THE NULL SUBJECT PARAMETER IN ADULT SECOND LANGUAGE ACQUISITION*

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An area of keen interest in applying Chomsky's UG parameter-setting model of SLA has been the Null Subject or Pro-Drop parameter. Research by White (1985) and Lakshmanan (1986) showed that L2 learners of English did not consider the three properties argued to be encompassed by the parameter as related. Data reported here show support for those results, which would be inconsistent with the predictions of the Null Subject Parameter. The results are considered in light of a number of possible positions that can be adopted when faced with data that disconfirm a hypothesis within the UG SLA research program.

1. INTRODUCTION

Most recent research dealing with language universals and second language acquisition is conducted within the framework of Universal Grammar (UG) (see, e.g., Eubank 1991; White 1989). As is well known, UG is comprised of a set of principles and parameters, the latter of which represent the ways in which languages can vary cross-linguistically. From the perspective of acquisition, UG is hypothesized to be innate, a fact that for children allows rapid and accurate acquisition of linguistic knowledge that is much richer than what is provided in the input. With regard to second language acquisition (SLA), the question is more complex, not only because there is first language information that is additionally available to learners, but also because the end result of acquisition is not native-like competence, as it is the case in first language acquisition. Thus, the current debate centers around the extent to which second language learners have access to the innate system that is presumably available to children (see Bley-Vroman 1989; Schachter 1988).

The literature has yielded contradictory results concerning the question of access to UG (see Felix 1991; Gass 1995). Some studies suggest that second language learners behave according to the precepts of UG parameters —the access position— (e.g. Broselow and Finer 1991; Finer 1991; Flynn 1987, 1988; Uziel 1993; White 1989); other studies suggest the opposite —the non-access position — (e.g. Clahsen, 1988; Clahsen and Muysken 1989; Schachter 1988; Bley-Vroman 1989; Felix and Weigl 1991). Still others argue that second language learners have access to UG through their native language —the indirect access position— (e.g. White 1986).

The main avenue for investigation of the UG-access issue in SLA research has been that of parameters (see Gass 1993:106). As pointed out by Davies (1996), part of the appeal of the parameter-setting model of language acquisition developed under the influence of Chomsky's (1981a, 1981b) Principles and Parameters (P&P) model of grammar has

been its presentation as a theory able to explain certain mysteries in the acquisition of grammar. Another part of that appeal has been the possibilities it has created for SLA research and mainstream linguistic theory to interact in interesting ways.

Second language acquisition data can provide counterevidence to certain hypotheses proposed within the P&P theory by proving to be consistent only with grammars that are ruled out by particular P&P hypotheses. Thus, it is perceived that SLA studies can provide important information regarding the appropriate formulation of parameters of UG (see Gass 1993). The aim of the present study is to do just that. In particular, I wish to examine SLA data with respect to the Null Subject Parameter (NSP), also known as the Pro-Drop Parameter.

After a brief overview of the NSP, I report on data obtained from two independent studies, the results of which appear to argue against the clustering of properties assumed to be encompassed by the NSP (thus supporting previous work on this area —see White, 1985; Lakshmanan, 1986). In the final section I discuss the various ways these disconfirming results can be interpreted.

2. THE NULL SUBJECT PARAMETER

The generativist literature on the NSP is relatively vast, stretching back to observations made by Perlmutter (1971). The basic observation is that languages such as Spanish and Italian have a number of properties including (i) the ability to omit subject pronouns, (ii) the free inversion of subject and verb in declarative sentences, and (iii) the so-called *that-trace* effects, that is, the extraction of a subject (leaving a trace) out of a clause that contains a complementizer. A language will either have all of these properties or none of them. As the examples in (1) below show, languages like Spanish and Italian are [+*pro*-drop] and have all the associated properties, whereas English is [-*pro*-drop], having none of them.

(1)

a. Subject pronouns
Va al cine esta tarde
Va al cinema sta sera
*goes to the movies this evening (vs S/He goes to the movies this evening)

b. Subject verb inversion
Ha llegado Laura
E arrivata Laura
*has arrived Laura (vs Laura has arrived)

c. *That*-trace effect
¿Quién dijiste que ha venido?
Chi hai detto che e venuto?
*Who did you say that has come? (vs Who did you say has come?)

The initial research into pro-drop in second language (L2) learning carried out by White (1985) investigated whether the first language (L1) setting of parameters has to be 'deactivated' in L2 learning, that is, learners start by applying L1 settings and gradually switch over. She also tested the hypothesis that all properties of a parameter are mastered simultaneously. Her method was to see the differences between two groups of intermediate L2 learners of English with different *pro*-drop settings in their L1s (French vs Spanish & Italian). The conclusions were that L1 parameters influence the adult learner's view of the L2 data, at least for a while, leading to transfer errors. However, White found

that learners did not recognize the structures in the parameter as related. While there was a difference between the Spanish and French speakers on the first type of sentences (i.e. those with and without overt subject pronouns), there was no difference between the two groups on the other two sentences. Thus, these learners did not appear to see the three properties as a unified parameter.

Lakshmanan (1986) conducted a study similar to that of White's. She tested Spanish, Arabic and Japanese ESL learners. In the statistical analysis, Lakshmanan compared her results with those of White, finding that the three properties were not perceived by these learners as unified under the umbrella of a single parameter.

Hilles (1986) assumes different properties of the *pro*-drop parameter in her investigation of the acquisition of English by a native speaker of Spanish, named Jorge: (i) obligatory pronoun use; (ii) use of non-referential *it*, as in weather terms and use of non-referential *there*; and (iii) the use of uninflected modals. Hilles showed that these features are related in the speech of her subject. She hypothesized that the triggering factor for the switch from [+*pro*-drop] to [-*pro*-drop] was the use of nonreferential subjects. There is, however, a controversy regarding the properties she considered as encompassed by the *pro*-drop parameter, a discussion of which would be beyond the scope of this paper.[1]

Recently, however, the idea that parameters may be reset has been questioned. For instance, Tsimpli and Roussou (1990) argue that parameter resetting is not possible. Their study examines the null subject phenomenon among Greek-speaking learners of L2 English. What they find is that these learners do discover that English requires lexical subjects; however, they also find that other properties of the relevant UG parameter are not triggered by this discovery. For them, this finding suggests that no parameter resetting took place in the first place.

At the most general level, it is perhaps important to keep in mind how this last study mentioned contrasts with others. For example, research reviewed by Eubank (1992) or Schwartz and Sprouse (1994) suggests not just that parametric values transfer from L1 into the initial state of L2 grammar, but also that parameter resetting can and does take place.

3. THE STUDIES[2]

3.1 Study A

The goal of this study was to collect data bearing on the issue of whether L2 learners start with their L1 setting of a given parameter and eventually reset it to the L2 option or

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whether the L1 setting does not play a role in the acquisition process. The subjects in our study were students whose L1 is Spanish or Basque (both *pro*-drop languages) and who were learning English (a non-*pro*-drop language) as a foreign language. Two issues of interest were considered:

> (i) Are L2 adult learners capable of resetting a parameter from the value found in their L1 to the value found in the L2? Will that resetting be a potential source of transfer errors?

> (ii) Do learners reset all the features associated with a parameter or will they require separate evidence for each feature?

3.1.1 Subjects and Methods

Fifty students of the University of the Basque Country (UPV/EHU) participated in this study. They were enrolled in the course *English for Specific Purposes* in the College of Pharmacy during the 1995-1996 academic year. Their English level, previously identified by means of a placement test, was intermediate-high (ACTFL Guidelines, 1986)

At the beginning of a four-month course, students were given a grammaticality judgment task similar to the one in White (1985). The content of the thirty sentences provided was slightly adjusted to suit students' interests (i.e. health science field) but the same structure and number of sentences was kept to be able to establish parallelisms between White's results and ours in future research.

Out of those 30 sentences, 16 were directly relevant to the *pro*-drop parameter and included: 6 ungrammatical sentences with missing subjects; 5 sentences with ungrammatical subject-verb inversion, and 5 sentences relevant to *that-trace* effects: 2 of those were ungrammatical in English, with extraction of subject and the complementizer *that* in position (cf. (1c) above) and 3 were grammatical in English with *that* omitted, on the assumption that students might insert it.

Subjects were provided with sentences with the corresponding instructions and were told that they were not being given a grammar test. They were asked to read the sentences and to indicate whether they considered them to be correct or not. If incorrect, the subjects were asked to supply a correction. There was a time limit (35 minutes) to control the explicit/implicit variable (see Cook 1990).

3.1.2 Results

The results analyzed in the study only related to the two questions posited above, namely, (i) is parameter resetting a potential source of error?, and (ii) do learners reset all features associated with a parameter?

There exists a marked difference between the results obtained for the three aspects of the *pro*-drop parameter. As for the first aspect, the case of missing subjects, the percentage of students responding incorrect to the ungrammatical sentences was very high (94%) and the corrections supplied were relevant in all cases. As for the judgments on sentences with subject/verb inversion, the results are very similar to the ones we have just seen. The majority of the students (95%) responded incorrect to the ungrammatical English sentences and, again, the corrections supplied were relevant.

From the analysis of the data obtained for the first and second aspect of the pro-drop parameter, we concluded that having to reset an L1 parameter does not cause important problems at an intermediate-high level of English. However, one needs to investigate the

role of input and explanation of the L2 in this context. Negative evidence is typically not available to the L1 learner, whereas the adult L2 learner may have access to both corrective feedback and explicit grammatical information. This negative evidence triggers the resetting of a parameter to its L2 value (see White 1991).

The final *pro*-drop structure tested involved sentences with *that-trace* effects. We provide here the relevant sentences with the numbers of the original questionnaire and a table summarizing percentages:

Two ungrammatical (*) sentences with *that* present:

> 17. *Who did you say that arrived late at the lab?
> 18. *Which virus do you think that will attack mankind in the next century?

Three grammatical sentences with *that* omitted:

> 10. Who do you think will find a cure for AIDS?
> 18. Which vaccine did you hope wold fight the disease?
> 28. Who do you believe would be a potential donor for that patient?

TABLE 1. Results for *that-trace* sentences

Sentence	Sts answered *correct*	Sts answered *incorrect*
*17	91%	9%
*19	95%	5%
10	59%	41%
18	68%	32%
28	59%	41%

It is clear that students have a problem with the third aspect of the parameter. They overwhelmingly responded *correct* to the ungrammatical sentences 17 and 19; those students whose answer was *incorrect* provided irrelevant corrections. From the data we can conclude that, for this aspect of the parameter, the carrying over of the L1 value is a source of transfer errors in the L2. There is also transfer in those students that responded *incorrect* to the grammatical sentences (10, 18 & 28); the correction they provided to those sentences was the insertion of the complementizer *that* in all cases. But what about the students that responded *correct* to 10, 18 & 28? They are sure that these sentences are grammatical (statistically, their responses are significantly different from chance at .05 using the binominal one-tailed test), subjects were not merely guessing at random. We probably need to hypothesize that they are assuming that the complementizer is optional in English in this type of construction.

3.1.3 Conclusion

The analysis of the data of this first study led to the following conclusions:

> (i) L2 learners of English at an intermediate-high level succeed in resetting some aspects of the *pro-drop* parameter,
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> (ii) the issue of the accessibility to UG is not very clear from the data regarding *that-trace* effects. Sometimes the L1 value of the parameter is adopted (sentences *17/*19; sentences

10/18/28 for those students who answered *incorrect*) leading to transfer errors. However, there is a group (those who answered *correct* to sentences 10/18/28) that adopts the L2 value of the parameter, thus favoring the accessibility of UG,

(iii) the three aspects of the parameter are not reset together.

3.2 Study B

The goal of this study was to collect data bearing on the issue of the relationship between learning situation and UG-access (see Felix and Weigl 1991). Most of the studies reported on in the literature have looked at L2 learners of a fairly homogenous kind. Typically these are learners who study the L2 in what is known as a second language environment, that is, they receive formal instruction and they are also exposed to what is referred to as 'real language'. In this study we approached the question of whether the properties of the learning context can be related to the factors that may potentially further or block UG-access. Specifically, we wanted to test whether corrective feedback and explicit grammatical information in an EFL context (i.e. learning English as an L2 by formal instruction in a classroom setting) had any influence on the resetting to their L2 value of the three properties of the *pro-drop* parameters exemplified in (1) above.

3.2.1 Subjects and Method

The subjects of our research were 26 Spanish university students with an intermediate-high level of English as previously identified by a placement test (ACTFL Guidelines, 1986). They were enrolled in the course *English for Specific Purposes* in the College of Pharmacy of the University of the Basque Country (UPV/EHU) during the 1996-1997 academic year. Spanish and Basque were their L1. None of the students, whose ages ranged from 18 to 20, had spent any time in an English speaking country, that is, their knowledge of the language came exclusively from classroom exposure during their primary and high-school years.

At the beginning of a 15-week course, the students were given a pre-instruction test both for comprehension and production of sentences standardly related to the *pro-drop* parameter. The students were provided with the corresponding instructions and were explicitly told that this test would not affect their grades. To enhance the credibility of this statement, the tests were anonymous although the papers were identified with a code (for post-instruction test purposes).

The material for the comprehension section of the pre-instruction text consisted of a total of 16 sentences involving:

1. six (6) ungrammatical (*) sentences with missing subjects

    *Scientists will be in trouble if don't consider the consequences of the experiment

2. five (5) ungrammatical (*) sentences with subject-verb inversion

    *The research team did not know when did escape the monkey

3. five (5) sentences relevant to the *that-trace* effect: two of those were ungrammatical in English, with extraction of subject and the complementizer *that* in position:
    *Who did you say that arrived late at the lab?
    and three sentences were grammatical with *that* omitted, on the assumption that the students might insert it:
    Who do you think will find a cure for this disease?

The test sentences were supplemented by 14 distractors and presented in random order. Students were asked to read the sentences and indicate whether they considered them correct or not. If incorrect, the subjects were asked to supply a correction. Again, as in Study A, a time limit (35 minutes) was established to control for the explicit/implicit knowledge variable.

The material for the production section of the text consisted of 8 sentences in Spanish related to the *pro-drop* parameter (4 dealing with missing subjects, 2 with subject-verb inversion and 2 with (the lack of) *that-trace* effects. Students were asked to write those sentences in English.

The subjects received specific grammatical explanations of the structures being tested, approximately 12 hours as part of their 60-hour course. At the end of the course they were given a post-instruction test that consisted of the same number and kind of items; only the lexical items chosen for each sentence were different.

We should mention at this point that we agree with White (1990:128) and consider it necessary for the experimenter in this kind of research to be able to manipulate the sentence types to be investigated rather than relying on their chance occurrence in production data. We have to look at both comprehension and production data in a controlled way. Since linguistic competence includes knowledge of ungrammaticality, L2 learners must somehow be made to reveal, directly or indirectly, whether they have this knowledge by means of tasks where sentences which violate universal constraints are deliberately included for investigation.

As in our research we wanted to compare the pre- and post- instruction results, we decided to use the sample proportion from the pre-test as the null hypothesis in the one-tailed binomial test for the post-instruction test. That is, we tested that the proportion under study in the post-test was equal to the same proportion in the pre-test.[3]

3.2.2 Results

In this study we found again a split between missing subjects and subject-verb inversion structures on the one hand, and structures with *that-trace* on the other. Let us first provide a summary of the results in the following tables:

TABLE 2. Comprehension[4]

	PRE-TEST	POST-TEST	PRE- VS POST-
*MIS SUB	85%	90%	significant increase ($\alpha = 0.05$)
*S-V	75%	86%	significant increase ($\alpha = 0.05$)
*that-trace	28%	39%	significant increase ($\alpha = 0.05$)
✔that-trace	83%	75%	significant decrease ($\alpha = 0.05$)

3   The usual two sample binominal test could not be used because the subjects were the same. The McNemar test was also disregarded because if would not indicate the direction of the changes produced, if any.

4   PRE-TEST refers to the pre-instruction test. POST-TEST to the post-instruction test. *MIS SUB to the ungrammatical sentences with missing subjects in English; *S-V to the ungrammatical sentences with subject-verb inversion; *that-trace to the ungrammatical sentences with the complementizer *that* in position and _that-trace to the grammatical sentences with the complementizer omitted.

TABLE 2. Production

	PRE-TEST	POST-TEST	PRE- vs POST-
MIS SUB	97%	100%	significant increase ($\alpha = 0.05$)
S-V	96%	100%	significant increase ($\alpha = 0.05$)
that-trace	63%	57%	significant decrease ($\alpha = 0.10$)

As we can see, the results of the pre- and post-instruction tests for missing subjects and subject-verb inversion, both in comprehension and production, are significantly different from chance (0.01 level, binomial two-tailed test); that is, subjects were not merely guessing at random, and there is a significant increment in the post-instruction test (0.05 binomial, one-tailed test). However, there is a significant decrease (0.01 binomial, one-tailed test) in the comprehension of *that-trace* sentences that are grammatical in English and in the production of *that-trace* sentences in general.

3.2.3 Conclusions

Even though the results of this study were, of course, not definite, but at best suggestive, some tentative conclusions may perhaps be drawn. Corrective feedback and explicit grammatical information do seem to have an effect on the improvement of the resetting of two aspects of the *pro-drop* parameter, that is, missing subjects and subject-verb inversion, but the same corrective feedback leads to more confusing results in the case of the third structure of the parameter, namely, *that-trace* effects.

4. DISCUSSION

Taken at face value, the results from the two studies reported on above indicate that the three properties argued to be encompassed by the *pro-drop* parameter are not perceived as related by the learners. Such a conclusion is consistent, as we have mentioned, with the results obtained by White (1985) and Lakshmanan (1986). But the question does not end here. Of the three structures, one could argue that students see some kind of relationship between sentences with subject omission and sentences with subject-verb inversion; that is, subject omission and subject-verb inversion structures seem to be more closely related to each other than either is to *that-trace* sentences. The percentages shown in Tables 1 and 2 show clear-cut results for the first two structures, whereas the results for the third are more confusing.

5. CONCLUSION

There is, of course, a range of conclusions we might draw in interpreting the results of the two studies. Gass (1993) establishes an excellent framework within which to consider experimental results that contradict theoretical predictions. Let us consider the two studies reported on here within this framework.

First, one can assume that the theory (P&P) is correct. That is, we can assume in this case that the three properties argued to be part of the *pro-drop* parameter are correct. If we then also assume that the results of the two studies provide a valid indication of the subjects' L2 English grammars, we must conclude that these subjects do not have complete

access to UG in learning a second language or that they have access to some of the properties and not to others, a conclusion that proponents of the UG SLA program would like to avoid.

Second, one can attribute the results to methodological problems, assuming that if those were solved, the facts would fit the theory. The two experiments carried out could be criticized for having used grammaticality judgment tasks. There is a growing body of literature questioning the validity and reliability of this type of task in SLA research (e.g. Davies and Kaplan 1995; Ellis 1990; Goss, Ying-Hua and Lantolf (1994). However, Liceras (1991), Gass (1994) and Munnich, Flynn and Martohardjono (1994) argue for the use of grammaticality judgment tasks. And, as Davies (1996:487-88) points out:

> Regardless of this controversy, a large subset of the research carried out within this theoretical paradigm [P&P] has made liberal use of grammaticality judgment tasks in data collection. This is due in part to the relative ease of administering such tasks and the ability of the researcher to collect the precise data relevant for testing a particular hypothesis. It is also due in part to the reliance on grammatical intuition in studies in generative syntax and the competence/performance distinction. The important point is that discounting the data collected on these grounds casts doubt on a significant portion of work done in the UG SLA paradigm.

Neither the first nor the second approach to the data calls into question the theoretical constructs on which the studies are based.

But the third possibility, as suggested in the introduction, is to use the second language data to argue against the theory or to suggest adjustments to the theory. In this case, as seen in the studies carried out, some learners' grammars are not consistent with the clustering of properties in the *pro-drop* parameter. Therefore, it is necessary to formulate a theory in which the data are not predicted to be impossible. Although desirable, a stronger conclusion is at this point unwarranted on the basis of the results of the two studies.[5]

WORKS CITED

Bley-Vroman, Robert W. 1989: What is the Logical Problem of Foreign Language Learning? *Linguistic Perspectives on Second Language Acquisition* ed. by Susan Gass & Jacquelyn Schachter, 41-68. Cambridge: Cambridge University Press.

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[5] A solution has already been suggested within a different framework. In 1984 Gass and Ard proposed a model for predicting the potential relationship between language universals and second language acquisition. They established a difference between typological and abstract universals as far as their influence on acquisition. Thus, the former have a strong likelihood of constraining SLA whereas the latter are predicted not to influence the acquisition of a second language to the same extent. According to these authors, it is more difficult for learners to notice connections among structures that are not superficially related (i.e. that are abstractions) than it is to notice surface relatedness. Gass (1995: 35) argues, with respect to the *pro-drop* parameter, that the relatedness between subject omission and subject-verb inversion structures has to do with freedom of subjects (whether or not they are overt and the extent to which their position in the sentence is free) in languages like Italian and Spanish. This would be due to the rich morphological system that allows easy recoverability of subjects. Gass points out that «*it is reasonable to assume that learners recognize the relatedness of these two structures which both have to do with the use and/or position of subject pronouns*». For Gass —who comments on White (1985)— learners are able to perceive the structural similarity in some cases, but not in others and it is the surface similarity that allows them to connect the structures. Learners do not appear to have access to underlying abstractions.

Broselow, Ellen and Daniel D. Finer 1991: Parameter Setting in Second Language Phonology and Syntax. *Second Language Research* 7: 35-59.

Chomsky, Noam 1981a: *Lectures on Government and Binding.* Dordrecht: Foris.

—1981b: Principles and Parameters in Syntactic Theory. *Explanations in Linguistics* ed. by N. Hornstein & David Lightfoot, 32-75. London: Longman.

Clahsen, Harald 1988: Parameterized Grammatical Theory and Language Acquisition: A Study of Acquisition of Verb Placement and Inflection by Children and Adults. *Linguistic Theory and Second Language Acquisition* ed. by Suzanne Flynn and Wayne O'Neil, 47-75. Dordrecht: Kluwer Academic Publishers.

—and Peter Muysken 1989: The UG Paradox in L2 Acquisition. *Second Language Research* 5: 1-29.

Cook, Vivian 1990: Timed Comprehension of Binding in Advanced L2 Learners of English. *Language Learning* 40: 557-599.

Davies, William D. 1996: Morphological Uniformity and the Null Subject Parameter in Adult SLA. *Studies in Second Language Acquisition* 18: 475-493.

—and Tamar Kaplan 1995: Native Speaker vs. L2 Learner Grammaticality Judgments. Paper presented at the Second Language Research Forum. Cornell University, Ithaca, New York.

Eubank, Lynn, ed. 1991: *Point Counterpoint: Universal Grammar in the Second Language.* Amsterdam: John Benjamins.

—1992: Verb Movement, Agreement and Tense in L2 Acquisition. *The Acquisition of Verb Placement: Functional Categories and V2 Phenomena in Language Acquisition* ed. by Jürgen M. Meisel, 225-244. Dordrecht: Kluwer.

Ellis, Rod 1990: Grammaticality Judgments and Learner Variability. *Variability in Second Language Acquisition: Proceedings of the Tenth Meeting of the Second Language Research Forum* ed. by H. Burmeister and P. Rounds, 25-60. Eugene: Department of Linguistics, University of Oregon.

Felix, Sascha W. 1991: The Accessibility of Universal Grammar in Second Language Acquisition. *Point Counterpoint: Universal Grammar in the Second Language* ed. by Lynn Eubank, 89-103. Amsterdam: John Benjamins.

—and Wilfried Weigl 1991: Universal Grammar in the Classroom: The Effects of Formal Instruction on Second Language Acquisition. *Second Language Research 7: 162-180.*

Finer, Daniel D. 1991: Binding Parameters in Second Language Acquisition. *Point Counterpoint: Universal Grammar in the Second Language* ed. by Lynn Eubank, 351-374. Amsterdam: John Benjamins.

Flynn, Suzanne 1987: *A Parameter-Setting Model of L2 Acquisition.* Dordrecht: Reidel.

—1988: Nature of Development in L2 Acquisition and Implications for Theories of Language Acquisition in General. *Linguistic Theory in Second Language Acquisition* ed. by Suzanne Flynn and Wayne O'Neil, 76-89. Dordrecht: Kluwer Academic Publishers.

Hilles, Sharon 1986: Interlanguage and the *Pro*-Drop Parameter. *Second Language Research* 2: 33-52.

García Mayo, María del Pilar 1997a: Parametric Variation in Adult L2 Acquisition: The *pro*-drop parameter. *Proceedings of the 20th International AEDEAN Conference* ed. by P. Guardia and J. Stone, 189-193. Universitat de Barcelona.

—1997b: The Effects of Classroom Feedback on Adult L2 Acquisition. Paper presented at the XXI Congreso de AEDEAN. Sevilla, 18-20 December.

Gass, Susan M. 1993: Second Language Acquisition: Past, Present and Future. *Second Language Research* 9(2): 99-117.

—1994: The Reliability of Second-Language Grammaticality Judgments. *Research Methodology in Second Language Acquisition* ed. by Elaine Tarone, Susan Gass and Andrew Cohen, 303-322. Mahwah, NJ: Earlbaum.

—1995: Universals, SLA and Language Pedagogy: 1984 Revisited. *The Current State of Interlanguage: Studies in Honor of William E. Rutherford* ed. by Lynn Eubank, Larry Selinker and Michael Sharwood-Smith, 31-42. Amsterdam: John Benjamins.

—and Josh Ard 1984: L2 Acquisition and the Ontology of Language Universals. *Second Language Acquisition and Language Universals* ed. by William Rutherford, 33-68. Amsterdam: John Benjamins.

Goss, N., Z. Ying-Hua and J. Lantolf 1994: Two Heads May Be Better than One: Assessing Mental Activity in L2 Grammaticality Judgements. *Research Methodology in Second Language Acquisition* ed. by Elaine Tarone, Susan Gass and A. Cohen, 263-286. Mahwah, N.J.: Earlbaum.

Lakshmanan, Usha 1986: The Role of Parametric Variation in Adult Second Language Acquisition: The Case of the Pro-Drop Parameter. *Papers in Applied Linguistics - Michigan* 2: 97-118.

Liceras, Juana M. 1991: Grammaticality Judgments Revisited: The Content of Empty Categories in Native and Non-Native Spanish. Paper presented at the conference on Theory Construction and Methodology in Second Language Acquisition Research. Michigan State University, East Lansing.

Munnich, Edward, Suzanne Flynn and Gita Martohardjono 1994: Elicited Imitation and Grammaticality Judgment Tasks: What They Measure and How They Relate to Each Other. *Research Methodology in Second Language Acquisition* ed. by Elaine Tarone, Susan Gass and A. Cohen, 227-243. Mahwah, NJ: Earlbaum.

Perlmutter, David 1971: *Deep and Surface Structure Constraints in Syntax.* New York: Holt, Rinehart & Winston.

Schachter, Jacquelyn 1988: Second Language Acquisition and its Relationship to Universal Grammar. *Applied Linguistics* 9: 219-235.

Schwartz, Bonnie D. and Richard Sprouse 1994: Word Order and Nominative Case in Non-native Language Acquisition. *Language Acquisition Studies in Generative Grammar* ed. by T. Hoekstra and Bonnie Schwartz. Amsterdam: John Benjamins.

Tsimpli, Ianthi and A. Roussou 1990: Parameter Resetting in L2. *UCL Working Papers in Linguistics* 2: 149-189.

Uziel, S. 1993: Resetting Universal Grammar Parameters: Evidence from Second Language Acquisition of Subjacency and the Empty Category Principle. *Second Language Research* 79: 49-83.

White, Lydia 1985: The 'Pro-drop' Parameter in Adult Second Language Acquisition. *Language Learning* 35: 47-62.

—1986: Implications of Parametric Variation for Adult Second Language Acquisition: An Investigation of the Pro-Drop Parameter. *Experimental Approaches to Second Language Learning* ed. by Vivian Cook, 55-72. New York: Pergamon Press.

—1989: *Universal Grammar and Second Language Acquisition*. Amsterdam: John Benjamins.

—1990: The Verb Movement Parameter in Second Language Acquisition. *Language Acquisition* 1: 337-360.

—1991: Adverb Placement in Second Language Acquisition: Some Effects of Positive and Negative Evidence in the Classroom. *Second Language Research* 7: 133-161.