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THE ACQUISITION OF GERMAN SYNTAX BY SPANISH-SPEAKING ADVANCED LEARNERS BASED ON AN UNDERLYING SUBJECT VERB OBJECT ORDER

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1. Introduction

This paper focuses on the acquisition of word order in German by adult native speakers of Spanish in an institutional context. During three semesters we analyzed the written production of Spanish undergraduate students at intermediate and advanced levels. We contrasted the production of students whose acquisition took place exclusively in Spain with other students who spent one semester at a German University. In addition to this longitudinal corpus, three transversal tests were carried out on our subjects, and then these results were contrasted with those of native German speakers.

The theoretical framework of this study is based on generative grammar analysis proposed for verb placement in German and a review of recent acquisition studies. Early word order studies in this framework of German in this framework were based on an underlying subject-object-verb order initiated by Koster (1975) and Den Besten (1977). Recent analyses of verb movement account for an underlying subject-verb-object order for all languages proposed by Zwart (1993, 1997) based on parallel works by Kayne (1993, 1994) and Chomsky (1993, 1995).

In this study, we adopt the proposal made by Zwart, Kayne and Chomsky, and we analyze the production of our subjects based on an underlying SVO order.

2. Review of analyses of verb movement

Traditional analyses of verb movement by Koster (1986), Den Besten (1989) and Weermann (1989) were based on the assumption that Germanic languages sharing the same asymmetry patterns - like German, Dutch and Yiddish - derive their syntactic structures from an underlying subject-object-verb order. To sum up, these authors claimed that verb movement in embedded clauses is blocked by a complementizer, which avoids the movement of the finite verb into C. In main clauses (V2-clauses),

the verb moves to C, but in embedded clauses just to Agreement. Thus there was no separate analysis for non-subject-initial clauses.

In the Minimalist Program (Chomsky 1993, 1995), grammar is considered a system with movements of constituents to check features in order to make the derivation convergent. We distinguish between overt movement and covert movement. Overt movement triggers visible changes of word order, but covert movement only affects the logical form (LF), and therefore is not visible in the superficial word order. Thus, in MP the marked option is the overt movement and the parametrical variation (Chomsky, 1993) is reduced to overt and covert movement. This means languages are distinguished by the absence or presence of movement. In this sense, the parameter of directionality as a distinction between head final and head initial languages is revised. So, in Zwart's analysis Dutch becomes a head initial language, despite being head-final in embedded clauses.

There are two interfaces, the Phonetic Form and the Logical Form. It is assumed that Logical Form is identical in all languages, while the Phonetic Form is what distinguishes languages. In other words, the difference between the two levels of interfaces is that word order is universal at a conceptual intentional level – the Logical Form – but not at an articulatory perceptual level – the Phonetic Form. In the MP, the interface Logical Form is the final state of a derivation, and Phonetic Form is a reflection of an intermediate stage in the derivation where instructions to the articulatory-perceptual system are issued. This means there is a moment of derivation in which instructions are passed to the Phonetic Form. This point is called Spell Out. All movements before Spell Out refer to overt syntax, and movements after Spell Out refer to covert syntax. Therefore, in comparative studies we must pay attention to overt syntax (before Spell Out), because it is in this part of syntax where the differences of word become evident.

In this analysis, the parametrical variation is reduced to check visible and non visible features which are to be either eliminated before Spell Out or not. Features associated with inflectional morphology are only important for syntax and are not legitimate objects at the interface level. Therefore, visible elements at the Phonetic Form have to be eliminated in overt syntax as soon as they are checked. Non visible features at the Phonetic Form are not to be eliminated because of the Procrastinate Principle, which claims that the movement is carried out as late as possible. Important for this analysis is the fact that visible features at Phonetic Form are strong features and non visible ones are weak features.

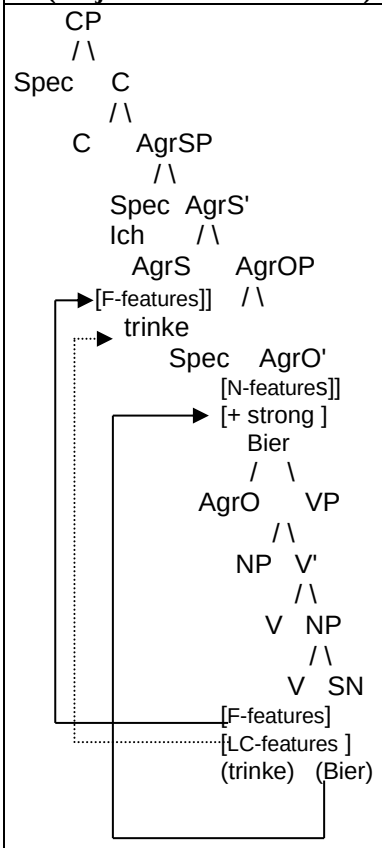
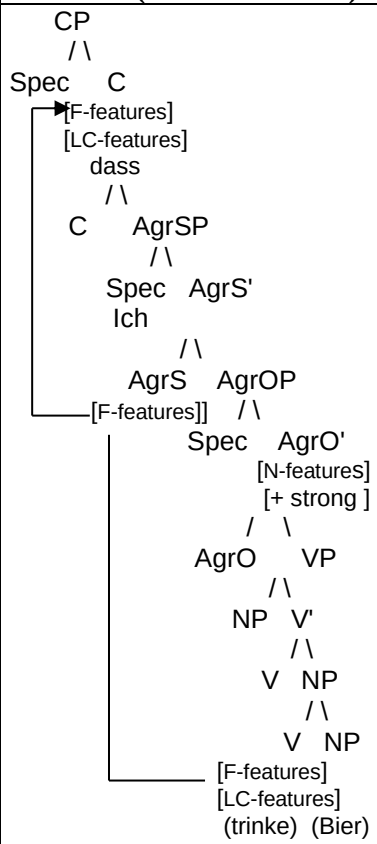
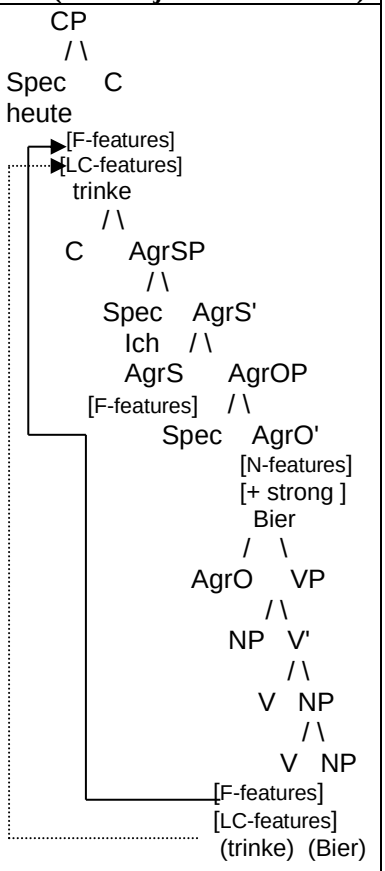
Thus, in the Minimalist Program (1993, 1995) the parametrical variation is localized as in former analyses in functional categories. In addition, features are introduced and the directionality parameter is revised since all movements are made to the left (Kayne, 1994). Parameterization exists in form of features [+/-].

More concretely, in this SVO approach, overt movement needs strong verbal features in *AgrS*, but in the case of German the absence of verb movement in embedded clauses implies that these features are not strong. Therefore, Zwart (1993) assumes that strong nominal features (N-features include person and number) trigger movement from V to AgrS where they are lexicalised as subject- initial main clauses (1a.).

Embedded clauses (1b.) introduced by a complementizer contain lexical and categorical features (LC-features). In Zwart's analysis, the formal features of the verb rise in all clauses to AgrS and are attracted by C. But the verb cannot be lexicalised in C as the complementizer already contains LC-features and is realized with the help of the formal features of the verb. The result is the lexicalisation of the complementizer and the finite verb remains *in situ* which gives us a superficial COMP SOV order.

Finally, there is the case of non-subject-initial clauses where C is projected with an lexically empty complementizer (1c). As well in this case, the formal features of the verb rise first to AgrS and goe on to C; nevertheless, there is no complementizer and there are no LC-features either. Therefore, the F-features of the verb need the LC-features and oblige them to rise as a Last Resource operation. The result is lexicalisation of V in C which gives us a superficial VSO order.

Figure 1: SVO approach

a. Subject Verb Object (subject-initial main clauses)	**b. Subject Object Verb (embedded clauses)**	**c. Verb Subject Object (non-subject-initial clauses)**
		
Ich trinke Bier	dass ich Bier trinke	Heute trinke ich Bier
[+ V] [+ O] V[F-feat.] [LC-feat.]→SCONCs	[-V] [+O] LC-features of COMP → V *in situ*	[+V] [+O] Projection of COMP without complementizer, V→ COMP

This approach is based on the assumption made by Halle and Marantz (1993), Chomsky (1995) and Zwart (1993, 1995) that lexical elements are bundles of features which contain formal features (F-features) and lexical categorical features (LC-features). From this point of view movement is a combination of F-movement and LC-movement. Movement to check features is always F-movement while LC-movement is a Last Resort movement to create a morphosyntactic complex which contains F and LC-features.

What I wished to analyze is whether these movements are present in the German Interlanguage and especially whether LC-features are interpreted correctly by our subjects. In the case of non-subject-initial main clauses, we pay special attention to the LC-movement as Last Resort movement.

3. Some assumptions of acquisition studies on verb movement

It has been suggested that there is a correlation between inflectional morphology and verb movement attested in first language acquisition by Clahsen (1996) and Platzack (1990, 1996). Such a correlation has not been found in second language acquisition (Liceras, 1997 for Spanish, Beck 1998 and Clahsen for German). In other words, in the adult second language system, learner's morphology will not trigger verb movement.

Tsimpli (1997) proposes the impossibility of setting new parameters in second language acquisition, since new values of features are not available in functional categories, and features of their First Language may differ from the Second Language. These authors believe that the functional Lexicon is blocked for Second Language Acquisition and learners have to use the parametrical options of their First Language.

Beck (1998) argues in a similar way that verb movement of adult learners of German is optional. We might recall that in the MP, finite verbs are generated in VP with their verbal flexion and also that their lexical information decides whether a feature is weak or strong (generated in the functional head AgrS, AgrO or T). Hence, a verb rises if its features are strong (overt syntax), but it does so only at the LF interface if its features are weak. For Beck, the problem of Second Language Learners is not to search in a defective extraction of the Lexicon but in a failure of the value of features in the licensing process (*local deficit hypothesis*).

Platzack (1996) proposes the *Initial Hypothesis of Syntax* assuming a SVO order as initial state for Language Acquisition. For Platzack, marked values in the initial state of language do not exist, this means that all values are initially weak for First and Second Language Acquisition. In this way, language acquisition could be seen as a gradual process from the IHS state towards values of the Language to be acquired.

Last but not least, we have to mention the pioneering ZISA project (Zweitspracherwerb italienischer, portugiesischer und spanischer Arbeiter) of Meisel, Clahsen and Pienemann (1981) and related studies. We remember that this study focused on Italian, Portuguese and Spanish workers and their acquisition of German in a longitudinal study. The results of this research were the well known developmental sequence on the acquisition of German word order:

Figure 2: Developmental sequence on the acquisition of German word order

SVO	**<**	**ADV**	**<**	**SEP**	**<**	**INV**	**<**	**V-FINAL**

(Clahsen, 1980; Pienemann, 1980, 1981, Meisel, Clahsen y Pienemann, 1981; Clahsen,Meisel y Pienemann, 1983)

The subjects of ZISA started out using a canonical SVO order. In a second stage, they used adverbs in a topicalized position, however without respecting subject inversion. In the third stage of developmental sequence, verbal material was separated (separate verbs, perfect, modals). Having achieved this step, subjects start to invert correctly (XVSO). Mastering of previous structures enable subjects to apply final verbs in embedded sentences.

Lots of research work has been done since and a large number of manuals apply this sequence; hence, acquisition studies in an institutional context is marked by these learning steps. The proposal of this study is not to refute former findings, but to investigate the distribution of deficient structures in an intermediate level and the influence of L1 and UG at this stage.

4. Spanish Word Order and Working Hypothesis

Spanish is a language with a relatively free word order. Spanish morphology is very rich and in consequence it licenses null subjects. Spanish does not allow verb final structures in embedded clauses, but it allows topicalisation with and without subject inversion. This means, if we go back to the assumption of Tsimpli (1997), adult Spanish Second Language Learners of German have the parametrical option of inversion, even if not obligatorily, but there is no parametrical option for verb final construction in embedded sentences. Generally, we could classify Spanish syntax as canonical showing preference for VO structures without explicit subjects and an option for topicalisation. Therefore, we expected Spanish adult learners of German not to have any problems with subject initial main clauses. For intermediate levels we expected optional verb movement in embedded clauses and evidence for correct verb movement in students' subject-initial main clauses. For non initial main clauses, we expected failures regarding LC-movement as Last Resort Option since Spanish licenses two parameters and null subjects.

Adopting the theoretical framework of Chomsky, Kayne and Zwart we tried to answer the following statements for L2 acquisition (Grümpel, 2000):

1) Do second language learners acquire verb movement [+/-] and object movement [+] systematically or is movement in Interlanguage Grammars just optional. Does natural and instruction input lead student to review strong or weak values in their L2- lexis?
2) Lexical categories inherent to all complementizers in German trigger their lexilisation in C and need no verb movement. Is there a sensibility for LC-features in an explicit complementizer in L2 acquisition?
3) Regarding our theoretical framework, inversion structures (XVSO) project C without lexical features. Therefore, C needs the LC-features of the verb for its realization in C. Do L2-learners show less sensibility regarding these abstract movements.
4) Do L2-learners overgeneralize verb final patterns once they are incorporated into their Interlanguage Grammar?

5. The empirical study – Spanish learners of German

5.1 The corpus

The acquisition data of this study comprise 8 Spanish undergraduate students of the University Europea-CEES in Madrid aged between 19 and 25 years. All subjects started German classes at the University Europea without any previous knowledge of this language. At the end of their 2nd year students were administered a level test with scores ranging between middle and high intermediate levels at the end of their 2nd year. I decided to divide data research in three groups, as we can see in figure 3.

Figure 3: Experimental Groups

Experimental Group I:	
Maria	3rd Semester of formal instruction (UEM) :
Mario	State of instruction: **300 hours**
Marisa	
Marta	
Lola	Period: October 1997 - December 1997 January 1998 – February 1998

Experimental Group II	
Maria	4th Semester of formal instruction (UEM) State of instruction: **425 horas** Period: February 1998 – May 1998
Mario	
Marisa	
Belen	
Experimental Group III	
Carla	4th Semester of formal instruction (UEM) after 1 semester of ERASMUS at a German University: **425 hours + immersion (ERASMUS)** Period: February 1998 – May 1998
Juan	

*All names of subjects are pseudonyms

As we can see in figure 3, subjects have received intensive instruction during their first year at university. Spanish is L1, English is the L2, and German is the L3 for these learners. The longitudinal data stems from their 2nd year of university. Special attention was paid to the third group which spent one semester at a German university as ERASMUS/SOCRATES exchange students. Data from Group I are taken after 300 hours of instruction input. Group II started out with 425 hours of instruction and finished their 2nd year with 565 hours of formal instruction.

As we can see in figure 4, our subjects have been followed longitudinally throughout the acquisition of German as a third language. At the end of this empirical study their were also submitted to cross-linguistic studies in written and oral tests regarding SVO, XVSO and SOV structures.

Figure 4: Corpus data

Longitudinal Study	-written competence
Cross-linguistic data (transversal)	- oral and written multiply choice/plus justification
Cross-linguistic data	- translation test

Data for longitudinal study were taken in periods from one to two weeks in the classroom after having given lexical items regarding the topic of the essay. In each group, we collected samples from our students in periods of one to two weeks. We analyzed a total of 1966 samples of sentences produced by our subjects.

In the transversal test students were administered a grammatical judgment exam consisting of 90 sentences. In the oral test, students listened to sentences read allowed by a native speaker and they had to decide whether each sentence was grammatically correct or not.

5.2 Results and discussion

Taking into account data results illustrated in figure 5, there is evidence that the students of this study showed the following hierarchy on difficulty:

XVSO > SOV > SVO

Figure 5: Non native forms for each empirical group and structures

	Group I	Group II	Group III
XVSO	40,32% (75/186)	25,96 (27/104)	11,11% (12/108)
SOV	16,09% (44/274)	12,61 (14/111)	8,61% (13/151)
SVO	7,23% (26/336)	6,09% (14/230)	3,43 (6/175)

The first group, which was the less advanced, showed that subject initial main clauses (SVO) were used at the beginning with preference and quite native near. Given that this was the most used structure at this stage compared with marked structures as SOV and XVSO, we see that this unmarked form is used with preference in their L1 (Spanish) and their L2 (English). As they advanced, our students used more and more complementizers and they incorporated object movement [+] paired with absence of verb movement [-]. Nevertheless movements are optional in this group .

On the other hand, data show that the German embedded structure SOV growing more robust in Groups II and III, as non-native forms in SOV drops in Group II from 16,09% to 12,61% and in Group III even to 8,6%. These data suggest that [+/- verb movement] and [+object movement] is incorporated gradually according to instruction and input data. This process is not lineal, as is shown in figure 6.

Figure 6: Non native forms in embedded clauses (SOV) per group and data collection

Recogida	1	2	3	4	5	6	7	8	9	10
Grupo I	36%	30%	14%	31%	9%	16,5%	11%	6%	9,5%	
Grupo II	11%	12,5%	0%	23%	7,5%	30%	0%	15,5%	16,5%	
Grupo III	16,5%	0%	5,5%	8,5%	11%	6,5%	10%	10%	7,5%	7%

Figure 7: Non native forms in subject initial clauses SVO for group and data collection

Recogida	1	2	3	4	5	6	7	8	9	10
Grupo I	7%	2%	0%	3%	22%	2,5%	3%	12%	13%	
Grupo II	10%	0%	10,5%	0%	4%	0%	5%	11,5%	9%	
Grupo III	7,5%	13,5%	0%	0%	0%	6%	0%	0%	5%	5%

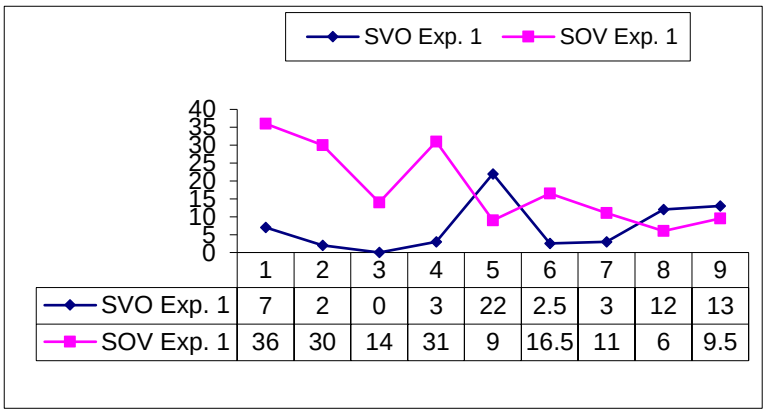
Our data suggest that movements appear profusely in the non native grammar, but these movements are not internalized as in the native grammar, since optional movement appears sporadically, which indicates that movements are detected by an active process of meta linguistic analysis.

On the second working hypothesis regarding the role of LC-features inherent to explicit complementizers in German, we suggest that there is a lexical acquisition combined with intuition and an active process detecting the absence of verb movement and object movement. Comparing failures on SOV and XVSO, production data show that in Group I, 16,06% non native structures were found in embedded clauses (SOV), compared to 40,32% found in non subject initial main clauses (XVSO). In Group II 12,96% SOV errors were found, compared to 25,96% found on inversion structures (XVSO). Data of group III is less evident, but still there are 8,61% failures on SOV compared to 11,11% on XVSO structures.

Having suggested for explicit complementizers with inherent LC-features that a lexical element helps to detect object movement and absence of verb moment, the answer to our third working hypothesis, taking into account our acquisition data, there is evidence that the abstract movement required for non subject initial main clauses (XVSO) is harder to detect. Topicalized structures as XVSO in German projects C without having complementizer, therefore the verb needs LC-features of the verb in order to be realized in C position. Data make evident that this abstract movement is difficult to detect for L2-learners.

Our last hypothesis, regarding generalization of verb final structures in non embedded clauses, was confirmed by data. All subjects of this study showed SOV generalization in their data. This phenomena became most evident in the first group, as we observe in figure 8.

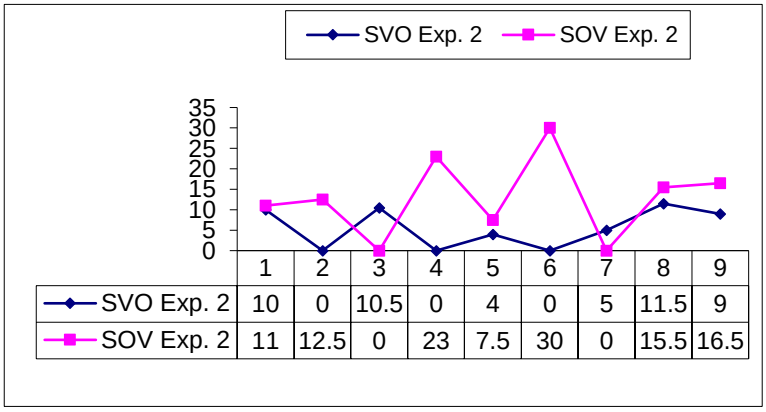
Figure 8: Generalization of SOV in SVO (Group I)



	1	2	3	4	5	6	7	8	9
SVO Exp. 1	7	2	0	3	22	2.5	3	12	13
SOV Exp. 1	36	30	14	31	9	16.5	11	6	9.5

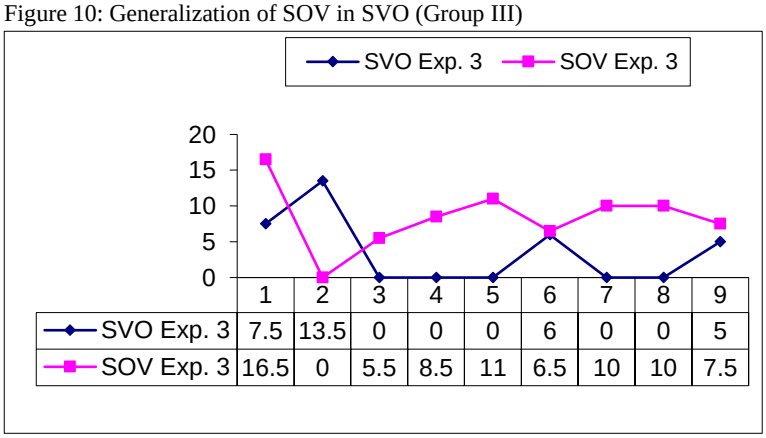
We observe in data collection 5 that Group I greatly reduces non native forms in SOV accompanied with a drastically rise of failures on SVO introducing object movement with final verb patterns. As we see in 6 to 9, non native forms on SOV, once dropped, are maintained on a lower level paired with a generalization of verb final structures in subject initial main clauses. This pattern is repeated in Group II and III although less evident, as we see in figure 9 and 10.

Figure 9: Generalization of SOV in SVO (Group II)



	1	2	3	4	5	6	7	8	9
SVO Exp. 2	10	0	10.5	0	4	0	5	11.5	9
SOV Exp. 2	11	12.5	0	23	7.5	30	0	15.5	16.5

Figure 10: Generalization of SOV in SVO (Group III)



	1	2	3	4	5	6	7	8	9
SVO Exp. 3	7.5	13.5	0	0	0	6	0	0	5
SOV Exp. 3	16.5	0	5.5	8.5	11	6.5	10	10	7.5

6. Conclusion

This paper has focused on the production data of 8 Spanish undergraduate students. A striking fact of these data is that these Spanish undergraduate students in their 2nd year of German show more difficulty on XVSO structures than on those of embedded clauses (SOV). This suggests that the developmental sequence of syntax attested by ZISA results differs from the distribution of non native forms in more advanced learners.

On the other hand, the gradual incorporation of SOV structures suggests that instruction and input data indeed trigger what Platzack (1996) calls an approach from "The Initial Hypothesis of Syntax (IHS)" towards the system of the L2.

Data showed also that abstract movement due to feature values are difficult to detect for XVSO structures, while students seem to be more sensitive to explicit complementizer with inherent LC-features with verb final patterns.

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