed - and into the first occurrences of those typical translation features or TUs, observing if they are invariable across different languages in the production of young natural interpreters. In our study, we have analyzed naturalistic oral production of various language-paired L1 bilingual children. These data were retrieved from different types of corpora containing NI instances and collected over a certain period of time.

4. Research questions and hypotheses

Having as a point of departure previous works on TUs as well as on NI, we have formulated the following four research questions that engender four hypotheses. These refer to the existence of explicitation and simplification in our data (hypothesis 1), the possible difference between these TUs (hypothesis 2), and the correlation that could be established between both or either of these TUs and the type of data (hypothesis 3), and the language pair or the directionality of the NI case (hypothesis 4).

Research question 1. Do TUs appear in L1 bilingual acquisition data as part of the different instances of NI produced by L1 bilingual children?
Hypothesis 1. As non-instructed interpreters, and therefore, non-influenced by *a posteriori* translational norms, children would use simplification and

explicitation in a natural and genuine way, since both are mechanisms associated to language mediation in general and to translation in particular. That is, the NI occurrences produced by the bilingual children in this study will exhibit these two features to a greater or lesser extent in their interpreting performance.

Research question 2. Is there any difference in the use of the two TUs that we set to study?

Hypothesis 2. The use of simplification and explicitation is expected to be equal in proportion since one is not more marked than the other and both are part of the language mechanisms in any linguistic mediation process, including translation. In fact, as argued by Toury (2004) and Pym (2008), and suggested by Mauranen (2008), if these two TUs are a pair of shifts, a rather balanced use of both TUs is expected.

Research question 3. Is the occurrence of TU instances linked to the type of data and, therefore, to the type of context in which NI takes place?

Hypothesis 3. Certain contextual conditions could affect the quantity and quality of these TUs in the translation activity of each child. In particular, a difference could emerge when comparing NI instances in spontaneous natural contexts (i.e. spontaneous data), where nothing but the usual communicative situation is constraining the child's production, and those that result from

experimental conditions (i.e. experimental data), where task conditions and the extra-pressure placed on the demand for a quick response could reduce the number of NI instances altogether or affect the number of TU instances.

Research question 4. Is the occurrence of TU instances linked to the language pair involved and/or to the directionality of the NI case in a given language pair?

Hypothesis 4.TU instances would appear regardless of the pair of languages the children are using in the translational interactions and, although either or both could be more common in one direction than in the other in a specific set of data (House 2008), no clear correlation between TU type and either language pair or directionality will be established.

In this way, we will draw inferences and point out regularities in the translational behavior (both in the spontaneous and in the experimental performance) of these bilingual children with a view to providing valuable information about typical features of NI and about the search for TUs from a different perspective and methodology.

5. Research methodology for the study of TUs in NI data

In order to contribute to the characterization of simplification and explicitation as TUs and to provide an answer to the research questions above, we set out to analyze language acquisition data available through different longitudinal corpora and sample lists. Our aim is to contribute to the debate on these two TUs using a corpus-based methodology by focusing on the emergence of the translation activity performed by untrained L1 bilingual children. We start by presenting our corpus of study, the data we have selected and how these have been codified for the present analysis.

5.1. Selection and description of the corpus data under investigation

The different sets of data we have analyzed are summarized in tables 1 and 2. These tables distinguish between two types of data: data coming from longitudinal corpora (table 1) and data coming from sample lists (table 2). All of them involve transcribed oral acquisition data since they represent everyday spoken language in a bilingual acquisition context. They are all available either on-line or in the corresponding publications where they appear. The two types of data differ in that the first set (table 1) includes the overall production of children throughout a period of time; while the second set (table 2) is a list of NI instances as selected by the researchers.

Table 1 shows the seven corpora we have used. These are made up of transcriptions where a complete record of the conversational interactions between the children and the rest of the participants are included.

Table 1. Data set 1: corpora

corpus	language pair	data type	# of children
FerFuLice	Spanish/English	spontaneous	2
Ticio	Spanish/English	spontaneous	1
Deuchar	Spanish/English	spontaneous	1
Vila	Spanish/Catalan	spontaneous	1
Genesee	French/English	spontaneous	5
Pérez-Bazán	Spanish/English	spontaneous	6
FerFuLice	Spanish/English	experimental	[2]
Cossato	English/Swedish Hungarian/Swedish Italian/English	experimental	3

Six of these corpora are freely available through the CHILDES project (MacWhinney 2000):[8] FerFuLice, Ticio, Deuchar, Vila, Genesee and Pérez-Bazán; while Cossato's (2008) corpus comes from a PhD dissertation. Only the FerFuLice corpus includes both spontaneous data (i.e. data elicited in natural unconstrained conversations between the children and the adults) as well as experimental data (i.e. data that have been collected by means of an experiment in which the children are asked to act as interpreters between two monolingual participants). A total of nineteen children are included in this first set and six language pairs are represented: Spanish/English, Spanish/Catalan, French/English, English/Swedish, Hungarian/Swedish and Italian/English.[9]

Table 2 refers to the four corpora that are made up of sample lists where NI occurrences are found: Ronjat (1913), Leopold (1939-1949), Swain (1972) and Lanza (1988, 1997, 2001).

Table 2. Data set 2: sample lists

researcher	language pair	data type	# of children
Ronjat	German/French	spontaneous	1
Leopold	German/English	spontaneous	1
Lanza	Norwegian/English	spontaneous	1
Swain	French/English	experimental	1

The fact that they are sample lists involves that only the specific NI case as selected by the researcher is available and that the linguistic context in which this NI case appeared is not subject to inspection or re-analysis. In this second set, both spontaneous as well as experimental data appear. A total of four children were analyzed and four different language pairs: German/French, German/English, Norwegian/English and French/English.

5.2. Selection and description of the data studied

The profile of the twenty-three children whose data we analyzed is fairly similar in that they are all L1 bilingual children, that is, children that have been exposed to the two languages from birth and in their home context.
Tables 3 and 4 present a general overview of the data we analyzed from these twenty-three participants including both background information as well as

information on the actual amount of data we collected. Only data from children under the age of 8 were included since our study deals with how TUs are used in the initial stages of the language acquisition process.[10]

Table 3 shows that the ages of the nineteen children in the first set range from 1;1 to 7;4. The word-count of the data from all these children gives a total of 223,582 words.

Table 3. Data set 1: information on selected participants

corpus	language pair	child's name	age range	# of words
FerFuLice	Spanish/English	Leo	1;1-6;11	77,365
		Simon	1;1-6;11	74,687
Ticio	Spanish/English	Diego	1;6-1;10	2,898
Deuchar	Spanish/English	Manuela	1;3-2;6	4,843
Vila	Spanish/Catalan	María del Mar	1;9-5;4	32,971
Genesee	French/English	Leila	1;2-2;3	670
		Jessica	1;10-1;11	1,041
		Gene	1;10-3;7	3,062
		Olivier	1;10-3;7	6,685
		Joelle	2;4-2;5	1,417
Pérez-Bazán	Spanish/English	Alberto	1;3-3;0	2,208
		Antonio	2;11-3;1	734
		Carla	2;0-3;3	2,929
		John	2;0-3;3	2,481
		Sheila	2;2-2;8	1,096
		Tina	2;2-2;11	739
FerFuLice	Spanish/English	Leo	4;10-6;3	1,615
		Simon	4;10-6;3	2,231
Cossato	English/Swedish	Birgitta	4;10	2,326
	Hungarian/ Swedish	Björn	6;5	816
	Italian/English	Barbara	7;4	768

In the case of the second set, table 4 summarizes the information corresponding to the four children whose ages range from 0;9 to 8;0. Given that data come from sample lists, no word count of the children's production could be done in this case.

Table 4. Data set 2: information on selected participants

researcher	language pair	child's name	age range
Ronjat	German/French	Louis	1;0-4;9
Leopold	German/English	Hildegard	0;9-8;0
Lanza	Norwegian/English	Siri	1;11-2;8
Swain	French/English	Michael	3;1-3;10

The information about the children under analysis, which is provided in tables 3 and 4, shows both a homogeneous profile in that they are all L1 bilingual children immersed in a bilingual home context. However, differences also appear across children. For instance, the amount of data available for each child is not the same (e.g. Leo versus Leila from the FerFuLice and the Genesee corpora respectively), the strategy of communication at home may vary (e.g. one-parent-one-language or not, in the FerFuLice versus the Vila corpora respectively) or the bilingual context may or may not extend to the social context (e.g. Spanish/English children in Spain versus French/English child in Montreal, Canada, in the FerFuLice and the Genesee corpora respectively).

5.3. Data classification procedure

In the corpora described in section 5.1., we analyzed the production of the child participants presented in section 5.2. in terms of NI. We first isolated the NI contexts and then classified these contexts and the specific NI occurrences or, as referred to hereafter, NI cases (NICs).

The compilation of NICs in our study covers those occurrences in which children are asked explicitly to translate (regardless of whether they actually do so or not) - as in (1a) - or instances in which they translate spontaneously, as in (1b), where Louis, at the age of two years and six months old, reports to Deda (a German speaking housemaid) what his father said even though nobody asked him to do so.

(1a)   Mother: don't step on the camera, no.
        Leo: lo quiero, sí. [I want it, yes]$_{Spanish}$
        Mother: can you say that in English?
        Leo: I want hold it that.

                                              [2;7_FerFuLice corpus]

(1b)   Father: non, reste pas ici, il fait trop froid, va voir Deda.
           [no, do not stay here, it is too cold, go and see Deda]$_{French}$

        Louis (to Deda): Papas Zimmer ist zu kalt. [papa's room is very cold]$_{German}$

                                              [2;6_Ronjat sample]

As regards both the corpora and the sample lists, some NICs were excluded from the analysis if any of the following conditions occurred:

- the context provided was not clear enough to classify the NIC as an actual instance of translation as in (2a), where it is unclear whether the child translated the French word *masque* into English (*mask*) or he just repeated it in the same language, thus not translating at all;

- the translation was in part or completely provided to the child, as illustrated in (2b);

- the case was ambiguous, as in (2c), where it is not possible to discern whether the child is actually translating what the adult is saying (*sit here*) or whether she is rather reacting to the adult's demand.

(2a)   The child goes and picks up a mask
       Researcher: what is this in English?
       Child: le… masque! [=mask]French or [=mask]English

                                                    [2;5_Genesee corpus]

(2b)   Child: el blau. [the blue one]Catalan
       Mother: sí y en castellano cómo se dice?
                   [yes and how do you say it in Spanish?]Spanish

       Child: blau. [blue]Catalan
       Mother: es de color a... [it is bl…]Spanish
       Child: …zul. […ue]Spanish

                                                    [4;6_Vila corpus]

(2c)   Natxo: seu aquí. [sit here]Catalan
       Child: yo me siento a mi silla. [I sit on my chair]Spanish

                                                    [3;7_Vila corpus]

Once the different NI contexts were isolated, they were classified using the following four variables: activity, grammar-interpretation mapping, directionality and data type. The corresponding settings of these variables are shown in table 5.

Table 5. Variables for the analysis of NICs

activity	grammar-interpretation mapping	directionality	data type
- complete	- lexical pairings	- A into B	- spontaneous
- incomplete	- expansive	- B into A	- experimental
- null	- economic		

The targeted settings for the study of simplification and explicitation appear in grey shadow. The specific TU instances are under the grammar-interpretation mapping variable: expansive NI refers to explicitation and economic NI to simplification.[11] The different variables and their values are described below.

The activity variable classifies NI depending on whether translation did or did not take place and whether the translation process was completed, as in the previous examples in (1), or was not completed, resulting in a language-mixed target utterance, as in example (3).

(3) Researcher: Ask Helen to turn on all the lights, OK?
     Child: Veux-tu tourne the lights? [Would you turn] French [the lights?]English

                                                              [3;3_Swain sample]

The null activity involves the absence of a target language utterance even though the situation requires a translation product, as happens in (4), where the child does not respond to his mother's requests to translate.

(4)   Mother: escucha, cómo se dice esto en inglés?
                    [Listen, how do you say this in English?]Spanish
        Child: hmm.
        Mother: Antonio.
        Child: 0.
                                                    [3;1_Pérez-Bazán corpus]

Both complete and incomplete NICs are further classified in terms of lexical pairings, expansive NI (i.e. showing explicitation) and economic NI (i.e. showing simplification). As for lexical pairings, they occur when there is a grammar-interpretation mapping of both original and target utterances, as exemplified in (5), where the target utterance involves the same lexical and semantic mapping as that of the original utterance.

(5)   Researcher: Demande si elle peut lôter. [ask if she can take it off]French
        Child: You can take it off?
                                                    [3;6_Swain sample]

The other two target settings, economic and expansive NI, are concerned with the two TUs under analysis. When comparing source and target occurrences in NICs, economic NI is said to take place when the information rendered in the translation is semantically and/or lexically reduced if compared to the

original utterance. It usually implies a reduction of lexical units since only the key part of the original message is rendered, as illustrated in example (6).

(6)   Susana: it's very difficult you've got to learn with number first okey?
       Esther: Leo qué ha dicho Susana que yo no lo sé?
              [Leo what did Susana say that I do not know it?]_{Spanish}

       Leo: que lo tienes que aprender primero con números.
              [that you have to learn it with numbers first]_{Spanish}

                                                        [4;10_FerFuLice corpus]

As (6) shows, Leo produces a translation where part of the original lexical units (*it's difficult*) uttered by the adult, and so, part of the message, is omitted.

Although a lexical reduction is concomitant with the interpreting process when, for instance, many utterances are translated into fewer utterances or just a single target utterance, as exemplified in (7), it is not a necessary condition for economic translations to occur, as exemplified in (8).

(7)   Researcher: ah eh no perché insomma sai mi cioè lo scorso inverno ho preso l'influenza per due settimane poi ho preso le medicine e non mi passava mai poi sono andata dal dottore eh insomma hm: non potevo andare a lavorare poi avevo la tosse e il mal di gola e: la febbre insomma per quello sono un po' preoccupata se fa: se fa tanto freddo qui e quindi insomma […] e: che volevo assicurarmi che non facesse troppo freddo.
              [ah eh because that is you know so last year I had a flu for two weeks then I took my medicines and it wouldn't go away then I went to the doctor's e: that is hm: I couldn't go to work then I had a cough and a sore throat e: a temperature that is that's why I am a bit worried if it's very cold here and therefore that is (…) e: that I wanted to make sure that it's not too cold]_{Italian}

       Barbara: she wanted to know that it's not too cold for staying here…

Emrick: too cold… well is that a problem?
Barbara: …because she is scared that she will get a cough or influenza.

[7;4_Cossato corpus]

(8)   Researcher: … the same color as his eyes.
        Child: … la même chose que ses yeux. [...the same thing as his eyes]French

[3;8_Swain sample]

In (8), the child interpreter translates the English original utterance into the

same lexical units in French though providing a semantically more general

translation for the word *color* (i.e. color > thing).

As for expansive NI, it takes place when the information rendered in the

translation is semantically and/or lexically expanded when compared to the

original utterance. It usually implies a greater number of lexical units since

the original message is rendered more explicitly or new information is added.

This is shown in examples (9) and (10).

(9)   Leo (to his father): no voy a dormir con ese tiburón.
                        [I am not going to sleep with that shark]Spanish
        Leo (to his mother): I'm not going to sleep with that old shark alright?

[4;0_FerFuLice corpus]

(10)   Researcher: hogy miket csinálnak ott? [what do they do there?]Hungarian
        Björn: vad gör du i din skola? [what do you do in your school?]Swedish

[6;5_Cossato corpus]

While in example (9) Leo adds new words (*old* and *alright*) when he

translates into English what he has just said in Spanish in order to keep the

one-parent-one-language communicative rule, in example (10), Björn not only adds one more item in his translation (the possessive *din*) but he also gives a more explicit description of what the deictic adverb *ott* expresses (i.e. there < school).

As happened with economic NI, expansive NI does not necessarily imply more lexical items in the target utterance since more explicit or precise information can be reworded into fewer or even only one item, as shown in (11).

(11)   Natxo: pero es un verde <u>diferente</u>, es un verde <u>de otro color</u>, me
        parece, ya verás.
        [but it is a different green, it is a different green color, I think, you will see]_{Spanish}

        María del Mar: es un verde <u>fortaquest</u>.
        [it is a green]_{Spanish} *[strong this]*_{Catalan}

                                                                    [5;3_Vila corpus]

In the incomplete NI in (11), the child produces a Spanish-Catalan target utterance, rendering the Catalan adjective *fort* as the translation of Spanish *diferente* or *de otro color*. In this way, she extends the meaning of the Catalan adjective using a more precise qualifier dealing with the grade of shade of the color itself (stronger or darker in this case; i.e. different < darker).

NICs were further classified according to two other variables: the directionality of NICs in terms of the source language and the target language of the pair involved; and the data type in terms of whether NICs were produced in a spontaneous context (i.e. everyday interactions at home

between the child and parents and/or researchers) or in an experimental context (i.e. the child is asked to act as an interpreter between two or more monolingual researchers).

On the whole, this classification procedure allowed us to address different issues concerning NI in general and the two TUs in particular: for instance, whether NI took place or the occurrence of simplification and explicitation in the overall number of NICs produced.[12]

6. An analysis of simplification and explicitation in NI bilingual acquisition data

We conducted our analysis taking into account the variables proposed in section 5.3. in order to address the issues outlined in our research questions and hypotheses. We also performed a series of statistical analyses (contrasts of proportions to calculate p-values) in order to detect significant differences when comparing across children and across variable settings. We now offer an overview of the data and then zoom into the two TUs, simplification and explicitation.

6.1. NICs in L1 bilingual acquisition data

The analysis of NICs produced by all the L1 bilingual children referred to in section 5.2. is summarized in table 6.

Table 6. NI production in L1 bilingual acquisition data

	complete	incomplete	null	Total NI in data
spontaneous	38.7% (292)	3.7% (28)	6.1% (46)	48.5% (366)
experimental	39.8% (300)	2.3% (17)	9.4% (71)	51.5% (388)
total NI type	78.5% (592)	6.0% (45)	15.5% (117)	100% **(754)**

As shown in table 6, out of the 754 NICs produced, almost half of them were found in spontaneous contexts (48.5%) and the other half (51.5%) in experimental sessions. In both contexts, the children produced significantly more complete NICs than in any other type (all p-values<.05). In this respect, the data show that bilingual children translate efficiently and generally in their language mediations and in both natural and experimental settings. This confirms our hypothesis 1.

When focusing on the interpreting activity, the analysis that follows includes both cases in which the interpreting process is completed (complete NICs, examples (1a) and (1b)) as well as contexts in which it is not (incomplete NICs, example (3)).[13] Thus, 637 cases were codified (320 in a spontaneous context and 317 in an experimental one) and the interpreting activity performed by each child individually appears in Figure 1.[14]
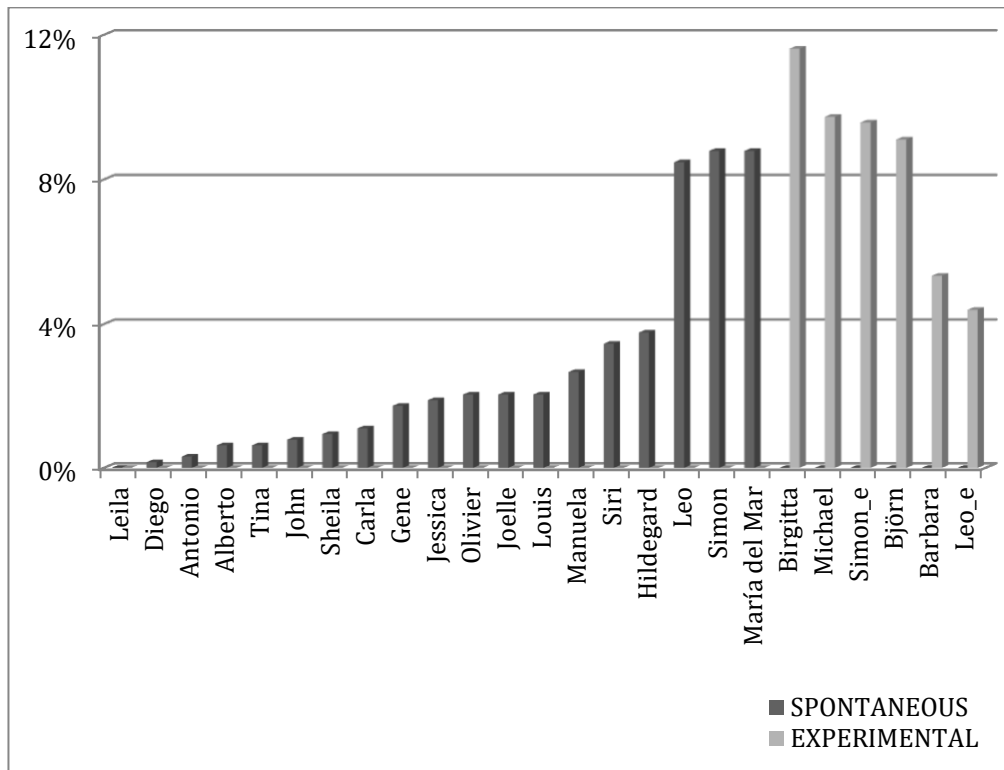
Figure 1. NIC production per child
       Percentages calculated over 637 (=100%)

As represented in figure 1, except for Leila (whose word count was the lowest of all our data -table 3-), all children translate to a greater or lesser extent. More specifically, and as far as spontaneous data are concerned, we can observe that María del Mar, Leo and Simon are the children who have a significant production of NICs with 8.8% (56 cases), 8.5% (54 cases) and 8.8% (56 cases), respectively (all p-values<.05).

With regard to experimental data, most children produced a similar percentage of NICs, being Simon (9.6%, 61 cases), Michael (9.7%, 62 cases), Birgitta (11.6%, 74 cases) and Björn (9.1%, 58 cases) the ones who produced

more cases in comparison to the other two participants, Leo and Barbara (*p*-values<0.5).

Generally speaking, there are bilingual children who are more prolific than others as natural interpreters in either setting and with different language pairs, although in the case of spontaneous data the quantity and the type of data available from each child is a factor that must be taken into consideration when dealing with these results. As illustrated in table 3, Leo and Simon (FerFuLice corpus) and María del Mar (Vila corpus) are the children who produced the highest number of words in all the corpora studied.

A further analysis of these results in terms of our second variable, the grammar-interpretation mapping, shows the occurrence of simplification and explicitation across children.

6.2. Simplification and explicitation in L1 bilingual data

The distribution of NICs in terms of the grammar-interpretation mapping variable is presented in table 7.

Table. 7. NICs in relation with grammar-interpretation mapping

	pairing	economic	expansive
spontaneous	39.7% (253)	6.1% (39)	4.4% (28)
experimental	21.2% (135)	19.3% (123)	9.3% (59)
total of subtypes	60.9% (388)	25.4% (162)	13.7% (87)

Percentages calculated over 637 (=100%)

In general terms, as illustrated in table 7, a total of 388 cases of lexical pairings (60.9%) reveals that when children translate they significantly prefer the use of this type of strategy over economic or expansive NICs (all *p*-values=0). With regard to economic and expansive cases, the number of NICs in the former (25.4%, 162 cases) is significantly higher than in the latter (13.7%, 87 cases) (*p*-value=0), which calls for a reformulation of our initial hypothesis 2 much in line with hypothesis 3, as we discuss below.

Focusing on the spontaneous data, the preference for pairing is also significant (all *p*-values=0) and, although economic NICs (6.1%, 39 cases) outnumber expansive NICs (4.4%, 28 cases), the difference is not significant (*p*-value=.08).

This result, however, is not replicated in the experimental data, where, on the one hand, lexical pairings and economic NICs are used in a similar proportion (*p*-value=.2) and, on the other hand, both subtypes are preferred over expansive NICs (9.3%, 59 cases) (*p*-values=0). That is, in the case of the experimental data analyzed, economic NICs significantly outnumber expansive NICs.

Table 7 also shows that economic and expansive NICs are significantly more predominant in experimental sessions than in spontaneous interactions (*p*-values=0). This difference in terms of type of data suggests that the contextual variable seems to be an influential factor in the interpreting performance in bilingual children, which confirms our hypothesis 3: leaving

aside the pairing cases that prevail in both settings, spontaneous communicative situations do not favor the dominance of one TU over the other since both simplification and explicitation seem to be equally represented in the spontaneous interactions between L1 bilingual children and their parents. With regard to experimental situations, the tendency towards using simplification rather than explicitation when interpreting for researchers could be explained by the intrinsic characteristics of constrained oral linguistic mediations (in contrast with family interactions). These are characterized by the demand for immediacy and concentration, or by the economy of expression to facilitate a quick understanding between two interlocutors, which is what the children are required to do in the experimental tests.

How the total number of the two TUs under analysis (249 cases, 162 economic and 87 expansive) is distributed across the participants of the study is shown in figures 2 and 3.
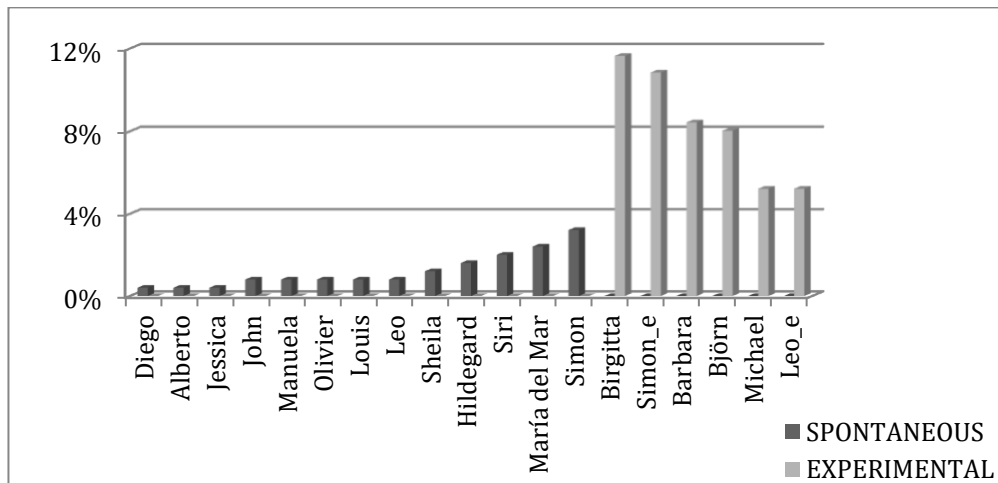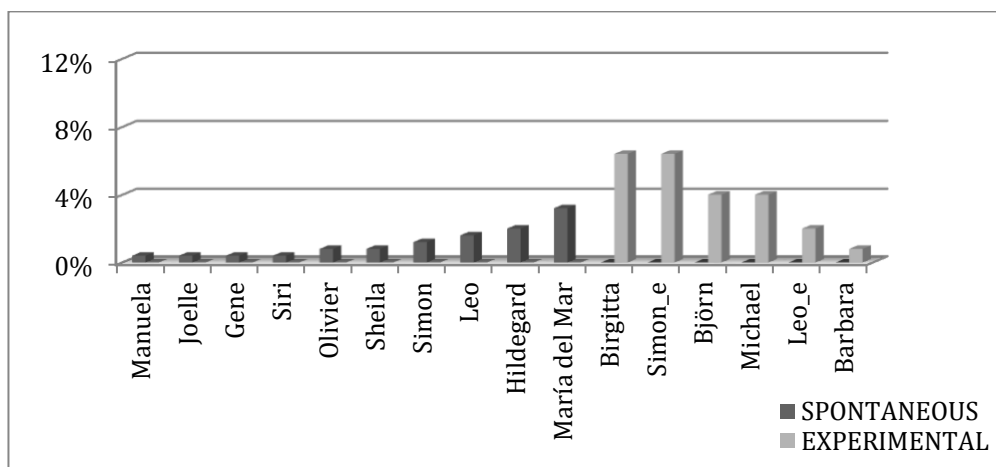
Figure 2. Simplification in the NIC production of L1 bilingual children
Percentages calculated over 249 (=100%)

In figure 2 only the performance of those children who produced economic NICs is presented (17 out of the 23 children). As already shown in table 7, the majority of economic NICs are found in experimental data. Simon was the child who used this strategy the most in both contexts (3.2%, 8 cases, and 10.8%, 27 cases, respectively), although Hildegard (1.6%, 4 cases), Siri (2%, 5 cases) and María del Mar (2.4%, 6 cases) in spontaneous data, and Brigitta (11.6%, 29 cases), Björn (8%, 20 cases) and Barbara (8.4%, 21 cases) in experimental sessions, showed no significant differences from Simon's production (all *p*-values>.05).

Figure 3.Explicitation in the NIC production of L1 bilingual children
Percentages calculated over 249 (=100%)

With regard to explicitation, figure 3 shows that fourteen children out of twenty-three contributed to the production of the 87 expansive NICs, more predominant in experimental than in spontaneous production (as in table 7). Out of the ten children who produced expansive NICs in spontaneous data, Hildegard (2%, 5cases), María del Mar (3.2%, 8 cases) and Leo (1.6%, 4 cases) are those who used this strategy significantly, while in the experimental data Simon (6.4%, 16 cases), Michael (4%, 10 cases), Brigitta (6.4 %, 16 cases) and Björn (4%, 10 cases) are the children who produced more expansive NICs than the rest (all p-values<.05).

Therefore, most children in this study used, simplification and explicitation, to a greater or lesser extent. Simplification was favored, especially in experimental data. Given that the children that represent the highest percentages in the use of each TU have different language pairs, no

correlation seems to hold between TUs and the language-pair variable, which

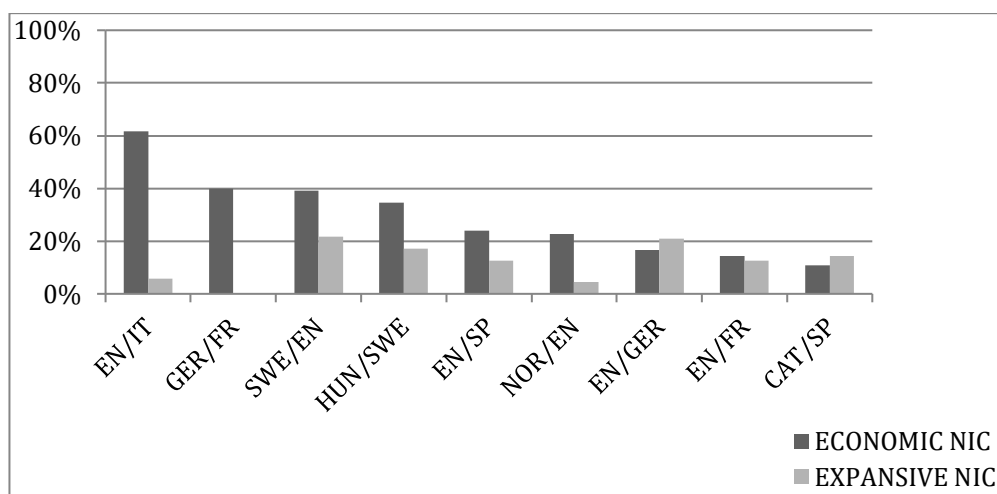is also confirmed by the results shown in figure 4.

Figure 4. Economic and expansive NIC production per language pair
Percentages calculated over 249 (=100%)

As can be observed in figure 4, out of the nine language pairs analyzed in this

study, five of them seem to favor the production of economic NICs over

expansive ones, while the other three language pairs (English/German,

English/French and Catalan/Spanish) show no preference for one over the

other. In the case of the German/French pair, no economic NICs were found

(the rest of NI production, 60%, corresponds to lexical pairings). The results

of this analysis also confirm that, regardless of the pair of languages involved,

both TUs are generally implemented in the children's translations and that

there is no correlation between this variable and the preference of

simplification over explicitation in our data, which supports what is stated in hypothesis 4.

With regard to the role of the directionality variable, table 8 shows how the data have been grouped into language families (English, German, Swedish and Norwegian as Germanic languages; Spanish, Italian and French as Romance languages; and Hungarian as other), indicating which ones are the source languages and which ones are the target languages.

Table. 8. NICs in relation to directionality

	economic	expansive	total
Germanic-Romance	27.7% (69)	8.8% (22)	36.5% (91)
Germanic-Germanic	15.3% (38)	8.8% (22)	24.1% (60)
Romance-Germanic	11.6% (29)	10% (25)	21.7% (54)
Romance-Romance	2.4% (6)	3.2% (8)	5.6% (14)
Germanic-other	4% (10)	2% (5)	6% (15)
other-Germanic	4% (10)	2% (5)	6% (15)

Percentages calculated over 249 (=100%)

Although for Romance-Germanic and Romance-Romance directions there are no significant differences between the economic and the expansive NICs production, in the rest of the direction pairs economic NICs are preferred over expansive ones (all p-values<.05). Table 8 also shows that most translations performed from a Germanic language into a Romance one (27.7%, 69 cases) are economic NICs (all p-values>.05). This result shows again that, regardless of the directionality of the language pairs in terms of language families, the inherent conditions of oral interactions make NI tend to be more

economic. Therefore, this result indicates that directionality does not seem to correlate with the TU type, as stated in hypothesis 4.

7. Conclusions and further research

In the present study we offer an investigation of two TUs, i.e. simplification and explicitation, in the translations produced by L1 bilingual children with different language pairs. Our research provides new insights into the nature of translation and contributes to the analysis of translation universals in acquisition data.

In particular, our analysis shows that, regardless of the language pair involved, all the L1 bilingual children in our study interpreted naturally (confirming our hypothesis 1) and the use of simplification and explicitation was typical and genuine in their interpreting performance. The preference for one TU over the other did not seem to be correlated to the language pair involved (as in our hypothesis 4), but was found to be linked to the context where translations are produced (i.e. spontaneous versus experimental situations) (confirming hypothesis 3 and contrary to hypothesis 2). Simplification is preferred by bilingual children both in their spontaneous speech as well as in the experimental contexts (i.e. where they are prompted to translate). We argue that in the latter case simplification is related, on the one hand, to the concomitant characteristics of oral interactions such as

interpreting and, on the other, to the extra-pressure placed on children in experimental situations. These involve (i) a heavier task burden and a high level of concentration when translating constantly between two languages; (ii) long duration of these tasks, which affects children's involvement and therefore their performance; and (iii) children's short-term memory span, which may have an effect when long source chunks are to be translated. Some of these issues have also been discussed in brokering studies (e.g. Valdés 2003; Hall 2004; Angelelli 2011).

Future research could address the following issues. First of all, the analysis of a considerably greater number of cases could provide stronger evidence for the pervasiveness of NI in general and of TUs in particular. This envisioned research could target different populations and so be based on data from bilinguals with other language pairs, from unbalanced bilinguals with different dominant languages as well as on data from adult untrained natural interpreters. Moreover, research could look at potential differences among lexical, morphological and syntactic manifestations of simplification and explicitation. Finally, the occurrence of TUs in NI could be explored in longitudinal studies aimed at investigating the relationship between universal features of translation and language competence at various stages of child development.

To conclude, bilingual language acquisition studies and CTS can benefit from mutual collaboration through the use of corpora in the empirical investigation

of language use in multilingual contexts. In this regard, the study of natural interpreting can become a fertile area for exchanging knowledge, resources and data between the two disciplines.

REFERENCES

Albrecht, Esther. 2004. *"I can speak German - und Deutsch" The Development and Use of Code-Switching among Simultaneous and Successive English-German Bilingual Children*. PhD dissertation. Albert Ludwigs University Freiburg.

http://d-nb.info/975221000/34

Álvarez de la Fuente, Esther. 2008. *Análisis lingüístico de la traducción natural: datos de producción de dos niños gemelos bilingües inglés/español*. PhD dissertation. University of Valladolid. Madrid: ProQuest Information and Learning España. Accessed September 15, 2014.

http://uvadoc.uva.es/handle/10324/71

Álvarez de la Fuente, Esther and Raquel Fernández Fuertes. 2012a. "How Two English/Spanish Bilingual Children Translate: In Search for Bilingual Competence through Natural Interpretation." In *Interpreting Brian Harris. Recent Developments in Translatology*, ed. by M. Amparo Jiménez Ivars, and M. Jesús Blasco Mayor, 95-115. Viena:

Peter Lang.

Álvarez de la Fuente, Esther and Raquel Fernández Fuertes. 2012b. "In Search of the Initial Translator in Translation and Bilingualism Studies." In *Interpreting Brian Harris. Recent Developments in Translatology*, ed. by M. Amparo Jiménez Ivars, and M. Jesús Blasco Mayor, 11-49. Viena: Peter Lang.

Álvarez de la Fuente, Esther and Raquel Fernández Fuertes. "A Methodological Approach to the Analysis of Natural Interpreting: Bilingual Acquisition Data and the CHAT/CLAN tool." In *Corpus-based Translation and Interpreting Studies: From Description to Application*, ed. By M. Teresa Sánchez Nieto. Berlin: Verlag Frank & Time für Wissenschaftliche Literatur, forthcoming.

Angelelli, Claudia V. 2011. "Expanding the Abilities of Bilingual Youngsters: Can Translation and Interpreting Help?" In *Interpreting Naturally. A Tribute to Brian Harris*, ed. by M. Jesús Blasco Mayor, and M. Amparo Jiménez Ivars, 103-120. Berne: Peter Lang.

Baker, Mona. 1993. "Corpus Linguistics and Translation Studies: Implications and Applications." In *Text and Technology: In Honour of John Sinclair*, ed. by Mona Baker, Gill Francis, and Elena Tognini-Bonelli, 17-45. Amsterdam: John Benjamins.

Baker, Mona. 1995. "Corpora in Translation Studies: An Overview and Some Suggestions for Future Research." *Target* 7: 223-243.

Baker, Mona. 1996. "Corpus-based Translation Studies: The Challenges that Lie Ahead." In *Terminology, LSP and Translation: Studies in Language Engineering in Honour of Juan C.* Sager, ed. by Harold Somers, 175-186. Amsterdam: John Benjamins.

Baumgarten, Nicole, Bernd Meyer and Demet Özçetin. 2008. "Explicitness in Translation and Interpreting. A Review and Some Empirical Evidence (of An Elusive Concept)." *Across Languages and Cultures* 9 (2): 177-203.

Becher, Viktor. 2010. "Towards a More Rigorous Treatment of the Explicitation Hypothesis in Translation Studies." *trans-kom* 3 (1). http://www.trans-kom.eu/bd03nr01/trans-kom_03_01_01_Becher_Explicitation.20100531.pdf

Becher, Viktor. 2011. *Explicitation and Implicitation in Translation: A Corpus-based Study of English-German and German-English Business Texts*. PhD dissertation. University of Hamburg. http://ediss.sub.uni-hamburg.de/volltexte/2011/5321/pdf/Dissertation.pdf.

Beckmannova, Petra. 2004. *Dolmetschen als angeborene Fähigkeit: das Phänomen des natürlichen Dolmetschens bei einem Bilingualen Kind im Alter von drei bis fünf Jahren – ein Tagebuch*. PhD dissertation. University of Wien.

Bendazzoli, Claudio, and Annalisa Sandrelli. 2009. "An Approach to Corpus-

based Interpreting Studies: Developing EPIC (European Parliament Interpreting Corpus)." *MuTra-Challenges of Multidimensional Translation: Conference Proceedings*. http://www.euroconferences.info/proceedings/2005_Proceedings/2005_Bendazzoli_Sandrelli.pdf

Bernardini, Silvia, and Federico Zanettin. 2004. "When Is a Universal Not a Universal? Some Limits of Current Corpus-based Methodologies for the Investigation of Translation Universals." In *Translation Universals. Do They Exist?*, ed. by Anna Mauranen, and Pekka Kujamäki, 51-62. Amsterdam: John Benjamins.

Blum-Kulka Soshana. 1986. "Shifts in Cohesion and Coherence in Translation." In *Interlingual and Intercultural Communication*, ed. by Juliane House, and Soshana Blum-Kulka, 17-37. Tubingen: Narr.

Blum-Kulka, Soshana, and Eddie A. Levenston. 1983. "Universals of Lexical Simplification." In *Strategies in Interlanguage Communication*, ed. by Claus Færch, and Gabriele Kasper, 119-139. London. Longman.

Bullock, Carolyn, and Brian Harris. 1997. "Schoolchildren as Community Interpreters." In *The Critical Link: Interpreters in the Community*, ed. by Silvana E. Carr, Roda Roberts, Aideen Dufour, and Dini Steyn, 227-235. Amsterdam: John Benjamins.

Butler, Yuko G., and Kenji Hakuta. 2004. "Bilingualism and Second Language Acquisition." In *The Handbook of Bilingualism*, ed. by Tej

K. Bhatia, and William C. Ritchie, 114-144. Malden, MA: Blackwell.

Cencini, Marco. 2002. "On the Importance of an Encoding Standard for Corpus-based Interpreting Studies." *inTRAlinea*. Special issue: *CULT2K*.

http://www.intralinea.org/specials/article/On_the_importance_of_an_encoding_standard_for_corpus-based_interpreting_stu

Chen, Wallace. 2006. *Explicitation Through the Use of Connectives in Translated Chinese: A Corpus-based Study*. PhD dissertation, University of Manchester.

Chesterman, Andrew. 2004. "Beyond the Particular." In *Translation Universals. Do They Exist?*, ed. by Anna Mauranen, and Pekka Kujamäki, 33-49. Amsterdam: John Benjamins.

Chesterman, Andrew. 2007. "What Is a Unique Item?" In *Doubts and Directions in Translation Studies*, ed. by Yves Gambier, Miriam Shlesinger, and Radegundis Stolze, 3-13. Amsterdam: John Benjamins.

Chesterman, Andrew. 2010. "Why Study Translation Universals?" *Kiasm. Acta Translatologica Helsingiensia* 1.

https://helda.helsinki.fi/handle/10138/24319

Chesterman, Andrew. 2012. "Translation Universals." In *Handbook of Translation Studies* 2, ed. by Yves Gambier, and Luc van Doorslaer, 175-179. Amsterdam: John Benjamins.

Comeau, Liane, and Fred Genesee. 2001. "Bilingual Children's Repair Strategies during Dyadic Communication." In *Trends in Bilingual Acquisition*, ed. by Jasone Cenoz, and Fred Genesee, 231-256. Amsterdam: John Benjamins.

Cossato, Diana. 2008. *La mediazione linguistica in contesti bilingui: la parola ai bambini*. PhD dissertation. University of Trieste.

Döpke, Susanne. 1992. *One Parent, One Language. An Interactional Approach*. Amsterdam: John Benjamins.

Fernández Fuertes, Raquel and Juana M. Liceras, coords. 2009. "English and Spanish Bilingual Data". @ *The CHILDES Database*. Accessed September 15, 2014.

http://childes.psy.cmu.edu/data/Biling/FerFuLice.zip

Hall, Nigel. 2004. "The Child in the Middle: Agency and Diplomacy in Language Brokering events." In *Claims, Changes and Challenges in Translation Studies*, ed. by Gyde Hansen, Kirsten Malmkjær, and Daniel Gile, 285-297. Amsterdam: John Benjamins.

Halverson, Sandra. 2003. "The Cognitive Basis of Translation Universals." *Target* 15 (2): 197-241.

Harris, Brian. 1977. "The Importance of Natural Translation." *Working on Papers in Bilingualism* 12: 96-114.

Harris, Brian. 1980a. "How a Three-year-old Translates." *Patterns of bilingualism*: 370-393. Singapore: National University of Singapore

Press.

Harris, Brian. 1980b. "Elicited Translation by a Three-year old English/French Bilingual." In *Proceedings of the First International Congress for the Study of Child Language*, ed. by David Ingram, Fred C.C. Peng, and Philip Dale, 610-631. Association for the study of child language: University Press of America.

Harris, Brian. 1992. "Natural Translation: A Reply to Hans P. Krings". *Target* 4 (1): 97-103.

Harris, Brian. 2003. "Aspects of Interpretation". Curso superior de traducción. Valladolid: University of Valladolid.

Harris, Brian. 2013. "An Annotated Chronological Bibliography of Natural Translation Studies with Native Translation and Language Brokering 1913-2012." Accessed September 15, 2014.

https://www.academia.edu/5855596/Bibliography_of_natural_translation

Harris, Brian, and Bianca Sherwood. 1978. "Translating as an Innate Skill." In *Language Interpretation and Communication*, ed. by David Gerver, and H. Wallace Sinaiko, 155-170. New York: Plenum Press.

House, Juliane. 2008. "Beyond Intervention: Universals in Translation". *Trans-kom* 1 (1).

http://www.trans-kom.eu/bd01nr01/trans-kom_01_01_02_House_Beyond_Intervention.20080707.pdf

Jantunen, Jarmo H. 2004. "Untypical Patterns in Translations. Issues on Corpus Methodology and Synonymity." In *Translation Universals. Do They Exist?*, ed. by Anna Mauranen, and Pekka Kujamäki, 101-126. Amsterdam: John Benjamins.

Kade, Otto. 1968. *Zufall und Gesetzmässigkeit in der Übersetzung*. Leipzig: Verlag Enzyklopädie.

Kenny, Dorothy. 1999. *Norms and Creativity: Lexis in Translated Text*. PhD dissertation. University of Manchester Institute of Science and Technology.

Kenny, Dorothy. 2001. *Lexis and Creativity in Translation: A Corpus-based Study*. Manchester: St. Jerome.

Klaudy, Kinga. 1996a. "Concretization and Generalization of Meaning in Translation." In *Translation and Meaning Part 3*, ed. by Marcel Helen and Barbara Lewandowska-Tomasczyk, 141-163. Maastricht: Hogeschool Maastricht.

Klaudy, Kinga. 1996b. "Back-Translation as a Tool for Detecting Explicitation Strategies in Translation." In *Translation Studies in Hungary*, ed. by Kinga Klaudy, José Lambert, and Anikó Sohár, 99-114. Budapest: Scholastica.

Klaudy, Kinga. 2008. "Explicitation." In *Routledge Encyclopedia of Translation* Studies, ed. by Mona Baker and Gabriela Saldanha, 104-108. London & New York: Routledge, 2nd edn.

Knapp-Potthoff, Annelie, and Karlfried Knapp. 1987. "The Man (or Woman) in the Middle: Discoursal Aspects of Non-professional Interpreting." In *Analyzing Intercultural Communication*, ed. by Karlfried Knapp, Werner Enninger, and Annelie Knapp-Potthoff, 181-211. Berlin: Mouton.

Köppe, Regina, and Jürgen Meisel. 1995. "Code-switching in Bilingual First Language Acquisition." In *One Speaker, Two Languages: Cross-disciplinary Perspectives on Code-switching*, ed. by Lesley Milroy, and Pieter Muysken, 276-301. Cambridge: Cambridge University Press.

Lanza, Elizabeth. 1988. "Language Strategies in the Home: Linguistic Input and Infant Bilingualism." In *Bilingualism and the Individual*, ed. by Anne Holmen, Elisabeth Hansen, Jørgen Gimbel, and J. Normann Jørgensen, 69-84. Clevedon, U.K.: Multingual Matters.

Lanza, Elizabeth. 1997. *Language Mixing in Infant Bilingualism: A Sociolinguistic Perspective*. Oxford: Oxford University Press.

Lanza, Elizabeth. 2001. "Bilingual First Language Acquisition: A Discourse Perspective on Language Contact in Parent-child Interaction." In *Trends in Bilingual Acquisition*, ed. by Jasone Cenoz, and Fred Genesee, 201-229. Amsterdam: John Benjamins.

Laviosa, Sara. 1998. "The Corpus-based Approach: A New Paradigm in Translation Studies." *Meta* 43: 474-479.

Laviosa, Sara. 2002. *Corpus-based Translation Studies*. Amsterdam: Rodopi.

Laviosa, Sara. 2008. "Description in the Translation Classroom. Universals as a Case in Point." In *Beyond Descriptive Translation Studies. Investigations in Homage to Gideon Toury*, ed. by Anthony Pym, Miriam Shlesinger, and Daniel Simeoni, 119-132. Amsterdam: John Benjamins.

Laviosa-Braithwaite, Sara. 1996. *The English Comparable Corpus (ECC): A Resource and a Methodology for the Empirical Study of Translation*. PhD dissertation. University of Manchester Institute of Science and Technology.

Leopold, Werner F. 1939-1949. *Speech Development of a Bilingual Child. A Linguist's Record*. Evanston, IL: Nortwestern University Press.

Lozes-Lawani, Christiane. 1994. *La traduction naturelle chez les enfants fon de la Republique de Benin*. PhD dissertation. University of Ottawa.

MacWhinney, Brian. 2000. *The CHILDES Project: Tools for Analyzing Talk*. Mahwah, NJ: Lawrence Erlbaum Associates. Accessed September 15, 2014.

http://childes.psy.cmu.edu

MacWhinney, Brian. 2008. "Enriching CHILDES for Morphosyntactic Analysis". In *Corpora in Language Acquisition Research: History, Methods, Perspectives*, ed. by Heike Behrens, 165-198. Amsterdam: John Benjamins.

Malakoff, Marguerite. 1991. *Natural Translation Ability in French-English Bilingual School-age Children: A Study of Source Language Errors in Naive Child-translators*. PhD dissertation. University of Yale.

Malmkjær, Kirsten. 2008. "Norms and Nature in Translation Studies." In *Incorporating Corpora. The Linguist and the Translator*, ed. by Gunilla Anderman, and Margaret Rogers, 49-59. Clevedon: Multilingual Matters.

Mauranen, Anna. 2008. "Universal Tendencies in Translation." In *Incorporating Corpora. The Linguist and the Translator*, ed. by Gunilla Anderman, and Margaret Rogers, 32-48. Clevedon: Multilingual Matters.

Mauranen, Anna, and Pekka Kujamäki, eds. 2004. *Translation Universals. Do They Exist?* Amsterdam: John Benjamins.

Meisel, Jurgen. 2001. "The Simultaneous Acquisition of Two First Languages." In *Trends in Bilingual Acquisition*, ed. by Jasone Cenoz, and Fred Genesee, 11-41. Amsterdam: John Benjamins.

Moropa, Koliswa. 2011. "A Link between Simplification and Explicitation in English-Xhosa Parallel Texts: Do the Morphological Complexities of Xhosa Have an Influence?" In *Corpus-based Translation Studies. Research and Applications*, ed. by Alet Kruger, Kim Wallmach, and Jeremy Munday, 259-281. London: Continuum.

Munday, Jeremy, ed. 2009. *The Routledge Companion to Translation Studies.*

London: Routledge.

Olohan, Maeve. 2004. *Introducing Corpora in Translation Studies*. London: Routledge.

Olohan, Maeve, and Mona Baker. 2000. "Reporting that in Translated English: Evidence for Subconscious Processes of Explicitation?" *Across Languages and Cultures* 1: 141-158.

Orellana, Marjorie F., Jennifer Reynolds, Lisa Corner, and María Meza. 2003. "In Other Words: Translating or "Para-phrasing" as a Family Literacy Practice in Immigrant Households". *Reading Research Quarterly* 38 (1): 12-34.

Øverås, Linn. 1998. "In Search of the Third Code. An Investigation of Norms in Literary Translation." *Meta* 43 (4): 571-588.

Pápai, Vilma. 2004. "Explicitation. A Universal of Translated Text?" In *Translation Universals. Do They Exist?*, ed. by Anna Mauranen, and Pekka Kujamäki, 143-164. Amsterdam: John Benjamins.

Pesetsky, David. 2009. "Linguistic Universals and Universal Grammar." MITECS. http://web.mit.edu/linguistics/people/faculty/pesetsky/Pesetsky_MITECS_Universals_UG.pdf.

Pöchhacker, Franz. 2009. "Issues in Interpreting Studies." In *The Routledge Companion to Translation Studies,* ed. by Jeremy Munday, 128-140. London: Routledge.

Puurtinen, Tiina. 2004. "Explicitation of Clausal Relations: A Corpus-based Analysis of Clause Connectives in Translated and Non-translated Finnish Children's Literature." In *Translation Universals. Do They Exist?*, ed. by Anna Mauranen, and Pekka Kujamäki, 165-176. Amsterdam: John Benjamins.

Pym, Anthony. 2008. "On Toury's Laws of How Translators Translate". In *Beyond Descriptive Translation Studies. Investigations in Homage to Gideon Toury*, ed. by Anthony Pym, Miriam Shlesinger, and Daniel Simeoni, 311-328. Amsterdam: John Benjamins.

Ronjat, Jules. 1913. Le developpement du langage observe chez un enfant bilingue. Paris: Librairie Ancienne H. Champion.

Saunders, George. 1988. *Bilingual Children: From Birth to Teens*. Clevedon: Multilingual Matters.

Sherwood, Bianca. 2000. *Features of NT in a Language Testing Environment*. PhD dissertation. University of Ottawa.

Shlesinger, Miriam. 1995. "Shifts in Cohesion in Simultaneous Interpreting." *The Translator* 1 (2): 193-214.

Steiner, Erich. 2005. "Explicitation, Its Lexicogrammatical Realization, and Its Determining (Independent) Variables – Towards an Empirical and Corpus-based Methodology." *SPRIKreports* 36: 1-42.

Swain, Merrill K. 1972. *Bilingualism as a First Language*. PhD dissertation. University of California, Irvine.

Tirkkonen-Condit, Sonja, ed, 1991. *Empirical Research in Translation and Intercultural Studies*. Tübingen: Gunter Narr Verlag.

Toury, Gideon. 1995. *Descriptive Translation Studies and Beyond*. Amsterdam: John Benjamins.

Toury, Gideon. 2004. "Probabilistic Explanations in Translation Studies: Welcome as They Are, Would They Qualify as Universals?" In *Translation Universals. Do They Exist?*, ed. by Anna Mauranen, and Pekka Kujamäki, 15-32. Amsterdam: John Benjamins.

Tse, Lucy. 1996. "Language Brokering in Linguistic Minority Communities: The Case of Chinese-and Vietnamese-American Students." *The Bilingual Research Journal* 20 (3-4): 485-498.

Tymoczko, Maria. 1998. "Computerized Corpora and Translation Studies." *Meta* 43 (4): 652-659.

Valdés, Guadalupe. 2003. *Expanding Definitions of Giftedness: The Case of Young Interpreters from Immigrant Countries*. Mahwah, NJ: Lawrence Erlbaum.

Vanderauwera, Ria. 1985. *Dutch Novels Translated into English: The Transformation of a 'Minority' Literature*. Amsterdam: Rodopi.

Vihman, Marylin M. 1985. "Language Differentiation by the Bilingual Infant." *Journal of Child Language* 12 (2): 297-324.

Walichowski, Miranda. 2001. "Language Brokering: Laying the Foundation for Success and Bilingualism." *Research in Bilingual Education.*

Symposium Conducted at the Annual Educational Research Exchange. College Station, Texas.

Xiao, Richard, Lianzhen He, and Ming Hue. 2010. "In Pursuit of the "Third Code". Using the ZJU Corpus of Translational Chinese in Translation Studies." In *Using Corpora in Contrastive and Translation Studies*, ed. by Richard Xiao, 182-214. Newcastle upon Tyne: Cambridge Scholars Publishing.

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Notes

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[1] In this article we will use the terms *translation*, *translator* and *translate* as umbrella terms to refer to both the oral and the written mode of translating. We are aware that the definition of translation as opposed to interpreting is "slippery" (Munday 2009, 6) and we adhere here to Kade's (1968) use of *translation/translator/translate* as superordinate terms. In the case of interpreting, Pöchhacker (2009, 128) argues how "interpreting studies is bound up with translation studies in many ways". In our empirical analysis (section 6) we use the term NI (natural interpreting) to refer to the specific translation performed by bilingual children, as proposed by Harris (2003).

[2] For this study we have adopted the term *corpus* in its broadest sense, that is, referring to a collection of naturally occurring linguistic data. As for the term

corpus-based studies and in order not to be mixed up with CTS, we have used the more general tag *empirical studies analyzing corpus data*.

[3] The validation of results through a corpus-based descriptive research process would explain why qualifiers are often added to TUs and so these are referred to *hypothesized universals* (e.g. Blum-Kulka 1986; Puurtinen 2004; Klaudy 2008) or *potential universals* (e.g. Bernardini and Zanettin 2004).

[4] See Puurtinen (2004) and Laviosa (2002, 2008) for a detailed review on these and other TUs in CTS literature.

[5] For instance, some researchers see simplification as a type of normalization or *vice versa* (Vanderawuera 1985; Pym 2008) understanding normalization as the tendency to favor the use of conventional, standard language to conform to the target audience. If normalization is applied to the level of the lexicon (e.g. using general, conventional vocabulary instead of a more semantically specific one), then it overlaps with simplification since both potential universals rely on the quantity and semantic specificity of certain lexical items to support their existence (Mauranen 2008).

[6] NI has also been referred to as naïve translation (Malakoff 1991; Harris 1992) or brokering (Knapp-Potthoff and Knapp 1987; Tse 1996; Walichowski 2001; Orellana et al. 2003; Hall 2004; Angelelli 2011), depending on whether a more empirical, metalinguistic or sociolinguistic approach was being followed.

[7] The term *bilingual* comprises different types of linguistic profiles depending on the age of exposure to the two languages, the linguistic skills at stake, etc. (see Meisel 2001 and Butler and Hakuta 2004 for an overview). We use the term *L1 bilinguals* to refer to those speakers who have acquired the two languages simultaneously from birth and in a natural context and who are, therefore, different from L2 bilinguals or sequential bilinguals, who have acquired their L1 from birth and their L2 at a later age, usually in an institutional context.

[8] The CHIld Language Data Exchange System (CHILDES) project was first conceived in 1981. "CHILDES is the largest corpus of conversational spoken language data currently in existence" (MacWhinney 2008, 165) and it is frequently used "[i]n order to conduct serious corpus-based research on the *development* of morphosyntax" (MacWhinney 2008, 167, emphasis added).

[9] The two children in the FerFuLice corpus have been counted only once. This is what the square brackets in table 1 indicate. Therefore, the first set of the study corpus involves data from nineteen children (and not twenty-one).

[10] The data in the corpora in tables 1 and 2 have been entirely codified for this study except for Cossato's because five out of the eight participants in her study fall out of our age scope. The five excluded participants are between 8;10 and 15;0 years old.

[11] The terms *explicitation* and *simplification* refer to the so-called universals while the tags *expansive* and *economic* are intended as classification variables. As such, these variables reflect the possible grammatical manifestations of their corresponding TUs and so they refer to how these TUs are instantiated in the natural interpreting production. That is, an expansive NI case is analyzed as an instance, a manifestation, of the TU *explicitation*, but it is not a TU as such.

[12] In the case of the corpora in CHILDES the automatic analysis of NICs has been done using the CLAN (Computerized Language ANalysis) programs, the software designed for the CHILDES project. This methodology applied to the study of NI is described in detail in Álvarez de la Fuente and Fernández Fuertes (forthcoming).

[13] We have analyzed complete and incomplete NICs together because of two reasons. First, the number of incomplete NICs is low. Secondly and most importantly, whether both NIC activity types are taken together (complete NICs + incomplete NICs) or separately, the distribution of the grammar-mapping variables, as the targeted settings, does not change. In fact, statistical analyses comparing both options yielded no significant differences.

[14] For Simon and Leo both spontaneous and experimental data are considered. Therefore, in figures 1, 2 and 3, Simon_e and Leo_e refer to their experimental production.