"O PARÂMETRO PRO-DROP E A AQUISIÇÃO DE SEGUNDA LÍNGUA"

SONIA MARIA LAZZARINI CYRINO[a]

ABSTRACT

Within the Government and Binding theory (GB), it is assumed the man is equipped with some innate language structure, Universal Grammar (UG), which contains a set of unviolable principles plus some open parameters which are set by experience. One such universal principle is the Empty Category Principle (ECP), which states that an empty category must be properly governed. There are some languages which seem to violate the ECP. These languages present some properties related to missing subjects, which are said to be part of a parameter, the Pro-Drop Parameter. To overcome problems with the ECP, GB theory explains the Pro-Drop Parameter as being one of the ways by which languages may vary-the variation being, in this case, with respect to the governing relation of subject and verb. The child, equipped with UG and exposed to a language such as English, sets the parameter as to not allow (phonologically) null subjects. The parameter will be set differently if the child is exposed to a language that allows null subjects. An interesting question arises when we think about the L2 learner. If L2 acquisition is a process similar to L1 acquisition, we may assume the L2 learner has some access to UG. My research investigates this question. In the case of native speakers of English learning Spanish (a Pro-Drop language), I hypothesized that: a) if the L2 learner has some access to UG, after being exposed to L2 data he will "know" there is an apparent violation of the ECP; b) acquisition of the Pro-Drop Parameter should imply the acquisition of the related cluster of properties. The subjects in this experiment were asked to give grammatical judgements to sentences containing the parameter properties. The results strongly suggest the accessibility of UG for adult L2 learners when one specific claim of the theory is considered.

KEY WORDS: *Linguistics; Second language acquisition; Syntax; Government and Binding theory.*

INTRODUCTION

Within the framework of Government and Binding Theory, it is assumed that the human being is "equipped" with some innate language structure which enables him to learn his native language in a very short period of time. This innate language structure is referred to as Universal Grammar (UG) (CHOMSKI, 1981b). Within this theory, UG has the form of a parameterized system and contains a set of principles which holds universally. One such principle is, for example, $\overline{X}$-theory, which determines the form of the phrase structure component. Another principle of UG, which we will be referring to in this paper, is the Empty Category Principle (ECP). The ECP states (in a general form) (CHOMSKI, 1981a):

An empty category must be properly governed.

Since these principles hold universally, they may not be violated. In addition, each of the so-called principles of UG has associated with it a set of "open parameters", or, a set of possible values which express the limited range within which languages may vary.

There are languagens like Spanish and Italian, which present empty categories apparently not properly governed. These languages allow missing subjects in surface structure, which represent an "apparent" ECP violation. Therefore, these languages have been called Null Subject (or Pro-Drop)[1] languages.

The Pro-Drop Parameter is the parameter whose setting determines whether or not a language is a Null Subject language. This parameter has different formulations in the current linguistic theory. Each formulation implies in the (Pro-Drop) language a cluster of properties which are treated as related to the way the parameter is set. The formulations differ among themselves on determining which constituents are that may properly govern the empty subject position, so as to avoid an ECP violation. One formulation of the Pro-Drop Parameter proposes that the subject position is governed by the agreement

a. Departamento de Letras – CCH/UEL.

element on the verb. This formulation allows for some properties of Pro-Drop languages to be treated as consequences of this same parameter setting. Missing subjects, free subject-verb inversion, **that**-trace phenomena are the properties most commonly said to be related to the Pro-Drop Parameter, under this formulation.

Another formulation of the parameter proposes an "affix-hopping" type of rule that adjoins the agreement morpheme to the verb, while inserting the empty PRO, which is an ungoverned category by definition, in subject position. This rule has, in Pro-Drop languages, the option of applying in the syntactic component, prior to the phonetic realization of forms, and reduces the properties related to the parameter to two, namely, missing subjects and free subject-verb inversion (CHOMSKY, 1981a).

A third formulation proposes as the Pro-Drop Parameter the possibility for the agreement element to be like the (ungoverned) empty category PRO, so that it is able to govern the empty subject position. In non-Pro-Drop languages, however, the agreement element is not strong enough to govern the empty subject position. Leaving the position empty will lead to an ECP violation because the position will not be governed. The only property related to this parameter, in this formulation, is the occurrence of null subjects. The property of free subject-verb inversion follows, in this analysis, from another parameter, which is the possibility for the "Affix-hopping" type of rule described above to apply in the syntax (HYAMS, 1983).

According to the theory, the parameter will be set in accordance to the language the child is exposed to. Therefore, if a child, "equipped" with principles of UG, such as the ECP, is exposed to a language like English, he will set the parameter(s) so as to not allow null subjects or subject-verb inversion. In addition, it is said that there are some triggering data that provoke the correct setting of the parameter.

In this research, I was concerned with the situation for adult second language learners, and I try to find out whether UG is still accessible for those learners. In other words, is L2 acquisition a process similar to L1 acquisition? One difference is obvious: languages vary with respect to the value set for a certain parameter. When learning a first language, the child sets that value according to the language he is exposed to. But the adult has already set the value for the parameters for his L1. The question is, then, whether L1 experience is carried over to L2 (transfer). Conversely, one may postulate that the adult still has some access to UG and will "reset" the parameter once he has sufficient exposure to L2 data. Research on both hypotheses has been recently advanced by various scholars (KRASHEN, 1982; BIRDSONG et alii, 1984; DULAY, BURT & KRASHEN, 1982; etc.).

In this work I tried to answer some of these questions by looking into the acquisition of the Pro-Drop Parameter by adult second language learners. I hypothesized that in the case where L1 and L2 have different parameter settings, the learner, after being exposed to L2 data, will "reset" the parameter accordingly and will accept what constitutes apparent ECP violations. In other words, the learner will have some access to UG. In addition, acquisition of the Pro-Drop Parameter should imply the acquisition of whatever properties are related to the parameter(s). Since there is a question as to what exactly the parameter is, I tested the three properties mentioned above and repeated here: missing subjects, subject-verb inversion, **that**-trace phenomena.

THE EXPERIMENT

The languages in the experiment were English (the learners' L1) and Spanish (the learners' L2). The subjects were students at the University of Iowa, USA, that is, adult native speakers of English learning Spanish as a second language. They were from different levels: beginners, intermediate, and advanced students (according to the class/course they were in). In this way, I was able to determine whether a long exposure to the target language would make a difference with respect to the issue being tested. There were 50 students in the first group, 52 in the second group, and 39 in the third group. There was also a control group of 12 native speakers of Spanish, which consisted of teaching assistants and faculty members of the Department of Spanish and Portuguese at the University of Iowa. The subjects did not know any other language fluently, besides English, and the majority in the beginners group was taking Spanish because it was a requirement for their course work (68%). In the intermediate group, 47% were taking Spanish both because they liked and it was a requirement, 23% were taking Spanish because it was a requirement and 30% because they liked and/or were interested in the language. In the advanced group, the majority (87%) said they were taking Spanish because they liked and/or were interested in the language. (These numbers were obtained from the answers to the questionnaire given to the students).

The subjects were presented with a list of sentences and an answer sheet where they were to mark their decisions. There was a set of 10 'warm-up' sentences (sentences A through J – see Appendix) in addition to the list of the 50 sentences of the experiment. The "warm-up' sentences consisted of "really" grammatical and "really" ungrammatical sentences not related to the issue under investigation. The 'warm-up' sentences were used to make sure the subjects knew what the task was. The sentences in the experiment, sentences 1 through 50, had the following characteristics: 15 sentences were grammatical sentences; 15 were ungrammatical sentences, of which just two sentences were related to the issue under investigation; 15 were the crucial sentences, of which 5 sentences contained missing subjects (3 in embedded and 2 in nonembedded clauses), 5 sentences with subject-verb inversion (4 in nonembedded and 1 in an embedded clause), 5 sentences with that-trace phenomena. There were also 5 sentences with object extractions (2 in relative clauses, and 3 in questions); these sentences were included to provide a comparison with subject extraction (that-t) constructions. All these sentences were randomly ordered, so that no clue could be given to the subjects on what was being tested.

I visited the classes and presented the questionnaire to the students. They were told that I was interested in getting to know some facts about second language acquisition and that they were to judge some sentences I was going to give them. They were to tell whether the sentence was a "Possible" sentence in Spanish or an "Impossible" sentence in Spanish. The judgement of 'Possible' would correspond to the sentence they thought possible for a native speaker of Spanish to say. In addition to that explanation, the subjects were given examples of what a 'Possible' and an 'Impossible' sentence would be in English, and they were told they were supposed to give the same kind of judgement to sentences in Spanish. The subjects were also told not to focus on the spelling or pronunciation of the sentence but to consider its syntax. To respond, they were to circle in their answer sheet the corresponding letter: P for Possible, I for Impossible and N for Not Sure. We went through the 'warm-up' sentences first and then, if there were no questions, we proceeded to the main body of sentences in the experiment. As each sentence was read by the experimenter, the subjects repeated it and then made their judgements, marking their response in the answer sheet. The experiment took about 15 to 20 minutes to be completed. With the control group the procedure was the same, except that some of the subjects were interviewed individually and the others participated in the experiment at the same time as their students (they were the instructors of the classes I was visiting).

All subjects answered all questions. The control group responded to all sentences with 100% accuracy, as expected. For the L2 learners I will discuss the results below, first for the "really grammatical" and "really ungrammatical" sentence and then for the crucial sentences in the experimet.

The beginners group (50 subjects), the intermediate group (52 students) and the advanced group (39 students) seemed to have a clear idea of what is possible and what is impossible in Spanish as regards the grammatical and ungrammatical sentences. Tables 1, 2 and 3 show the percentages of students giving the correct answer for the levels beginner, intermediate and advanced respectively. "Possible" is the correct answer for the grammatical sentences, and "Impossible" is the correct answer for the ungrammatical sentences.

TABLE 1. Grammatical vs. Ungrammatical Sentences

GRAMMATICAL				UNGRAMMATICAL			
Answer / Sentence	P	I	N	Answer / Sentence	P	I	N
A	98	2	0	B	26	54	20
C	86	8	6	D	20	78	2
G	98	2	0	E	10	66	24
H	58	24	18	F	12	84	4
I	68	30	2	2	14	80	6
J	44	40	16	4	12	82	6
1	94	4	2	7	0	98	2
9	76	12	12	10	4	94	4
16	80	18	2	12	74	24	2
18	88	10	2	14	26	66	8
21	100	0	0	17	14	78	8
25	94	4	2	19	16	78	6
28	58	24	18	22	4	84	12
31	94	6	0	27	32	64	4
33	94	6	0	29	4	94	2
36	98	0	2	34	32	52	16
39	58	34	8	37	0	96	4
43	86	14	0	41	26	60	14
46	88	10	2	49	68	24	8
48	96	4	0				
50	70	28	2				

Answers in percentages (Beginners, N = 50)

TABLE 2. Grammatical vs. Ungrammatical Sentences

GRAMMATICAL				UNGRAMMATICAL			
Answer / Sentence	P	I	N	Answer / Sentence	P	I	N
A	98.07	1.92	0	B	13.46	82.69	3.84
C	94.23	5.76	0	D	5.76	94.23	0
G	98.07	1.92	0	E	5.76	92.30	1.92
H	76.92	17.30	5.76	F	3.84	96.15	0
I	84.61	13.46	1.92	2	7.69	92.30	0
J	28.84	63.46	7.69	4	3.84	94.23	1.92
1	96.15	3.84	0	7	1.92	98.07	0
9	96.15	1.92	1.92	10	0	100.00	0
16	92.30	5.76	1.92	12	25.00	59.61	15.38
18	86.53	9.61	3.84	14	13.46	78.84	7.64
21	100.00	0	0	17	7.69	92.30	0
25	96.15	3.84	0	19	3.84	96.15	0
28	86.53	9.61	3.84	22	0	100.00	0
31	96.15	3.84	0	27	15.38	82.69	1.92
33	100.00	0	0	29	0	100.00	0
36	96.15	3.84	0	34	23.07	73.07	3.84
39	88.46	9.61	1.92	37	0	98.07	1.92
43	92.30	7.69	0	41	48.07	51.92	0
46	80.76	19.23	0	49	36.53	63.46	0
48	96.15	3.84	0				
50	98.07	1.92	0				

Answers in percentages (Intermediate, N = 52)

TABLE 3. Grammatical vs. Ungrammatical Sentences

GRAMMATICAL				UNGRAMMATICAL			
Answer / Sentence	P	I	N	Answer / Sentence	P	I	N
A	97.43	0	2.56	B	0	92.30	7.69
C	97.43	2.56	0	D	0	94.87	5.12
G	100.00	0	0	E	0	94.87	5.12
H	97.43	2.56	0	F	0	94.87	5.12
I	100.00	0	0	2	0	94.87	5.12
J	12.82	82.05	5.12	4	2.56	92.30	5.12
1	97.43	2.56	0	7	0	94.87	5.12
9	74.35	25.64	0	10	0	94.87	5.12
16	100.00	0	0	12	20.51	76.92	2.56
18	84.61	12.82	2.56	14	2.56	92.30	5.12
21	100.00	0	0	17	5.12	89.74	5.12
25	100.00	0	0	19	0	94.87	5.12
28	94.87	2.56	2.56	22	2.56	92.30	5.12
31	94.87	2.56	2.56	27	2.56	92.30	5.12
33	100.00	0	0	29	0	94.87	5.12
36	100.00	0	0	34	0	89.74	10.25
39	97.43	2.56	0	37	2.56	89.74	7.69
43	87.17	12.82	0	41	30.76	58.97	10.25
46	82.05	15.38	2.56	49	15.38	82.05	2.56
48	94.87	2.56	2.56				
50	100.00	0	0				

Answers in percentages (Advanced, N = 39)

For the crucial sentences, I had interesting results. For the missing subject type of sentence, the beginner group demonstrated they "know" Spanish may have phonologically null subjects. They showed good performance with sentences with missing subjects both in nonembedded and embedded clauses. Table 4 shows the percentanges for their answers to this type of sentence. The answer 'P' is the correct answer.

The intermediate group also performed well in the missing subject type of sentence. Table 5 shows the results in percentages.

The advanced group (see Table 6) did well in the missing subject type of sentence and it seems that they "know" there is no ECP violation in Spanish. Sentence 24 even got 100% acceptance, a very good result, considering this is the sentence in which the missing subject is in the embedded clause.

For, the subject-verb inversion type, the results were not so clear cut. The beginner group did not do very well. Table 7 shows the percentages obtained for this kind of sentence (the correct answer is "P"). Some sentences containing intransitive verbs (sentences 8 and 23) were better accepted than sentences containing transitive verbs. A chi-square test between the overall performance of the control group and the beginners group showed that beginners treated this type of sentence significantly differently than the control group ($\chi^2(2,N=250 \& 60) = 65.98, p < 0.001$). Another interesting observation is that subjects in the beginner group also seemed to have difficulties with inversion in questions in Spanish. Although subject-verb inversion is a different rule for questions (Torrego, 1984) than is for 'free subject-verb inversion' in statements, the subjects in the beginners group seem to have problems with both rules. The same was not true for the intermediate and advanced groups, who treated sentences 28 and 39 (of the grammatical set) with no difficulty.

For the intermediate group, the picture for crucial sentences of the free subject-verb inversion type is the same as the beginners group, although levels of acceptance are higher for sentences 8, 23, 30 and 35 and lower for 38. Table 8 shows the results.

TABLE 4. Missing Subjects

Sentence \ Answer	P	I	N
5	88	10	2
13	92	2	6
24	84	14	2
40	64	32	4
45	88	12	0

Answers in percentages (Beginners, N = 50)

TABLE 5. Missing Subjects

Sentence \ Answer	P	I	N
5	82.69	9.61	7.69
13	92.30	5.76	1.92
24	94.23	5.76	0
40	71.15	28.84	0
45	88.46	9.61	1.92

Answers in percentages (Intermediate, N = 52)

TABLE 6. Missing Subjects

Sentence \ Answer	P	I	N
5	92.30	5.12	2.56
13	97.43	2.56	0
24	100.00	0	0
40	94.87	5.12	0
45	94.87	2.56	0

Answers in percentages (Advanced, N = 39)

TABLE 7. Free Subject-Verb Inversion

Sentence \ Answer	P	I	N
8	56	24	20
23	62	26	12
30	26	68	6
35	22	46	32
38	34	50	16

Answers in percentages (Beginners, N = 50)

TABLE 8. Free Subject-Verb Inversion

Sentence \ Answer	P	I	N
8	61.53	38.46	0
23	76.92	15.38	7.69
30	44.23	50.00	5.76
35	53.84	42.30	3.84
38	25.00	67.30	7.69

Answers in percentages (Intermediate, N = 52)

TABLE 9. Free Subject-Verb Inversion

Sentence \ Answer	P	I	N
8	84.61	15.38	0
23	89.74	7.69	2.56
30	66.66	30.76	2.56
35	76.92	20.51	2.56
38	56.41	35.89	7.69

Answers in percentages (Advanced, N = 39)

Here, acceptance for sentence 30 (transitive verb) is lower than acceptance for sentences 8,23 and 35 (intransitive verbs). Sentence 38 also shows a low acceptance demonstrating that subject-verb inversion presents a problem when in an embedded sentence. For this group, however, the picture is clearer when considering transitivity/intransitivity of verbs involved in subject-verb inversion, and also embedding, as a problem. It looks like the learners accept subject-verb inversion, but not free subject-verb inversion. The rule, for the learner, is restricted to constructions with intransitive verbs (and it may be that the choice of verb is also crucial, for sentence 35 is the sentence with the lowest acceptance level for both the beginners and intermediate groups for the sentences presenting an intransitive verb).

The advanced group performed better than the other two groups, and, although the majority accepted this type of sentence, the numbers are not very high for sentences 30 and 38. Table 9 shows the results.

The picture for the advanced group is even clearer, since they seem to accept subject-verb inversion in Spanish but are not sure whether the rule applies across-the-board. The fact that sentences with intransitive verbs were, in general, more accepted than sentences with a transitive verb and with the inversion in the embedded clause suggests that the learners have not yet acquired the free subject-verb inversion rule as a whole. They seem to "know" it is possible to invert subject and verb in Spanish, but they do not yet "know" this is free, and the rule applies everywhere in Spanish.

The that-t type of sentence presented a problem at all levels. The three levels behaved alike with respect to wh-questions containing a complementizer que (that) and the subject extracted from the embedded clause. Table 10 shows the results in the three levels. The correct answer, again, is "P".

As can be seen in Table 10, an interesting picture presents itself: the beginners group seems to accept the sentences better than the other two groups[2]. Another observation is that subjects do not seem to, in majority, reject the sentences, but they seem to be uncertain, as the percentages are somewhat evenly divided between "P" and "I".

TABLE 10. That-trace Phenomena

	A			B			C		
Answer / Sentence	P	I	N	P	I	N	P	I	N
3	40	34	26	28.84	57.69	13.46	28.20	58.97	12.86
11	46	38	16	36.53	57.69	5.76	30.76	48.71	20.51
20	50	26	24	36.53	57.69	5.76	38.46	48.71	12.82
32	46	34	20	40.38	53.84	5.76	48.71	43.58	7.69
42	42	36	22	40.38	48.07	11.53	48.71	41.02	10.25

Answers in percentages
A – Beginners (N = 50)
B – Intermediate (N = 52)
C – Advanced (N = 39)

TABLE 11. Object Extractions in all Levels

	A			B			C		
Answer / Sentence	P	I	N	P	I	N	P	I	N
6	82	14	4	92.30	3.84	3.84	89.74	10.25	0
15	78	14	8	90.38	9.61	0	84.61	15.38	0
26	26	52	22	17.30	69.23	13.46	56.41	25.64	17.94
44	32	56	12	26.92	63.46	9.61	56.41	30.76	12.82
47	34	42	24	46.15	44.23	9.61	71.79	23.07	5.12

Answers in percentages
A – Beginners (N = 50)
B – Intermediate (N = 52)
C – Advanced (N = 39)

TABLE 12. Object Extractions (No Inversion)

Answer / Sentence	A			B			C		
	P	I	N	P	I	N	P	I	N
4	47.05	29.41	23.52	58.82	29.41	11.76	75	15	10
8	41.17	41.17	17.64	29.41	41.17	29.41	80	10	10
12	58.82	35.29	5.88	47.05	35.29	17.64	75	20	5

Answers in percentages
A — Beginners (N = 17)
B — Intermediate (N = 17)
C — Advanced (N = 20)

In addition, the results for the object extractions were not good either. The three levels once more behaved alike. For sentences where the object was extracted from a relative clause (sentences 6 and 15), the subjects had no problems, in general. But when the object was extracted out of an embedded clause in an instance of a wh-question, all levels had difficulties[3]. Table 11 shows the results.

This "bad" performance in the object extraction in a wh-question could help explain why the that-trace type of sentence was also a problem for the subjects. The explanation could be that learners have a problem with extractions from embedded clauses in general (as WHITE, 1984, suggests in view of her results). In the case of the sentences in which the object was extracted in a wh-question, there is an additional complicating factor for the subjects with English as their L1. In Spanish, subject-verb inversion is optional[4]. See the example:

¿Qué libro cree Juan que María compró?
¿Qué libro cree Juan que compró María?

This might have been the cause of the subjects' difficulty with sentences 26, 44 and 47, where, besides an extraction out of an embedded clause, there is a subject-verb inversion, an option which English does not have.

In order to test whether this inversion might be causing a problem for sentences where the object was extracted, i.e., whether there might be some L1 influence or whether extracting from embedded clauses was a problem per se, I conducted a follow up study containing the exact sentences 26, 44 and 47, but with no inversion in the embedded clause. See the results on Table 12.

All groups, in general, performed better this time. A chi-square test between the intermediate group performance in the experiment and in the follow up study showed that they behaved significantly differently in the two situations (χ^2 (2.N = 51 & 156) = 8.81, $0.025 > p > 0.01$). The same was true for the beginners group (χ^2 (2,N = 51 & 150) = 5.65, $0.06 > p > 0.05$). This result suggests that structures where there is subject-verb inversion in embedded sentences indeed present difficulties for the learner who has not yet been exposed sufficiently to the target language, a result in accordance with the result of sentence 38. Therefore, we may not say that bad performance in that-t sentences is caused only by difficulty with extraction, since the subjects did better in the follow up study.

Finally, a correlation test showed that there is no correlation between individual answers for the three types of sentences. A break down in levels of proficiency revealed no correlation among the types of sentences either. This means that if the subjects answered correctly for type I (missing subjects) they did not necessarily answered correctly for types II (free subject-verb inversion) and III (that-trace phenomena). Table 13 shows the results of this test (Pearson correlation coeficients) by levels of proficiency.

TABLE 13. Correlation between Types of Sentences by Level

	Type I	Type II	Type III
Type I	1.00000	−0.03176	−0.20344
Type II		1.00000	0.44742
Type III			1.00000

Beginners (N = 50)

	Type I	Type II	Type III
Type I	1.00000	0.10009	0.24413
Type II		1.00000	0.12952
Type III			1.00000

Intermediate (N = 52)

	Type I	Type II	Type III
Type I	1.00000	0.03729	0.26807
Type II		1.00000	0.26095
Type III			1.00000

Advanced (N = 39)

CONCLUSION

The results of this research show an interesting picture of the acquisition of the Pro-Drop Parameter by adult L2 learners. We started by assuming there is a cluster of properties related to the parameter, namely, missing subjects,

free subject-verb inversion and that-t phenomena. The Pro-Drop Parameter, following Chomsky (1981a:257) is:

R may apply in the syntax

Pro-Drop languages accept this option ('R' being 'Rule R', the "Affix-hopping" type of rule described in the introduction to this paper) and non-Pro-Drop languages do not have this rule as an option in the syntax, but operate the rule in PF (Phonological Form). In acquisition terms, according to the theory, the child, equipped with UG and exposed to a language like English, for example, sets the parameter as to not allow (phonologically) null subjects and subject-verb inversion in declarative sentences.

Assuming that when learning a second language the learner has some access to UG, I hypothesized that after being exposed to L2 data for some period of time, the learner would "know" that the ECP violation in the data was only apparent; the target language had a different setting for the parameter. Likewise, acquisition of one of the properties of the Pro-Drop Parameter should imply the acquisition of the other two properties related to that parameter.

The results in this research disconfirm these hypotheses if we assume the formulation of the Pro-Drop Parameter stated above. Since there are other formulations, let us look at them and at the acquisitional data at hand.

In the first place, it looks like the learners (at all levels) recognize that a language like Spanish allows phonologically null subjects at surface structure. Therefore, they "know" the empty category in subject position is either somehow properly governed, or it is PRO.

We do not get "good" results, though, when we look at the performance for the free subject-verb inversion type of sentences. There is an improvement in the learners' performance as the level of proficiency is higher. In the beginners group, for example, only 40% (in overall performance in the sentences) accept sentences whith subject-verb inversion. The intermediate group did slighthy better, but their good performance was restricted to nonembedded sentences containing an intransitive verb. The advanced group accepted subject-verb inversion, but again, restricted to nonembedded sentences containing an intransitive verb.

As for the that-trace phenomena, the results showed that all levels are uncertain about the possibility of those sentences in Spanish. The difficulty was not in the extraction from an embedded clause since, although the learners performed badly in the experiment for the object extractions too, they had better scores in the follow up study. Therefore, the picture we have is that that-trace structure really represents a problem for the learners. Although they do not completely reject the structure, they do not completely accept it; they seemed to be uncertain about those constructions[5].

WHITE (1984, 1985a) arrived at the conclusion that there is a problem of L1 interference when L1 and L2 have different parameter settings. White investigated the acquisition of the Pro-Drop Parameter by native speakers of Spanish learning English as a second language. As a control group she used French native speakers learning English as a second language (French is a non-Pro-Drop language). Since White's experiment represents the inverted situation of languages, it is interesting to compare her results with the results of my research.

For missing subjects, White reports that her beginners group was "most inclined to accept missing subjects in English and that there was a gradual improvement in ability to recognize the ungrammaticality of such sentences..." (WHITE, 1985a:53). In some instances, she had beginners with a 100% acceptance of sentences with missing subjects in English. Learners did not "know" that missing subjects are impossible in tensed matrix sentences in English.

For sentences with subject-verb inversion White's results were "good", in the sense that there was a low acceptance of English sentences with subject-verb inversion (even as low as 28%). There were no instances of subject-verb inversion in an embedded clause in WHITE (1985a)'s study. In WHITE (1984), though, there were two instances of English sentences with subject-verb inversion in the embedded clause, and both showed a high level of rejection (91% and 85%). With these results, White concludes that this aspect of the Pro-Drop Parameter seemed to cause no problems for her subjects, suggesting that the two aspects of the parameter, missing subjects and subject-verb inversion, do not go together.

For the that-t structures, White also had "bad" results, and, interestingly, both for her experimental and control groups. Her subjects seemed to accept that-t structures in English. White explains these results by suggesting that the structures in question may cause the learner difficulties because "they involve embedded clauses and are thus more complex than the other sentence types investigated..." (WHITE, 1984:20).

Clearly, White's results are in a kind of "complementary distribution" with mine, with respect to the two first properties of the Pro-Drop Parameter. While my subjects did well for the (embedded or nonembedded) missing subject types of sentence, White's subjects did badly in the same situation. While White's subjects did well for the (embedded or nonembedded) free subject-verb inversion types of sentence, my subjects did badly for that kind of structure. On the other hand, for the that-t, the results seemed to be the same for all groups of L2 learners. This is an interesting picture and should lead to some conclusions as to the acquisition of the parameter.

White claims there is transfer when the two languages have different settings of the parameter. In view of the results of my experiment as compared to her experiment I would like to consider another possibility. L1 interference is not a good explanation anyway, since White's subjects performed well for sentences with subject-verb inversion and my subjects performed well for sentences with missing subjects. Since English and Spanish differ with respect to both properties, this is not the expected result if we are to

claim L1 interference.

Since it is not possible to claim L1 interference, we may postulate the adult learner has some access to UG and the results are a reflex of that. But how can we say that, in view of the results apparently baffling?

Consider the formulation of the Pro-Drop Parameter, by which the possibility for languages to have phonologically null subjects and to have free subject-verb inversion in declarative sentences follow from different parameters (HYAMS, 1983). Hyams proposes that the former is due to what she considers the "Pro-Drop Parameter", and the latter follows from another parameter, whether "Rule R" has the option of applying in the syntax of a given language or not. Notice that if null subjects and subject-verb inversion do not follow from the same parameter, then the results we have can be explained. Moreover, if we assume, along with Hyams, that null subjects is the initial state, the first hypothesis one makes about a language, or the unmarked option, the results we have indicate that the adult second language learner has indeed some access to UG[6]. My results are consistent with that hypothesis since all levels performed well with respect to the missing subject type of sentence. White's results are consistent too, since the first hypothesis her beginners group made about English is that it allows null subjects. Even White's control group, which consisted of French native speakers (and French does not allow null subjects), considered sentences with missing expletives grammatical (acceptance as high as 60% in WHITE (1985a)'s control group, beginners level).

Moreover, if subject-verb inversion follows from a different parameter we should not expect a correlation between the results for the missing subject and free subject-verb inversion type of sentence, which, indeed I did not have nor did White's results suggest she had. These results are also consistent with the assumption of L2 learners having some access to UG. Considering subject-verb inversion as not being the "initial state" (HYAMS, 1983), beginning learners shall not have that structure in their initial interlanguage grammar. This was exactly the results I had in my research: acceptance of subject-verb inversion was low in the beginners group and improved with level of proficiency. This was also the result White had in her research. All her subjects subject-verb inversion in English, this result being consistent with the analysis proposed here.

As for the that-t phenomena, I would like to suggest there are other processes involved; in other words, that-t is not completely related to the parameter in question. As a support for this conclusion we have the work by SOBIN (1986), in which another analysis of the COMP-trace phenomena is advanced. Another piece of evidence that shows that there is more to be analysed in structures like this is the results WHITE (1986) had, in which English native speakers (her control group) accepted that-t constructions.

In view of these findings, we conclude that we cannot rely only on the notion of "transfer" of parameter when dealing with L2 acquisition data. Although WHITE (1984, 1985a) atributed to (negative) transfer the inability of her subjects to detect the ungrammaticality of English sentences with missing subjects and that-t structures, the picture is different when we look at the acquisition of the same structure with a different L1 perspective. What seems at first sight as an instance of L1 interference may be analysed as the result of the intermediate (interlanguage) grammar of the learner. And, most of all, the hypothesis of accessibility of UG for adult L2 learners is strongly suggested with the present study[7].

NOTES

[1]The term Pro-Drop comes from the analysis of CHOMSKY and LASNIK (1977) of languages like Spanish. According to them, in such languages "an abstract feature [+ pro] can be generated in the base and simply not filled by lexical insertion, thus there is no deletion of pronouns" (p. 453). What happens then, according to them, is that the rule of Subject Deletion applies and hence the feature [+ pro] "drops". Since then, GB theory has developed, and although the rule of Subject Deletion has been discarded, the term 'Pro-Drop' has remained.

[2]One possible explanation for this is the fact that the beginners group was exposed to a different teaching methodology than the other two groups. The former was taught in Spanish while the latter studied Spanish through translation/grammar and was taught in English.

[3]This shows an asymmetry for object extractions suggesting, perhaps, that wh-movement for questions may be a different rule from wh-movement for relative clauses (see MALING, 1978; RADFORD, 1981).

[4]Subject-verb inversion is optional in Spanish, except in the case of a wh-question (TORREGO, 1984), when it is obligatory:

(a) * ¿Qué Juan compró?
¿Qué compró Juan?
'What did Juan buy?'

(b) * María no sabe qué Juan compró.
María no sabe qué compró Juan.
'María does not know what Juan has bought.'

[5]But this is also the picture for this kind of structure in English, the learners' L1. SOBIN (1986) reports that that-e constructions were accepted either passively or actively by the majority of informants in his study. In fact the pattern of acceptance for this kind of structure was not significantly different from the pattern of acceptance of sentences containing a want for NP construction. This means that-t is not impossible in English and this may have caused the uncertainties detected in L2 learners in the present research.

[6]Other studies (RITCHIE, 1978; FLYNN, 1983 and WHITE, 1986) also confirm this hypothesis.

[7]The results here indirectly confirm the hypothesis since we have to look at one specific claim in the theory in order to have that evidence. Nevertheless, the importance of the present study consists also in the suggestion that, instead of one parameter with three different related

properties, we may have three different parameters. Although this is not a desirable solution in a theory that aims to achieve explanatory adequacy with minimum machinery, that is the picture we have when looking at empirical data. Further study in the area of acquisition of parameterized grammars should be done in order to determine what parameters exist and which phenomena should be related to them.

APPENDIX

SENTENCES ON THE EXPERIMENT

A) Madrid es una ciudad importante.
B) El mesas es feas.
C) ¿Qué estudia María?
D) Él vivimos en Chicago.
E) Gordo gato estamos allí.
F) Mariel una blusa bonita.
G) ¿Quién trabaja en la biblioteca?
H) María piensa que Francisca compró una blusa.
I) ¿Qué compró Juan?
J) ¿Quién piensa Pedro que trabajó mucho?

1) La madre es muy bonita.
2) Nosotros estudiar.
3) ¿Qué libro cree María que cuesta mucho?
4) Ahora él nieva.
5) Yo hablé con María ayer. Está muy gorda.
6) Este es el libro que Juan compró.
7) Yo estamos aquí.
8) Hablaron las niñas por tres horas.
9) El perro mató la serpiente.
10) María una casa ayer.
11) ¿Qué film cree usted que es malo?
12) Yo pienso María tiene um libro.
13) Hace mucho frío este inverno.
14) ¿Cuándo la casa yo compré en diciembre?
15) Esta es la carta que Pedro escribió.
16) ¿Dónde está la casa?
17) Los niños bailó hoy.
18) Ella escribe cartas para Miguel.
19) La madre soy Juana.
20) ¿Quién piensas tú que compró una blusa?
21) El hombre vive en España.
22) ¿Quién visita usted Juan y ?
23) Ayer apareció el cometa.
24) La niña está muy cansada porque trabajó mucho.
25) El niño no habla mucho.
26) ¿Cuántos niños piensa Pedro que tiene María?
27) Yo compré una blusa porque él nieva.
28) ¿Cuándo bailaron las niñas?
29) Nosotros la clase mañana.
30) Ayer estudió Juan la lección.
31) El diretor tiene 6 dólares.
32) ¿Cuál de los libros piensa usted que está en mi oficina?
33) El perro y el niño están contentos.
34) Juan compré ayer.
35) Ayer caminó Juan por el parque.
36) Juan habla español en su casa.
37) Libro el este es.
38) Pedro piensa que bailó la niña ayer.
39) ¿Trabaja Juan todos los días?
40) María piensa que hablamos español.
41) Él visitó China a ver a María, y Perú, a Rosa.
42) ¿Qué novela cree Juan que es interesante?
43) Esta es la niña que habla español.
44) ¿Qué lección piensa Pedro que estudia María?
45) Yo pienso que hace calor en California.
46) El hombre habla con una mujer buena.
47) ¿Qué piensa María que comió Miguel?
48) La agencia tiene 5 oficinas.
49) Juan cree María habla inglés.
50) El hombre compró la casa.

FOLLOW UP QUESTIONNAIRE

Section:..... Course:.....

Please circle the letter "P" if you think the sentence is POSSIBLE in Spanish, the letter "I" if you think the sentence is IMPOSSIBLE in Spanish, and the letter "N" if you are NOT SURE.

1) Juan hablamos mucho.	P	I	N
2) ¿Quién trabaja en la biblioteca?	P	I	N
3) Chicago en María vive.	P	I	N
4) ¿Qué lección piensa María que Juan estudió?	P	I	N
5) La mujer compró un libro interessante.	P	I	N
6) ¿Estudia María la lección?	P	I	N
7) Gordo gato es aquí.	P	I	N
8) ¿Cuántos niños piensa Pedro que María tiene?	P	I	N
9) El hombre caminó por el parque.	P	I	N
10) ¿El perro el gato?	P	I	N
11) Juan está muy gordo.	P	I	N
12) ¿Qué piensa Miguel que María comió?	P	I	N

RESUMO

Na teoria de Governo e Vinculação, assume-se que o ser humano é "equipado" com algumas estruturas inatas da língua, a Gramática Universal (UG), a qual contém um conjunto de princípios invioláveis e alguns parâmetros em aberto, os quais são fixados através da experiência. Um desses princípios universais é o Princípio da Categoria Vazia (o ECP: Empty Category Principle), segundo o qual uma categoria vazia deve ser devidamente governada. Existem algumas línguas que parecem violar o ECP. Essas línguas apresentam algumas propriedades que a teoria coloca como parte de um parâmetro, o parâmetro Pro-Drop. A teoria de governo e vinculação refere-se a esse parâmetro como sendo um dos modos pelos quais as línguas diferem entre si – a diferença sendo, neste caso, com respeito à relação de governo entre sujeito e verbo, de modo que a violação do

ECP é apenas aparente. Quando a criança, "equipada" com os princípios universais, cresce em contacto com uma língua como o inglês, tem o parâmetro fixado de modo a não permitir sujeitos (fonologicamente) nulos. O parâmetro é fixado diferentemente se a criança cresce em contacto com uma língua que permite sujeitos nulos. Uma questão interessante ocorre quando pensamos em pessoas que aprendem uma L2. Se a aquisição de uma L2, é um processo semelhante à aquisição de uma L1, como muitos estudos parecem indicar, podemos assumir que a pessoa que aprende uma L2 tem algum acesso à UG. A presente pesquisa investiga essa questão. No caso de estudantes de espanhol cuja língua materna é o inglês, as hipóteses foram: a) se a pessoa que aprende uma L2 tiver algum acesso à UG, depois de estar em contacto por algum tempo com a L2, "saberá" que há uma aparecente violação do ECP; b) a aquisição do parâmetro Pro-Drop deverá implicar na aquisição do grupo de propriedades relativas ao parâmetro. Neste experimento, pediu-se aos sujeitos que julgassem a gramaticalidade de sentenças que continham as propriedades do parâmetro e que aparentemente violavam o ECP. Os resultados sugerem a acessibilidade da UG para adultos que aprendem uma L2, quando uma afirmação específica da teoria é considerada.

PALAVRAS-CHAVE: *Lingüística; Aquisição de 2a. língua; Sintaxe; Teoria do governo e vinculação.*

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