The acquisition of lexical and functional categories in English and German learners of Italian as a Foreign Language

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Abstract

The study of morphosyntactic development in children has a long tradition in both first (L1) and second (L2) language acquisition theories and literatures. In particular, «researchers of child language acquisition have long noted that children pass through developmental stages of grammatical morphology with […] variable or optional production rates of morphosyntactic inflection»[2] due to incomplete inflectional representations of features[3]. In spite of the large number of studies on these issues, specific cross-linguistic research which could shed new light on internal and/or external factors governing early acquisition of the inflectional system is still very limited. Following recent research carried out by Galasso[4] on the acquisition of inflection, the present paper aims to test the assumption that child language morphosyntactic development is determined by an emerging internal computational system we assume as characteristic of L1 as well as L2 acquisition.

Introduction

The paper is a small contribution to the huge field of cross-linguistic research on L1/L2/L3 acquisition as well as an opportunity to look back at the impact of these studies on current research on early SLA. In particular, investigations into spontaneous production oral data (rather than written data) have highlighted the great variability or optionality in L2 learners' use of verbal and nominal inflection and its combined effects on L2 syntax development. In the present paper, the basic assumption of the so-called Dual Mechanism Model[5], according to which lexical stems are acquired in the first place and subsequently come to be distinguished as separated from affixes, is verified from a cross-linguistic perspective drawing on a sample of Italian as a Foreign Language data from two groups of learners whose native languages are English and German respectively. In order to verify whether the emergence of specific phenomena in the acquisition of the inflectional system might/may occur in native speakers as well at the same age and stage of language development, two control corpora have been used in the study (the *Lancaster Corpus of Children's Project Writing* (LCCPW) and the *KoKo L1 – Corpus of German Children's Writing*). The intention was to categorize

divergences and establish their possible origin in cross-linguistic association (and developmental reasons or a combination of both).

The paper is organised as follows. In section 1 a brief overview of studies concerning the acquisition of inflectional morphology in both first and second languages is provided. Section 2 presents the methodology adopted for a preliminary comparative study of inflectional morphology querying/investigating an International Learner Corpus of children's/adolescents'/teenagers' writing (VALICO) as well as native corpora. In section 3 a brief discussion of the outcomes elicited from the study is presented. The implications of the present findings for future analyses and models of language acquisition are discussed in section 4.

1
Background

The long-established tradition of studies in the field of morpheme acquisition order carried out by Krashen *et al.* in the 1970s[6] suggested that 1) certain inflectional affixes are acquired in a largely invariant order; 2) acquisition could be defined in terms of accuracy. This meant that performance under 90% accuracy did not correspond to lack of acquisition, rather learners produce various morphemes and function words inconsistently[7]. Later studies conducted in the field of the generative framework[8] underlined the difference between overt use and real underlying knowledge. As a matter of fact, two radically different perspectives have been opposed over time to explain morphological variability in L2 learners: 1) as a developmental phenomenon by which the interlanguage grammar lacks certain abstract categories, subsequently acquired; 2) abstract morphosyntactic features are present even at an early stage of L2 acquisition. Nonetheless, the attested breakdown between the different components of grammar hampers the learner's access to the relevant morphology even when it has been acquired[9]. This approach is known as the Missing (Surface) Inflection Hypothesis. That is, absence of surface morphology does not necessarily imply absence of more abstract categories and features (for example some verbs show no explicit morphology for past or indicate past tense by apophony/Ablaut (*sing/sang*; *singen/sang*; *sapere/seppi*) or by suppletion (*go/went*; *stehen/stand*; *gehen/ging*; *andare/vado/andai*), i.e. even in the absence of explicit morphology, there is evidence for inflection and related tense and agreement features. That is abstract features are not always visible in the form of overt verbal or nominal affixes (*I sing* has +person, +number, – tense (-past) traits in English or *Lehrer* bears +gender, – number traits in German), nevertheless even in the absence of explicit morphology, there is evidence for related tense and agreement as well as inflection features respectively. A further complication is the distinction to be made between null morphemes and absence of morphemes: null morphemes have corresponding positions or features in a syntactic representation (see for example English and German agreement). In contrast, there are cases where syntactic representation

lacks a particular category or feature (see for example grammatical gender in English vs. overt features in Italian and German). The overall tendency in L2 acquisition research has been to interpret the absence of overt morphology as an indication of absence of the corresponding morphosyntactic categories in the individual learner's interlanguage. Instead in more recent years, White[10] and Galasso[11] have taken the assumption that while an L2 learner's production might lack overt inflection for tense or agreement, his/her underlying grammar nevertheless represents the categories of Tense and Agreement and their corresponding features (as it is the case for English native speakers when anything other than third-person singular is involved).

Variability in overt morphology is not restricted to L2 acquisition, but it is attested in L1 acquisition as well (see Lancaster Corpus, VINCA and KoKo Corpus). In this field, two main opposing views have been recognised: the first assuming that morphology comes before syntax, i.e. the acquisition of overt morphological paradigms drives the acquisition of some functional categories and their features leading to subsequent acquisition of syntax; the second hypothesis assumes the primacy of syntax over overt morphology with some differences between child and adult grammars that are reflected in a particular kind of morphological variability (the so-called *optional infinitive* phenomenon by which the main verb in a child's utterance is sometimes finite and sometimes non-finite). According to Vainikka and Young-Scholten[12] free functional morphemes act as triggers of bound functional morphemes. More specifically, L2 learners may produce inflected forms where they have not analysed affixes as distinct morphemes (ib. 101).

2
The present study

Corpus-based research on children's writing has been carried out by Biber and associates in America since the early 1990s[13]. In the UK the availability of corpora for such investigations is still limited (cf. The Lancaster Corpus of Children's Writing; The Oxford Children's Corpus of Reading and Writing; Growth in Grammar Corpus). This is especially important if we consider that some studies of children's writing performance across time have to date reached somewhat contradictory results[14], and that recent research has demonstrated the potential of corpus linguistics as a solid aid in investigations on children's understanding of how language works[15].

The present study aims to test the basic assumption of the so-called Dual Mechanism Model, according to which lexical stems are acquired in the first place and subsequently come to be distinguished as separated from affixes in a cross-linguistic perspective. In order to address this question a small corpus of writings from two groups of German and English learners of Italian as a second language was created from a major corpus and divided into two sub-components or sub-corpora subsequently annotated. The English-German corpus was automatically parsed by using the Visual Interactive Syntax Learning (VISL) applications and language analysis tools (http://beta.visl.sdu.dk/)

which can provide both syntactic and semantic information on a given constituent structure. The parsed data were then queried using a concordancer (*AntConc*) in order to:
– explore linguistic features that are functionally related and relevant to language acquisition research
– establish the extent to which the frequency of such features across languages and interlanguages may contribute to the identification of underlying shared language processing.

The general framework of the study follows the traditional two-step procedure employed in Corpus Linguistics consisting in: 1) a pilot study to determine what linguistic features of interest have been investigated by surveying previous studies; 2) a list of selected linguistic features to be investigated in the corpus.

3
Method

3.1. *Data* – The Comparable Sub-corpora

The data used in the present study come from the L1 English and German components of VALICO (Varietà di Apprendimento della Lingua Italiana: Corpus Online, i.e. "Online Corpus of the Learning Varieties of Italian"), an Italian International Learner Corpus freely available and searchable online, designed by a group of researchers at the University of Turin[16] in 2003[17].

The corpus queried online[18] is composed of short compositions (3804 searchable texts published online in May 2009) written by learners of different language backgrounds. Table 1 provides an overview of the corpus and its size.

TABLE 1
Overview of VALICO

Tokens	567.437
Type	38.094
Lemmas	94.80
POS-tags	34

The main aims of the VALICO project were 1) to show how students of different ages and mother tongues write in Italian and 2) to provide a POS – (and error-tagged) queryable corpus.

The data under investigation for the present study were not error-tagged and elicited through a narrative/description task using visual prompts. The comic strips were specifically designed to highlight some aspects of learners' language such as use of verb

tenses, pronominalization and order of constituents within a sentence. Participants were instructed to write a story interpreting the comic strips they were provided (FIG. 1 and FIG. 2) using no more than 100 words.

FIGURE 1
Stazione

FIGURE 2
Amore

In the present study, the data extracted from the main corpus were then compared to similar L1 control corpora, namely VINCA (Varietà Italiane Native: Corpus Appaiato, i.e. "Comparable Corpus of Italian Native Varieties"), LCCPW (Lancaster Corpus of Children's Project Writing) and KoKo Corpus (korpusunterstützte Analyse der Sprachkompetenz bei Lernenden im deutschen Sprachraum), to verify the occurrence of the

same phenomena in Lis. VINCA is a Corpus of Native Written Italian freely available and searchable online which was designed by the same group of researchers as a control corpus for VALICO and based on the same activities assigned to the foreign learners in VALICO. The LCCPW is a digitized collection of project work produced by children aged between 9 and 11 along with a longitudinal study of children's writing-for-learning, based on the writing of 8-12 year old children. KoKo Corpus is a Monitor Corpus of Native Written German by school students. The corpus was designed with the aim to record students' written statements in order to observe the language competencies of learners with German as a first language in South Tyrol (Italy) and North Tyrol (Austria) as well as in different parts of the German-speaking area (e.g. Thuringia, Germany). The analysis will serve to compare and verify whether learners show different language behaviours and in which linguistic domains these differences may be reflected.

3.2. Procedure

The sample data used for the present study were extracted from VALICO to form two sub-corpora of primary school learners: ESUBC1 (sub-corpus of English native speakers aged 11-14) and GSUBC2 (sub-corpus of German native speakers aged 8-14), of 20 written texts each.

The collected data were then automatically parsed by using the language analysis tools provided by the VISL website[19]. The parsers available at the VISL interface are based on the theoretical framework of the *Constraint Grammar*, a methodological paradigm widely adopted in *Natural Language Processing* (NLP) which can provide both syntactic and semantic information on a given constituent structure by assigning tags of lemmatization, inflection, derivation, syntactic function, constituent dependency, valency, semantic classification. The system also marks the *dependency relation structure*s between parts of speech (POS) with the symbol @ placed before (>) or after (<) the head and proves therefore to be particularly useful for investigations on lexical-grammatical and morphosyntactic patterns in specific variety usage. Upper case tags describe word classes as well as morphological inflection (e.g. MV= main verb, PRP= preposition, N = noun, GN= genitive), while lower case tags in sharp parentheses (<...>) provide secondary information that may be used to create POS subclasses (<aux>). In some cases, the automatic annotation was manually corrected, since the annotated text showed a certain level of semantic inconsistency (e.g. *sono [sonare]* <mv> V PR 3P IND @FMV; *il [il]* <art> <EN: perde il pelo ma non il vizio old habits die hard>).

In example (1) the singular (S) noun (N) is annotated as the subject of the clause (@SUBJ>) premodified by the definite article (@>N), while @<SC stands for the corresponding subject predicative complement. In example (2) the main verb <mv> is annotated as finite form (V PR 3P IND @FMV).

(1)la [la] <art> <def> ART F S **@>N**
colore [colore] <f-phys> <f> N M S @SUBJ>
di [di] <np-close> PRP @N<

TABLE 2
The features examined and the corresponding VISL tags

POS	Functional Category	Definition	Examples
N	@>N	prenominal elements such as Det, Adj	(1)nianche [nianche] <heur> N M S @<ACC @SUBJ> un [uno] <f:1629339.6> <idf> ART M S **@>N** uomo [uomo] <*> <H> <Hbio> N M S @<ACC @SUBJ> [o] <co-subj> KC @CO una [una] <fr:100> <art> <f:1219257> <idf> ART F S @>N donna [donna] <H> <fem> N F S @SUBJ> vede [vedere] <vq> <mv> V PR 3S IND @FS-STA questo [questo] <dem> <dem> DET M S **@>N**
ADJ	@<SC/OC		ladro [ladro] <H> N M S @<ACC
		subject/object predicative complement	c '[c] <*> N M P @SUBJ> era [essere] <va+ci> <mv> V IMPF 3S IND @FS-STA anche [anche] <setop> <EN:even if> <f:515233.2> <setop> ADV @>N una [una] <quant> <fem> INDP F S @<SC grande [grande] <*> ADJ M S @>N orologio [orologio] <tool> N M S **@<SC** che [che] <rel> INDP M/F S/P @SUBJ> era [essere] <va+ci> <mv> <np-close> V IMPF 3S IND @FS-N< no [no] <f:10939.8> ADV @ADVL le [la] <art> <def> ART F P @>N 2 [2] <card> NUM P @P<
V <AUX>	**@FMV**	finite main verb	il [il] <art> < <def> ART M S @>N ragazzo [ragazzo] <H> N M S @SUBJ> e [e] <co-subj> KC @CO il [il] <art> <def> ART M S @>N suo [suo] <poss> <poss> DET M S @>N cane [cane] <tool> <Azo> <anorg> <act> N M S @SUBJ> vanno [andare] <move> <va+DIR> <mv> V PR 3P IND @FMV nel [in] <sam-> PRP @<ADVL l [il] <-sam> <def> ART M S @>N litto [litto] <heur> N M S @P< per [per] <EN:by chance> <f:1772072.3> PRP @<ADVL dormire [dormire] <f:1309.9> <mv> V INF @ICL-P<

mia [mio] <poss> <poss> DET F S **@>N**
casa [casa] N F S @P<
è [essere] <va+ci> <mv> V PR 3S IND @FS-STA
bianco [bianco] ADJ M S **@<SC**

(2)un [uno] <idf> ART M S @>N
ragazzo [ragazzo] <H> N M S @SUBJ>

e [e] <co-subj> KC @CO
il [il] <art> < > <def> ART M S @>N
suo [suo] <poss> <poss> DET M S @>N
cane [cane] <tool> <Azo> <anorg> <act> N M S @SUBJ>
sono [essere] <mv> V PR 3P IND **@FMV**
nella [in] <sam-> PRP @<ADVL
la [la] <-sam> <def> ART F S @>N
camera [camera] N F S @P<
e [e] <co-fin> KC @CO
guarda [guardare] <vq> <mv> V PR 3S IND **@FMV**

To get a more comprehensive rather than fragmented account of the interlanguages under investigation, their grammatical peculiarities were observed at the level of phrase structure. The selected functional features presumably variable in interlanguage were searched for in the corpus and then mapped onto VISL tags by observing the constituent structure of the Noun Phrases and the Verb Phrases in the corpora. The features examined in the study and the corresponding VISL tags are shown in TAB. 2.

Once annotated, tags/instances for each feature could automatically be extracted from the corpus with the application of the *AntConc* concordancer and then manually mapped to the corresponding structural patterns selected for the study.

Following Galasso[20], the analysis of the two sub-corpora was mainly carried out to test three main research questions:

1. Does the acquisition of a. stems and b. affixes follow the same developmental stages in the two languages under investigation?
2. Among the affixes, which inflectional affixes show major error incidence?
3. Can the Dual Mechanism Model (DMM, i.e. leading to separation of stems and affixes and mental asymmetry between the acquisition of lexical (stem) categories and functional categories) be also applied to the selected data?

The starting point of the analysis was the grid (TAB. 3) of (abstract) functional categories and morphosyntactic features with different surface morphological realizations in the languages under investigation[21].

Later, a comparison with the two control corpora was carried out to find out the occurrence of the same mistakes in the inflectional system in L1. Indeed, some overlapping emerged from the comparison (FIG. 3).

Therefore, any divergent form in the corpora under investigation were detected and analysed on the basis of this classification. Consequently possible spelling errors occurring in the data were not included in the analysis.

As a matter of fact, in the English native corpus (LCWCC) the Agreement feature shows a certain variability (Ex. 1-4) mainly in the case of the verbal system[22] (FIG. 3.).

(1)*The tail feathers on a bird (and of course the tail itself!) <sic>steers</sic>the body.

TABLE 3
Abstract functional categories examined in the study.

Functional Category	Abstract morpho-syntactic features	Surface morphological realizations in Italian	Surface morphological realizations in English	Surface morphological realizations in German
IP	±tense/finite; ±past; Ø features (person, number, gender)	*-o; -i; -no; -to/-a/-i/-e*	*-s; -ed; -Ø*	*-(e)s; -(e)t; -Ø*
DP	±definite; ±plural	*un/-o/-a*; *il/lo/la/ gli/i/le*	*a; the*; Ø	*ein/-e der/die/das/die*

FIGURE 3
Error types in the Lancaster Corpus of Children's Writing
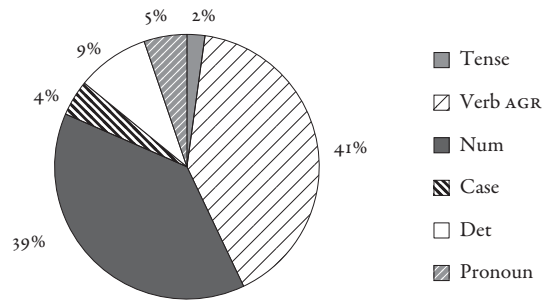
(2)**Keratin is what our nails, skin and hair <sic>is</sic> made out of. (A tough and flexible protein).*

(3)**powerful</reg> feet, <reg>another</reg> name for their feet <sic>are</sic> talons.*

(4)**If the lift of the wings < sic>are</sic> greater than the force of gravity... We have lift off! < Lancaster Corpus of Children's Writing.txt*
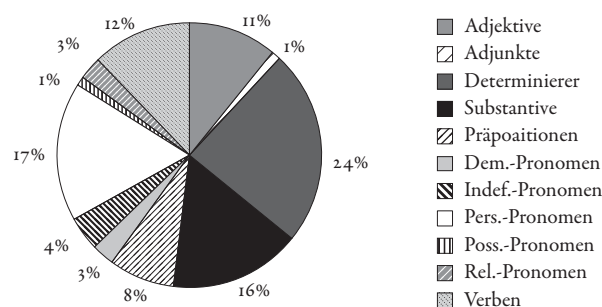
The same feature emerges from the analyses of data in KoKo[23] showing that the highest frequency of Agreement mistakes (Ex. 5-7) occurs in the field of nominal DET (24%) + NP (including 16% nouns and 17% personal pronouns) and verbal inflection (12%) (FIG. 4).

(5) **mitten in diese Phase*
(6) **eine der wichtigsten Punkte*
(7) **dieses Zitat giltet*

FIGURE 4
Error types in KoKo

Anyway, the control corpus for L1 English seems to have yielded few publications about the outcomes of this project and are mainly focused on the transcribing issues the researchers had to face to digitize children's writings[24].

As for VINCA, a survey of the data in the corpus has shown no significant variability of the features under investigation.

4
Results and discussion

The distributional analysis of phrasal constructions in both sub-corpora shows that highest frequency of divergent structures plots around the area of gender and S+V Agreement in both sub-corpora as shown in FIG. 5 and FIG. 6.

The highest frequency of mistakes in ESUBC1 occurs in the field of verbal tense (11%), nominal gender (9.5%) and verbal agreement (8.8%).

The highest frequency of mistakes in GSUBC2 occurs in the field of nominal gender (46%), verbal tense (28%) and verbal agreement (26%).

In particular, major variability pertains the VP including a high number of *hapax legomena* such as **andanno*, **arrivanno*, **decidanno*, **dormanno*, **guardanno*, **partano*, e **andono*, **uscionno* which show evidence of the emergence of stem-affix separation through the identification of the 3rd plural person morpheme (*a/o*)-*no* (nasal ending). Given the almost lack of gender marking (zero marking for gender) in English nominal constructions, the high frequency of divergent markedness was predictable and confirmed. Examples of Optional Inflectional stage in both corpora (TAB. 4) show that the INFL related material begins to take on optional projections during the acquisitional process.

FIGURE 5
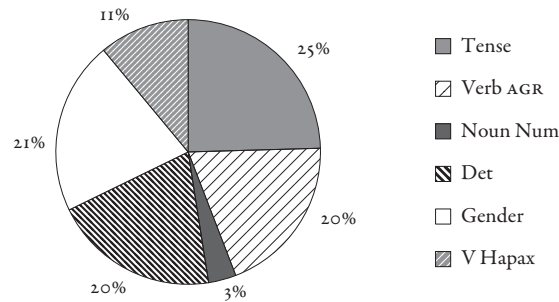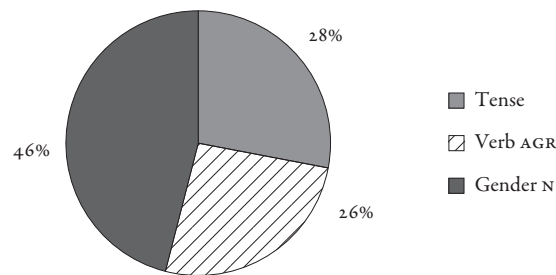Error types in ESUBC1 of L2 Italian Writing

FIGURE 6
Error types in GSUBC2 of L2 Italian Writing

As for L1 English such errors account for proximity of constituents in the clause rather than underlying AGREEMENT features, and should be therefore explained in terms of cognitive mechanisms such as language features processing.

A previous comparative study[25] of L2/L3 data from a group of EFL (L2 English) and DaF (L3 German) learners whose native language was Italian, had shown that when processing a sentence, learners failed to integrate syntactic structures and lexical-semantic information along with mission inflection. Learners from both L1s tend to use more direct mapping of surface form to interpretation or logical form. The reduced automaticity of grammatical features as opposed to the lexical-semantic ones concerns the access and the integration of the syntactic and morphological component. When integration fails, learners may resort to default strategies relying on L1 resources. As a consequence, learner's problems with the missing inflection, which is of course more evident in German learners than in English learners as opposed to wrong inflection, suggest the evidence of computational problems with the integration between syntactic and morphological knowledge, leading to the optional use of "default" underspecified forms.

TABLE 4

Examples of variable inflection

CORPUS	Examples
ESUBC1	**la** [la] <art> <def> ART F S @>N **colore** [colore] <f-phys> <f> N M S @SUBJ> **di** [di] <np-close> PREP @N< **mia** [mio] <poss> <poss> DET F S @>N **casa** [casa] N F S @P< **è** [essere] <va+ci> <mv> V PR 3S IND @FS-STA **bianco** [bianco] ADJ M S @<SC **una** [una] <quant> <fem> INDP F S @SUBJ> **grande** [grande] ADJ M S @>N **salotto** [salotto] <Lh> N M S @SUBJ> **ci** [ci] INDP PIV @SUBJ> **sono** [essere] <mv> V PR 3P IND @FS-STA **il** [il] <art> <def> ART M S @>N **posto** [posto] N M S @<ACC **abbastanza** [abbastanza] <aquant> <f:12943.7> <aquant> ADV @<ADVL **il** [il] <*> <art> <def> ART M S @>N **ragazzo** [ragazzo] <H> N M S @SUBJ> **prendi** [prendere] <vq> <mv> V IMP 3S @FMV **il** [il] <art> <def> ART M S @>N **cane** [cane] <tool> <Azo> <anorg> <act> N M S @<ACC **nel** [in] <sam-> PRP @<ADVL **l** [il] <-sam> <def> ART M S @>N **braccio** [braccio] <tool-shoot> <anmov> <HHinst> N M S @P< **il** [il] <*> <art> <def> ART M S @>N **ragazzo** [ragazzo] <H> N M S @SUBJ> **lo** [il] PERS 3S ACC @ACC> **porta** [portare] <move> <vta+DIR> <mv> V PR 3S IND @FS-STA **andono** [Andono] <*> <heur> PROP M/F S @NPHR **chiudera** [chiudera] <heur> <np-close> N M S @N< **l'** [il] <art> <def> ART M S @>N **animale** [animale] <H> <EN:domesticated animal> N M S @NPHR **quando** [quando] <f:83399.5> KS @SUB [quando] <f:43603.7> <rel> ADV @ADVL> **il** [il] <art> <def> ART M S @>N **bambino** [bambino] <H> N M S @SUBJ> **è** [essere] <va+ci> <mv> V PR 3S IND @FS-ADVL> **il** [il] <art> > <def> ART M S @>N **canellino** [canellino] <heur> N M S @<SC **dormanno** [dormanno] <heur> <np-close> N M S @N<

(follows)

TABLE 4 (*follows*)

CORPUS	Examples
ESUBC1	**il** [il] <*> <art> <def> ART M S @>N **cano** [cano] N M S @SUBJ> **salta** [saltare] <move> <ve> <mv> V PR 3S IND @FS-STA **della** [del] <f:930.8> ART F S @>N **finestra** [finestra] <Lopening> N F S @<ACC
GSUBC2	**c'** [ci] <aloc> <aloc> <np-close> ADV @N< **era** [essere] <va+ci> <mv> V IMPF 3S IND @FS-STA **kiosk** [kiosk] N M S @<SC **poi** [poi] <atemp> <f:77228.9> <atemp> ADV @<ADVL **un** [uno] <f:1629339.6> <idf> ART M S @>N **uno** [uno] <EN:venticinque twenty-five past> N M S @<SUBJ **super** [super] <*> <np-close> ADJ M S @N< **marcheto** [marcheto] <heur> N M S @<SUBJ
	nianche [nianche] <heur> N M S @<ACC @SUBJ> **un** [uno] <f:1629339.6> <idf> ART M S @>N **uomo** [uomo] <*> <H> <Hbio> N M S @<ACC @SUBJ> **[o]** <co-subj> KC @CO **una** [una] <fr:100> <art> <f:1219257> <idf> ART F S @>N **donna** [donna] <H> <fem> N F S @SUBJ> **vede** [vedere] <vq> <mv> V PR 3S IND @FS-STA **questo** [questo] <dem> <dem> DET M S @>N **ladro** [ladro] <H> N M S @<ACC
	una [una] <fr:100> <*> <art> <f:1219257> <idf> ART F S @>N **donna** [donna] <H> <fem> N F S @SUBJ> **ha** [avere] <mv> V PR 3S IND @FS-STA **scarpe** [scarpa] N F P @<ACC **grande** [grande] <np-close> ADJ F S @N<
	i [il] <*> <art> <def> ART M P @>N **fidanzati** [fidanzato] <H> N M P @SUBJ> **hanno** [avere] <mv> V PR 3P IND @FS-STA **tre** [tre] <card> <card> NUM P @>N **valici** [valici] <heur> N M S @<ACC **un** [uno] <*> <f:1629339.6> <idf> ART M S @>N **uomo** [uomo] <H> <Hbio> N M S @SUBJ> **ha** [avere] <mv> V PR 3S IND @FS-STA **un** [uno] <f:1629339.6> <idf> ART M S @>N **valico** [valico] <act> N M S @<ACC **in** [in] PRP @<ADVL **mano** [mano] <HHorg> N F S @P<

«Researchers of child language acquisition have long noted that children pass through developmental stages of grammatical morphology with early multi-word stage showing variable and optional production rates of morphosyntactic inflection»[26]. Two

assumptions have been made to explain such variability: the first one[27] assumes that optionality is due to incomplete inflectional representations of features; the second one[28] assumes that there exists an earlier stage during which children have complete non-access to inflectional morphology.

Conclusion

Most of the research carried out over the past decades has focused on how inflected forms are identified and segmented in the input, how grammatical information is mapped to inflectional markers and how the acquisition of inflectional affixes interacts with the development of syntax.

At the same time, special attention has also been paid to the typological characteristics of a language's inflectional systems that may influence the acquisition process.

The analysis of the data indicates that stems and affixes are acquired as two separate morphological entities, following the same developmental stages in both languages. Minor differences between the two languages emerge when taking into account the types of inflectional affixes. In ESUBC1 the highest frequency of errors pertains respectively the grammar domains of tense, gender and S+V agreement, whereas in GSUBC2 nominal gender, tense and S+V agreement. Such results also show that L1 interference may still play a role in the acquisition process, especially when unmarked properties of language, which are less likely to be transferred, are involved[29].

Finally, the data presented in this study suggest that an interesting interrelation and symmetry holds between the development of subject-verb agreement structures on one hand and nominal constructions on the other. In addition, affix morpheme development moves from potentially semantic-based forms through to rule-based inflectional forms which are attested in both corpora as well.

These findings are consistent with the assumption that INFL should be thought in a more comprehensive way, pertaining to the agreement mechanism that brings about both nominal and verbal inflection. This view may also contribute to understand more global issues of abstract grammatical functions in child L1/L2/L3 language acquisition. A deeper understanding of such processes and their interaction with other domains of cognition and grammar is expected to come from future investigations of the acquisition of inflectional morphology.

Notes

1. Rita Calabrese is author of sections: Introduction, 1, 3.2, 4; Silvia Palermo is author of sections: 2, 3.1, Conclusion.

2. J. Galasso, *Acquisition of Functional Categories*, IULC Publications, Indiana University, 2003; J. Galasso, *Children first start with a single processing model-"Merge", then move to a dual processing model-"Move"*, 2011 (unpublished paper).

3. K. Wexler, *Optional Infinitives, Head Movement and the Economy of Derivations*, in D. Lightfoot, N. Hornstein (eds.), *Verb Movement*, Cambridge University Press, Cambridge 1994, pp. 305-50.

4. Galasso, *Acquisition of Functional Categories*, cit.; Id., *Children first start with a single processing model-"Merge", then move to a dual processing model-"Move"*, cit.

5. S. Pinker, *Words and Rules: The Ingredients of Language*, Basic Books, New York *1999*.

6. S. D. Krashen, C. Madden, N. Bailey, *Theoretical Aspects of Grammatical Sequencing*, in M. K. Burt, H. C. Dulay (eds.), *On TESOL '75: New Directions in Second Language Learning, Teaching and Bilingual Education*, TESOL, Washington 1975, pp. 44-54.

7. L. White, *Second Language Acquisition*, Cambridge University Press, Cambridge 2003.

8. J. M. Meisel, H. Clahsen, M. Pienemann, *On Determining Developmental Stages in Natural Second Language Acquisition*, in *"*Studies in Second Language Acquisition*"*, 3, 1981, pp. 109-35.

9. White, *Second Language Acquisition*, cit., p. 179.

10. *Ibid*.

11. Galasso, *Acquisition of Functional Categories*, cit.

12. A. Vainikka, M. Young-Scholten, *The Initial State in the L2 Acquisition of Phrase Structure*, in S. Flynn, G. Martohardjono, W. O'Neil (eds.), *The Generative Study of Second Language Acquisition*, Lawrence Erlbaum, Hillsdale (NJ)1998, pp. 17-34.

13. R. Reppen, *Variation in Elementary Student Language: A Multidimensional Perspective*, PhD Dissertation, Northern Arizona University, ProQuest Dissertations and Theses, 1994; Id., *Academic Language: An Exploration of University Classroom and Textbook Language*, in U. Connor, A. T. Upton (eds.), *Discourse in the Professions*, John Benjamins, Amsterdam 2004, pp. 65-86; D. Biber, R. Reppen, S. Conrad, *Developing linguistic literacy: perspectives from corpus linguistics and multi-dimensional analysis*, in "Journal of Child Language", 29/2, 2002, pp. 458-62.

14. A. J. Massey, G. L. Elliott, N. K. Johnson, *Variations in Aspects of Writing in 16+ English Examinations between 1980 and 2004: Vocabulary, Spelling, Punctuation, Sentence Structure, Non-Standard English*, University of Cambridge Local Examinations Syndicate, Cambridge 2005, https://www.cambridgeassessment.org.uk/Images/109738-variations-in-aspects-of-writing-in-16-english-examinations-between-1980-and-2004-vocabulary-spelling-punctuation-sentence-structure-non-standard-english.pdf; S. Rashid, G. Brooks, *The Levels of Attainment in Literacy and Numeracy of 13- to 19-Year-Olds in England, 1948-2009*, NRDC Crown Copyright, London 2010.

15. A. Sealey, P. Thompson, "*What Do You Call the Dull Words?"Primary School Children Using Corpus Based Approaches to Learn about Language*, in "English in Education", 38, 1, 2004, pp. 80-91; Id., *"Nice Things Get Said": Corpus Evidence and the National Literacy Strategy*, in "Literacy", 40, 1, 2006, pp. 22-8.

16. Manuel Barbera, Carla Marello and Elisa Corino.

17. E. Corino, C. Marello, *Italiano di stranieri. I corpora VALICO e VINCA*, Guerra Edizioni, Perugia 2017.

18. http://www.corpora.unito.it/valico/valico.php (webpage accessed on 11th December 2018).

19. http://beta.visl.sdu.dk/.

20. Galasso, *Acquisition of Functional Categories*, cit.

21. Morphosyntactic features of nouns were not included in the table due to space reasons. For a more detailed discussion, see the extensive literature on the subject.

22. As marked by the anonymous reviewer of the paper, it is worth noting that inappropriate agreement frequently occurs in language usage «when there is either a list or a phrase that may mislead the speaker (as one of its constituents is plural, the other singular)».

23. A. D. Abel, J. Schneider, M. J. Mcguire, *N400 Response Indexes Word Learning from Linguistic Context in Children*, in "Language Learning and Development", 14, 1, 2018, pp. 61-71.

24. N. I. Smith, T. McEnery, R. Ivanic, *Issues in Transcribing a Corpus of Children's Handwritten. Projects*, in "Literary and Linguistic Computing", 13, 4, 1998, pp. 217-26.

25. R. Calabrese, S. Palermo, A*nnotating Learner Data from a Cross-Linguistic Perspective: A Study on ESL/DAF Learners' Interlanguages*, "Annali dell'Istituto Universitario Orientale di Napoli", Sezione Germanica*"*, NS, XX, 1-2. 2010, pp. 221-33.

26. Galasso, *Acquisition of Functional Categories*, cit.

27. Wexler *Optional Infinitives, Head Movement and the Economy of Derivations*, cit.

28. Galasso, *Acquisition of Functional Categories*, cit.

29. L. White, *Universal Grammar: Is It Just a New Name for Old Problems*, in S. M. Gass, L. Selinker (eds.), *Language Transfer in Language Learning*, Benjamins, Amsterdam 1993, pp. 217-32.