

Setting Parameters in L2A: On the English 's Morpheme

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1. Introduction

Syntactic variation among languages has been accounted for in Generative Grammar through the notion of parameters, conceived of as points at which the language acquirer has to make a (binary) choice as far as their value is concerned on the basis of the linguistic input (s)he is exposed to.

As far as the locus of parameters is concerned, two different views have been proposed in the literature. According to one view, parameters are expressed in UG principles: each principle has a sort of switchboard which must be set on or off. The other view (Borer 1984, Kayne 2000, Rizzi 2011) places the locus of parameters in the functional lexicon.

When we come to L2 acquisition, we argue, the two views make very different predictions.

A possible consequence of the 'Parameters in Principles' view is that when UG principles are engaged for the second time, their parametric values, previously set, are transferred (and then, possibly, reset). According to the 'Parameters in the (Functional) Lexicon' view, parameters are set for each item of the functional lexicon the learner encounters.¹ This entails, we argue, that the L1 learner and the L2 learner are in a similar condition: they are both faced with new vocabulary items whose syntactic properties have to be discovered. UG principles and parameters are independent entities, so parametric values need not and should not be transferred as a consequence of UG availability.² If UG is available in L2A, parameters will not be transferred and then reset, but set again.

This does not mean, of course, that we deny cross-linguistic influence in L2A: we simply note that its source cannot be tied to the fact that UG is engaged again if parameters and principles are independent entities.³

Rizzi (2011) proposes that parameters are instructions for a certain syntactic action expressed as features on an item of the functional lexicon, and made operative when the item enters syntax as a head. Parametric features are, in the set of possible linguistic features, a small subset of morpho-syntactic features which have the property of triggering the basic syntactic actions: Merge, Move and Spell-out. Hence, there will be Merge parameters, Move parameters and Spell-out parameters. Each item of the functional lexicon will be endowed with a corresponding set of switches, and acquiring the item amounts to setting these switches.

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¹ As Rizzi (2011) argues, the traditional lexical/functional divide has to be revised. See Cinque and Rizzi (2010) for an inventory of functional elements far larger than is generally thought.

² A different view concerning the relation between parameters-in-the-lexicon and transfer is apparently expressed by Sprouse (in prep.) quoted by Schwartz (2013). I haven't been able to access the manuscript in question up to now.

³ On empirical grounds, a dissociation between UG and transfer has been reported in the literature, e.g. by Montrul (2000). We think Montrul's data are easily explained assuming that UG and transfer are two independent sources for the L2 learner.

How does an L2 learner behave when (s)he is confronted with a new item of the functional lexicon? In this work we discuss some experimental data concerning the L2 acquisition of the English 's morpheme by native speakers of Italian aged 10-12. Our data push to the conclusion that in discovering the Merge properties of 's, our subjects make hypotheses that cannot be but UG driven.

The paper is organized as follows: in Section 2 we present the experimental task and the results. The latter will be discussed in Section 3 while in Section 4 we draw the conclusions.

2. Discovering the Merge properties of 's

In order to see how learners proceed in the identification of the syntactic properties of a new vocabulary item, the English *-s* morpheme is particularly interesting due to its morpho-phonological opacity. With graphic and /or phonetic variants, it may indicate the plural of nouns, the third person singular of the present of lexical verbs as well as, in its contracted form, of *be* and *have*, and the genitive.

We proposed a written grammatical decision task to two different groups of native speakers of Italian aged 10-12, beginners or near beginners of L2 English. Given the written nature of the task, we chose two uses of the 's morpheme which are homophonic and homographic, i.e. totally non-transparent: the case in which 's is a (contracted) form of BE and the case in which it is a genitive.

2.1. Materials and procedure

Subjects were proposed 5 sentence patterns. In two of them the value of 's is third person singular of BE and in three of them it is genitive. All items contained no violations and were not ambiguous. The patterns are reported in Table 1.

Table 1

Value of 's	Pattern	Example
1.BE	Common noun + 's + PP	The car's in the garage
2.BE	Proper name + 's + PP	Jodie's in the garden
2.GV	Is + Subj+Poss Simple NP + 's + N	Is this Jack's tracksuit
4.GV	Is + Subj+Poss Conjoined NP + 's + N	Is this Tom and Jenny's car?
5.GV	PossNP + 's + BE + AP	Rosie's dog is very friendly

Subjects had to decide, for each item of the list, whether the value of 's was BE or genitive and indicate it to the right of the item. Instructions were written in the subjects' native language, Italian. Two testing sessions were realized: one soon after students were taught BE simple present and 's genitive (December Session), and one five months later (June Session)

2.2. Participants

50 subjects participated in each experimental study. They were all beginners or near-beginners of English aged between 10 and 12, attending the 1st year of Scuola Media.

In the Pilot Study, the experimental group included 2 dyslexic subjects, while for 13 of the remaining 48 subjects Italian was a near native L2. In the Second Study, there were 2 dyslexic subjects, while for 10 of the remaining 48 subjects Italian was a near native L2.⁴

⁴ Subjects whose Italian was a near native L2 had resided in Italy for more than three years and were educated in Italian. The two dyslexic children of the Pilot Study were initially treated separately, but no statistically significant difference emerged in the results including or excluding them. For the two dyslexic children of the Second Study we adopted the general rule, which was to exclude subjects which did not complete the test. This was the case for one of them.

2.3. Results

We'll report the results of the Pilot Study, while for the Second Study (still in progress) we'll only indicate the points in which results significantly diverge from those of the first study.

In Table 2 we report the general percentage of target decisions in the December Session and in the June Session. These results are indications of the general trend without a specific analysis for each one of the patterns reported in Table 1. They simply show that the decision that our subjects had to make was not a trivial one for them, in that there is a relevant amount of non – target decisions, i.e. no ceiling effect:

Table 2. Total % of target decisions in the two sessions (Pilot Study)

December	67.6
June	71.2

In Table 3 and Table 4 results are differentiated per pattern. In Table 3 we report the percentage of target and non – target decision for each pattern in the December Session, while in Table 4 the same data are referred to the June Session:

Table 3. Results for the December session (Pilot Study)

Pattern	Target %	Non target %
Pattern 1	74	26
Pattern 2	56	44
Pattern 3	78	22
Pattern 4	68	32
Pattern 5	62	38

We found a statistically significant difference for target decisions between Pattern 2 (the pattern with less target decision) and Pattern 3 (the pattern with more target decision): $\chi^2=5.4726$ $p=.05$; with Yates correction $\chi^2=4.5228$ $p=.05$.

Table 4. Results for the June session (Pilot Study)

Pattern	Target %	Non target %
Pattern 1	74	26
Pattern 2	58	42
Pattern 3	84	16
Pattern 4	72	28
Pattern 5	68	32

The results of the June Session again show a statistically significant difference for target decisions between Pattern 2 and Pattern 3 ($\chi^2=8.2079$ $p=.05$ (significant also at $p=.01$ and at $p=.001$); with Yates correction $\chi^2=6.9937$ $p=.05$ (significant also at $p=.01$). The same statistically significant difference between Pattern 2 (the pattern with the lowest percentage of target decisions) and Pattern 3 (the pattern with the highest percentage of target decisions), is thus found in both session.

Another result which is replicated in the two sessions concerns the ranking of the various patterns:

Table 5 Patterns ranking for target decisions (Pilot Study)

Session	Ranking
December	P3>P1>P4>P5>P2
June	P3>P1>P4>P5>P2

A similar, though not identical, patterns ranking is found in the second study, as shown in Table 6:

Table 6 Patterns ranking for target decisions (Second Study)

Ranking
P3=P4>P1>P2>P5

Comparing Table 5 and Table 6, we see that in the Second Study Pattern 3 and Pattern 4 are equally difficult for the subjects. The most difficult pattern (assuming difficulty to be directly related to a low percentage of target decisions), for this group of subjects, is Pattern 5 instead of Pattern 2 which was the most difficult pattern for the subjects in the Pilot Study.

In the Second Study we found indeed a statistically highly significant difference between Pattern 5 and Pattern 3: $\chi^2 = 9.4044$ $p = .05$ (significant also at $p = .01$ and at $p = .005$) in the December Session.

3. Discussion

The first remarking result of this experimental study is that deciding what is 's is really a difficult task for beginners, and this difficulty persists over time, as Table 2 shows for the Pilot Study.

What is more, we found that the various patterns are not equally difficult for our subjects. In the Pilot Study we found a pattern ranking which is exactly replicated in the two experimental sessions, as shown in Table 5. As far as the Second Study is concerned, the pattern is similar, although not identical, to the one of the Pilot Study. Two differences are worth noting: the first concerns the fact that Pattern 3 and Pattern 4 are felt equally difficult (and not ranked $P3 > P4$ as in the first study); the second difference is that in the Second Study the significantly more difficult pattern is Pattern 5 and not Pattern 2 as in the Pilot Study. The first difference is not very surprising. If we go back to Table 1, we see that the only difference between Pattern 3 and Pattern 4 is that in Pattern 4 the possessor is a conjoined NP while in Pattern 3 it is a simple NP. This difference seems to be felt slightly differently by the two groups, but in both groups Pattern 3 and Pattern 4 are the easiest compared to the other patterns.

As far as the second difference is concerned, we can see first of all that in both groups Pattern 2 and Pattern 5 are the most difficult patterns (see Table 5 and Table 6), the difference lying in the fact that the statistical difference is found for one group in Pattern 2 and for the other in Pattern 5.

What makes Pattern 2 and Pattern 5 significantly more difficult than Pattern 3?

In order to answer this question, we argue that subjects make the following underlying hypothesis as far as the English 's morpheme is concerned:

- (1) *Is* and 's are allomorphs of a general agreement morpheme

where ' general' means that it can be merged both clause internally and DP internally.

Assuming (1), Pattern 2 and Pattern 5 (reported in (2) and (3) for convenience) are more difficult because here 's is placed at what we may call, following Fodor (1998a) a 'choice point', i.e. a point in which it can be attached either into the currently parsed DP (and in this case it is interpreted as a genitive), or projecting IP (and in this case it is interpreted as the third person singular of BE in the present tense) :

- (2) Jodie's in the garden
- (3) Rosie's dog is very friendly

The two possible interpretations follow directly from the two distinct parsing principles reported in (4) and (5):

- (4) **Late Closure** (Frazier and Fodor. 1978)

When possible attach incoming material into the constituent currently being parsed

(5) **Minimal Attachment** (Frazier and Fodor, 1978)

Attach incoming material into the phrase marker being constructed using the fewest nodes consistent with the well-formedness rules of the language under analysis

If subjects follow Late Closure, when they encounter 's they attach it into the currently parsed DP and interpret it as a genitive; if subjects follow Minimal Attachment they project an IP node to which 's (a form of BE) is attached. A similar problem does not arise in Pattern 3, repeated here below for convenience:

(6) Is this Jack's tracksuit?

With *Is* in C°, when subjects encounter 's, I° is filled by the copy of the moved *is*, and 's can only be interpreted as a genitive.

Finally, few words on the comparative easiness of Pattern 1, reported for convenience in (7):

(7) The car's in the garage

This pattern is not felt particularly difficult by our subjects because here 's follows a common (i.e. inanimate) noun. We cannot say, however, whether subjects are following a rule they have been taught or they are relying on a deep [animacy] feature which makes them exclude the genitive interpretation of 's in this environment.

Let's now go back to the main finding of this study. The fact that when 's is placed at a choice point it is significantly more difficult to decide what it is shows that our subjects are able to use syntactic parsing principles grounded on a fully developed clausal architecture. But our data could not be explained without the assumption that our subjects consider *is* and 's two allomorphs of one and the same (agreement) morpheme that can be merged both clause internally and DP internally, as stated in (1).

The hypothesis in (1) is not dissimilar from proposals made by linguists: den Dikken (1998, 1999) for instance, argues that possessive 's is the singular form of the copula. This hypothesis has nothing to do with rules that subjects have been taught about 's.

That learners make the hypothesis in (1) is also suggested by independent evidence, namely by some elicited production errors such as the one reported in (8), collected by Bennati and Di Domenico (2008), which is possibly an instance of 'BE over-generation' (Ionin and Wexler, 2002) whose boundaries, however, go beyond the clause and include the DP as well:

(8) Q. Where are the belts?

A. The belt is Brom is on the table. The Belt is Katrina is on the chair⁵

4. General conclusions

In this work we have presented some data concerning the L2 acquisition of the English 's morpheme. These data cannot be explained but assuming that our subjects make the hypothesis in (1). Going back to our introductory claims, in assuming (1) our subjects do nothing less but try to set the Merge properties of 's, i.e., according to Rizzi's (2011) typology of parameters, they try to set a Merge parameter of this specific element of the functional lexicon.

What is the source of knowledge that guides subjects in establishing the Merge properties of 's?⁶ We argue that this source of knowledge cannot be but UG: the hypothesis in (1) has nothing to do with

⁵ The elicited production test in Bennati and Di Domenico (2008a) was meant to elicit 's –genitive constructions through the help of some pictures showing objects belonging to the main characters of a story which was familiar to the subjects. The subjects studied in Bennati and Di Domenico (2008a) were, like those of the present studies, native speakers of Italian aged 10-12, beginners or near beginners of L2 English. In Bennati and Di Domenico (2008a) examples like (8) were left aside. I thank Elisa Bennati for letting me recast them in the present framework.

⁶ The term 'source of knowledge' is taken from Ionin, Zubizarreta and Bautista-Maldonado (2008)

what subjects are taught about 's and cannot be due to transfer from their L1, since there is no equivalent of 's in it.⁷

The fact that in (1) no transfer from the L1 is implied does not entail, of course, that transfer from the L1 does not occur in L2A: transfer is a well and widely documented fact in L2A, at least since Sweet (1899). What we have shown with our data is simply what may happen when transfer is not implied in L2A and that transfer may not occur in L2A even when a parameter value must be fixed. This, in turn, implies that transfer and the establishment of parametric values are two independent processes. This point, as we argued in Section 1, is a theoretically motivated consequence of the view that parameters are properties of elements in the functional lexicon: if parameters are not expressed in principles, UG principles can be used in acquiring an L2 without transfer of parametric values. Setting and transfer of parametric values are two independent and possibly alternative processes. While the first is a genuinely UG driven process, the latter is rather an escape-from – acquisition mental mechanism the L2 acquirer may resort to.

If parameters are features of lexical (functional) items, transfer can be characterized as follows: in the acquisition of a new lexical item, an L2 acquirer may decide to (temporarily) acquire only its phonetic matrices, transferring from an equivalent L1 item the already set feature values and the syntactic actions they may trigger. It might be easier, for the L2 acquirer, to transfer, rather than to acquire, the syntactic features values of a new lexical item, when this is possible (see Footnote 7). If it is not, or if the learner decides to acquire rather than transfer, these features values, then UG comes into play (*modulo* Critical Period).⁸

Then the next question is: when UG comes into play, is the process the same as in L1 acquisition?

Our data show that there might be some differences. The hypothesis in (1), which reveals that subjects use universal parsing principles grounded on a fully mature clausal architecture, could be the same made by L1 acquirers, as long as it is a hypotheses made by some linguists, as we saw in Section 3.⁹ It would be interesting to find a task suitable for younger children, in order to prove that this hypothesis is at stake in the L1 acquisition of the English 's morpheme.

One problem might arise, however, if cases like (8) are instances of BE- overgeneration, as we have argued, and if they are to be put in relation to (1), as we did. In this case we are forced to conclude that there is indeed a difference in the L1 and the L2 acquisition of the English 's morpheme . Paradis (2010) argues that BE-overgeneration is a hallmark of L2 acquisition, not attested in L1 acquisition (both in typically and non-typically developing children), and cases like (8), as far as I can tell, are not attested in L1 acquisition.

Brown (1973), for instance, reports that the first stage in the L1 acquisition of English 's-Genitive constructions consists in a simple possessor preposing (e.g. Daddy chair) followed by the appearance of the 's morpheme (Daddy's chair).¹⁰

This difference can be explained in two different ways. Under the maturational approach to L1 acquisition (i.e. under the idea that the clausal architecture is not fully matured at the onset of first language acquisition), (8) can be explained assuming that L2 learners, contrary to L1 learners, start from a fully matured clausal architecture and are thus free to insert the morpheme / is='s/ before acquiring possessor movement. On the contrary, under the idea that the clausal architecture is fully at disposal at the onset of first language acquisition, assuming /is='s/ to be the overt realization of a functional category, its insertion in (8) (and BE- over-generation in general) could be interpreted as deriving from the fact that the phonological realization of a functional category, computationally costly in early childhood, is rather the preferred option in L2A.

⁷ Müller and Hulk (2001) propose that cross-linguistic influence depends upon the grammatical phenomenon involved. They argue that cross- linguistic influence is predictable when there is a certain overlap between two grammatical systems, and that it is unidirectional: if (the adult) language A allows for more than one grammatical analysis from the child's perspective and language B contains positive evidence for one of those possible analyses, cross-linguistic influence is probable. None of these conditions is at stake in the case studied here,

⁸ I discuss these issues in Di Domenico (in press).

⁹ On the universality of parsing principles such as Minimal Attachment and Late Closure see Fodor (1998b)

¹⁰ A similar trend was found by Bennati and Di Domenico (2008b) for L2 acquisition by native speakers of Italian. Here we consider cases like (8) as a stage which precedes the stage of possessor preposing.

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