

DOCUMENT RESUME

ED 385 137

FL 023 129

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 TITLE Language Choice and Code-Switching in a Young Bilingual Child.
 PUB DATE Mar 95
 NOTE 18p.; Paper presented at the Annual Sociolinguistics Symposium (10th, Lancaster, England, United Kingdom, March 1994).
 PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)
 EDRS PRICE MF01/PC01 Plus Postage.
 DESCRIPTORS *Bilingualism; Case Studies; *Child Language; *Code Switching (Language); Foreign Countries; Language Acquisition; Language Dominance; Language Processing; Oral Language; Spanish; Syntax

ABSTRACT

This paper addresses bilingual children's speech in relation to data from a case study of a child in Wales acquiring English and Spanish between the ages of 1 and 3 years to establish how language choice and code-switching can be recognized in young children. Data is reviewed from the one-word stage, the early two-word combination, and the multi-word combination stages. It is suggested that contextually appropriate language choice is possible at the one-word stage, that choices between content and function involve more content than function in the two-word stage, and that mixed language utterances in the multi-word stage may represent adult-like examples of code-switching. Overall, it is strongly recommended that a child's linguistic repertoire must be considered at all three stages to determine final language choice. It is concluded that both language choice and code-switching are dependent on a developing bilingual's linguistic resources; language choice cannot take place until there is equivalence between lexical items and alternative grammars in the languages for the child to be better able to choose between them. (Contains three references.) (NAV)

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Language Choice and Code-Switching in a Young Bilingual Child

by

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Paper presented at the Tenth Sociolinguistics Symposium
University of Lancaster, England

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March 1994

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ABSTRACT

Recent work on bilingual children's speech has focused on the extent to which children are able to choose between the two languages in their repertoires from an early age. We shall address these issues in relation to data from a case study of a child acquiring English and Spanish between the ages of one and three. We shall consider data from the one-word stage, from the stage of early two-word combinations, and from that of multi-word combinations.

At the one-word stage we shall argue that contextually appropriate language choice is possible, but that this can only be established on the basis of a detailed knowledge of the child's lexical resources in both languages. At the stage of early two word combinations we shall compare mixed and non-mixed language utterances, particularly those consisting of a 'content' plus a 'function' word, and will argue that while the child may be making choices between the 'content' words, this is less clear in relation to the 'function' words, largely because the 'function' words are more peripheral to the adult linguistic system. At the stage of multi-word combinations we shall focus on mixed language utterances, in order to determine to what extent these can be considered adult-like examples of code-switching. Various constraints proposed in the literature will be examined in relation to these utterances.

We shall argue that the different linguistic resources available at each stage will give rise to different possibilities of language choice, and that an account which ignores a child's linguistic repertoire at a particular stage will be incomplete.

In this paper we seek to establish how we can recognize language choice and code-switching in young bilingual children. We define language choice as the selection of one language versus another at a particular point in time, whether at the beginning of or during an utterance. Language choice is related to code-switching in that code switching involves a change in language choice. While language choice is lexically constrained, code-switching is grammatically constrained. Language choice can thus occur as early as in one-word utterances. Code-switching, however, will only occur once the child has two grammatical systems. A case study of the first author's daughter, Manuela, who was exposed to Spanish and English from birth will be used to illustrate these points. The data reported in this study come from weekly video recordings in two language contexts and from daily diary records kept by the mother.

First of all, we shall deal with the earliest one-word utterances. If children are being exposed to two languages simultaneously, it is possible that their one-word utterances will involve language choice. It has been said in the past that developing bilinguals do not in fact have a choice between two languages at the one-word stage, but we shall show that such a choice is possible insofar as there are pairs of lexical equivalents in the child's vocabulary. The presence or absence of such equivalents can then be seen as lexical constraints on language choice.

To determine the extent to which lexical items in the two languages were equivalent in our study, the child's lexicon was constructed. Diary entries and video recordings were used to track her early lexical acquisition. Examples of entries from this lexicon are shown in Appendix 1. In Appendix 1, the number in the first column signifies the chronological order of the first appearance of each lexical item. In the examples shown, each lexical entry is categorized as English or Spanish according to an adult source word (A.S.W.).

Using this lexicon, we can illustrate that language choice is possible even when Manuela was producing predominantly one-word utterances. However, such choice is dependent on when, if at all, equivalents are in her productive vocabulary. In entry 20 in Appendix 1, we can see that she produced the Spanish 'más' for the first time at 1;3.9 but did not have the English equivalent 'more' until 1;4.14. The last column of entry 40 for 'more' indicates that its equivalent 'más' was produced earlier as shown by entry 20. To give an idea of how such single-word utterances are used in actual speech, a fragment of a transcript of a video-recording at 1;7.12 in CHILDES format can be seen in Appendix 2. In this transcript, the lines beginning with stars contain the actual utterances whereas all the lines beginning with percent signs provide additional information. The situation in the fragment is that Manuela is in her highchair eating a banana in the kitchen with her mother and grandmother, who are both speaking English. Manuela looks at her mother and produces the Spanish "más", asking for more banana as she stretches out her hand with her fingers apart. There is an overlap in her production of "más" with her grandmother's statement "Granny came on the train" and her mother's negative reply to her request – "no". Then the mother continues the topic introduced by the grandmother – "Did you know about Granny coming on the train? Did Granny come on the train? Hm?". Manuela makes her request again – "más" and points towards the bananas. The mother replies "no, that's enough now" but asks her whether she would like another biscuit. Manuela accepts. At this point, Manuela produces the English equivalent "more", a choice available to her as both 'more' and 'más' are in her lexicon before this session at 1;7.12. She points to another biscuit, which her mother gives to her.

Further information about Manuela's language choice can be gleaned from looking again at Appendix 1. The second example, entry 31, shows that 'zapato' was produced for the first time at 1;3.28 but its equivalent 'shoe' does not appear until 1;4.19. Both the words 'zapato' and 'shoe' were used to refer to an old shoe in her toy box. Before 1;4.19, the choice of 'zapato' was lexically constrained by the absence of its

equivalent but after this age the equivalent 'shoe' was available. Entry 53 in Appendix 1 shows that the word 'juice' has no equivalent from age 1;4.29, when it first appears, to age 1;8.4 when its Spanish equivalent 'jugo' appears. On the other hand, the word in entry 54, 'oh-dear', did not have a Spanish equivalent as late as 1;10, the extent of the lexicon. In entry 68, we can see in the last column that the English equivalent of 'agua', 'water', appears about 2 months later than 'agua'. In entry 122, the word 'fruta' lacks an equivalent throughout the period covered by the lexicon up to 1;10. We know this because the last column is empty. Finally, in the last example shown, the choice of 'dos' (entry 135) is lexically constrained by the absence of the English equivalent 'two' for about 3 months.

If we now consider early two-word utterances, we find that language choice is lexically constrained in the same way as for the one-word utterances. A sample of two-word utterances may be found in Appendix 3. In utterance 4 in Appendix 3, "oh-dear book", 'oh-dear' has no equivalent at least up to the age of 1;10 as we have seen in entry 54 of Appendix 1. In fact, 'book' also has no equivalent at this point. Thus in saying "oh-dear book" the child had no lexical alternatives from which to choose. In utterance 8, we know that 'agua' had an equivalent at this age, 'water', whereas 'fruta' did not. Thus in saying "agua fruta" the child had a choice only in the first word. In utterance 5, "zapato gone", the child has no Spanish alternative to 'gone', but as we have seen, 'zapato' did have an English equivalent, 'shoe'. In utterance 11, "más banana", the child has no equivalent to 'banana', but does have an English equivalent to 'más'.

As the examples show, our two-word utterances may contain two English words, two Spanish words, or one of each. We might wish to consider whether the last type, which we shall call 'mixed' for convenience, could count as code-switching. The notion of 'code' presumably presupposes the availability of not only two lexicons but also two grammars. So we need to address the question of whether there is evidence of two

grammars in our two-word utterances. In fact, do they exhibit a syntactic structure at all? Selected examples of two-word utterances can be seen in Appendix 3. We would suggest that some of them seem to fit into a 'small clause' analysis (cf. Radford 1990) in that both words could be assigned to the lexical categories noun, verb, adjective or preposition:

- | | | |
|-----|------------|---------|
| 1. | pasa gone | [NP VP] |
| 8. | agua fruta | [NP NP] |
| 10. | hat off | [NP PP] |

But there are also utterances containing words which we would want to call 'acategorial' because they do not belong to lexical categories. These are found in utterances such as the following which are also shown in Appendix 3 with contextual information:

- | | | |
|-----|--------------|--------|
| 2. | más juice | [? NP] |
| 3. | juice más | [NP ?] |
| 4. | oh-dear book | [? NP] |
| 6. | more agua | [? NP] |
| 7. | no papá | [? NP] |
| 9. | fruta sí | [NP ?] |
| 13. | dos frog | [? NP] |

The acategorial words, shown by question marks, seem to function as predicates in predicate argument structures. For example, 'más' and 'more' are used as requests; 'oh-dear' indicates that something is amiss in relation to its argument; and 'no' indicates non-existence. The predicate-argument structures of acategorial words only have a primitive syntax based on juxtaposition. In fact, juxtaposition is a feature common to all our two-word utterances. However, there is certainly no evidence in the data for two grammatical systems, and thus no evidence for code-switching.

If code-switching depends on the existence of two grammatical systems, we should consider when two systems might be expected to emerge. It has been argued recently (e.g. Radford 1990) that early child grammars consist exclusively of lexical

categories, whereas functional categories such as Determiner, Complementizer, Inflection appear later, and it is the functional rather than lexical categories which are language-specific. Meisel (1993) in fact suggests that code-switching is only possible once functional categories emerge, in that they provide grammatical coherence and thus make it possible for constraints on code-switching to be observed. In the data to which he refers, such categories emerge from age 2;4 onwards. Our data also show that functional categories have begun to appear by age 2;4. So from multi-word utterances appearing in the diary between 2;4 and 2;6 we extracted those which showed a change of language choice during the utterance. The utterances which we examined are listed in Appendix 4. We should like to emphasize that the analysis which follows is very preliminary and speculative. We can see from the utterances in Appendix 4 that functional categories have already begun to emerge. For example, pronouns and articles come under the heading of the functional category of Determiner. In utterance 1 in Appendix 4, for example, we can see that the first person pronoun 'yo' appears twice, and its English equivalent 'I' appears in utterance 3. The definite article 'la' also appears in utterance 1. The indefinite article 'un' appears in 8. We have evidence for the functional category Complementizer in utterance 4 with the word 'cuando' ('when'), and for the category of Inflection wherever auxiliaries or tensed verbs appear. Utterance 1 includes third person singular present tense verbs 'pone' and 'va'. Utterance 7 includes a first person past tense verb, 'hice'. Utterance 8 contains a verb marked for second person singular present tense, 'tienes', and utterance 9 has a verb in the first person plural present tense, 'vamos'. Utterance 5 contains an auxiliary verb 'would'. We should point out that, although all utterances contain some evidence of functional categories, utterances 4, 5 and 6 are missing articles. Having established that functional categories had begun to emerge in these data, we then wanted to discover to what extent the data observed adult constraints on code-switching. In this preliminary analysis we chose to apply only the government constraint as formulated by Di Sciullo *et al.* (1986). The

government constraint involves the notions of government and of language indexing. We can define government roughly as the relationship between a head and its complement. According to the government constraint, the language index of the governee (or complement) must be the same as that of the governor (or head). This is illustrated in Appendix 5 with the phrase "eat bread". (Note we have used similar notation to that used by Di Sciullo *et al.*, even though it is somewhat dated.) Here 'bread' is governed by the head of the phrase 'eat', and so must be in the same language as 'eat'. However, if the governee is a branching node, as in the second example in Appendix 5, "eat the bread", where N' is the governee of the verb 'eat', its language index has to be matched only by the node branching from it which is highest in the tree. In this example the determiner is the highest element in the tree under NP. We applied the government constraint to our data and found that the utterances in Appendix 4 could be divided into the following three types:

- a) functional categories present and obeys government constraint
[Utterances 1, 3, 7, 8]
- b) functional categories present but violates government constraint
[Utterances 2, 9]
- c) functional categories not sufficiently present for the government constraint to be applied
[Utterances 4, 5, 6]

We can illustrate each of these types with examples from Appendix 4. Utterance 1 is an example of type a. The structure of the clause including a switch can be seen in Appendix 6. The determiner 'la' has the same language index (S for Spanish as opposed to E for English) as the NP from which it branches and is the highest element branching from NP. This means that its sister N' can be in a different language. Thus this utterance obeys the government constraint. Utterance 2 is an example of type b as shown in

Appendix 7. It is the language of the adverbial 'gently' which is responsible for the violation of the constraint. '[G]ently' is governed by the V 'poniendo' and should therefore have the same language index. One possible way for accounting for this violation is in terms of a lexical constraint. In this utterance, it seems likely that Manuela did not have a Spanish equivalent in her vocabulary, and so was forced to use 'gently'. In utterance 9, the verb 'watch' should be in Spanish according to the government constraint, but it is possible that the phrase "watch Playschool", which was normally heard in an English-speaking environment, is being used in an unanalysed way for lack of an equivalent phrase. Type c is exemplified by utterances 4, 5 and 6 which all lack articles preceding the change in language, although we may note that some other functional categories are present. In fact we can account for the change in language in all three utterances in terms of the lack of equivalents in the vocabulary for 'nursery school', 'iglesia' and 'Christmas carols'. Our preliminary conclusion on the basis of our multi-word data is that code-switching is beginning to emerge but is not yet fully adult-like.

CONCLUSION

So to conclude overall, we have shown that both language choice and code-switching are dependent on a developing bilingual's linguistic resources. Language choice cannot occur until the child has equivalent lexical items in the vocabulary between which she can choose, and code-switching cannot occur until the child has two alternative grammatical systems. In our data, language choice was possible in one-, two- and multi-word utterances, while adult-like code-switching was beginning to emerge only in those multi-word utterances where functional categories and thus alternative grammatical systems were available.

ACKNOWLEDGEMENT

Thanks are due to Bob Borsley for comments on an earlier version of this paper.

REFERENCES

- di Sciullo, A-M., Muysken, P. and Singh, R. (1986). Government and code-mixing. *Journal of Linguistics* 22, 1-24.
- Meisel, J. M. (1993). Grammatical constraints on code-switching in young bilinguals. Paper presented at the Sixth International Congress for the Study of Child Language, Trieste.
- Radford, A. (1990). *Syntactic Theory and the Acquisition of English Syntax*. Oxford: Blackwell.

Appendix 1. Sample entries from lexicon

ORDER	DATE	AGE	DATA BASE	CHILD UTT.	A.S.W. or meaning	LANG. of A.S.W.	VARIANT FORMS/ OBSERV.	EQUIV. CONTRAST
20	3-OCT-86	1;3.9	D	[ma]	más <more>	SPA	24-12-86 1;6.0 D [maç]	7-11-86 1;4.14 D[mə] more
31	22-OCT-86	1;3.28	D	[pa]	zapato <shoe>	SPA	JAN-87: [pato] zapato	12-11-86 1;4.19 D[udʒ] 13-11-86 1;4.20 v.2[ʃuz] shoes
40	7-NOV-86	1;4.14	D	[mə]	more	ENG	9-4-87 1;9.16/ v.7 [wʌnmə] one-more	no. 20 más
53	22-NOV-86	1;4.29	D	[dʒus]	juice	ENG	also [ɪʃ]	28-2-87 1;8.4 v.6[uwo] jugo
54	22-NOV-86	1;4.29	D	[əʊdə]	oh-dear	ENG	8-1-87 1;6.15. v.3 [odiə] some- times "oh" and "oh-no" (no. 79) is uttered meaning "oh-dear"	
68	3-DEC-86	1;5.9	D	[awa]	agua <water>	SPA		19-1-87 1;6.26 D [wɔda] water
122	27-JAN-87	1;7.3	D	[uta]	fruta <fruit>	SPA		
135	1-FEB-87	1;7.8	V.4	[dɔs]	dos <two>	SPA		30-4-87 1;10.6 v.8 [tu] two

Appendix 2. Transcription in CHILDES format

@Age of MAN: 1;7.12
 @Filename: 870205e.gra
 @Situation: At home in kitchen with MOT and GRA; MAN is in her highchair eating a banana.

*MAN: más [>].
 %pho: m a
 %eng: more
 %tim: 10:37
 %act: finishing mouthful of banana
 %gpx: stretches out hand with fingers apart
 %exp: wanting more banana
 *GRA: <Granny came on the train> [<>].
 *MOT: No [<].
 *MOT: Did you know about Granny coming on the train?
 *MOT: Did Granny come on the train?
 *MOT: Hm?
 *MAN: más.
 %pho: m a
 %eng: more
 %tim: 10:37
 %gpx: pointing towards bananas
 *MOT: no, that's enough now.
 *MOT: d'you want another biscuit?
 *MAN: yes [?].
 %pho: (j) a,:
 %gpx: reaching towards biscuit
 *MAN: more?
 %pho: m,\$ m O,:
 %gpx: pointing to another biscuit
 *MOT: all right
 %act: gives MAN another biscuit

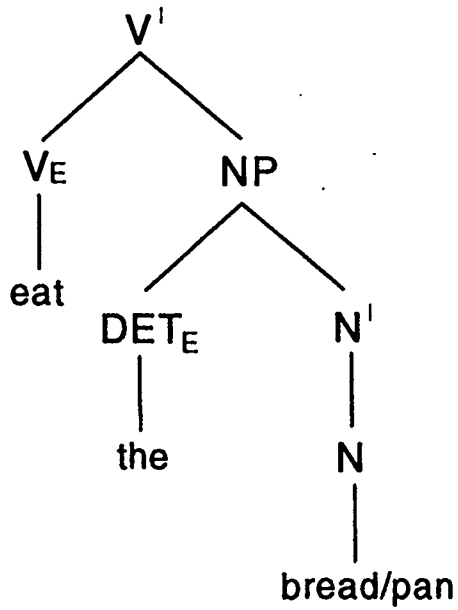
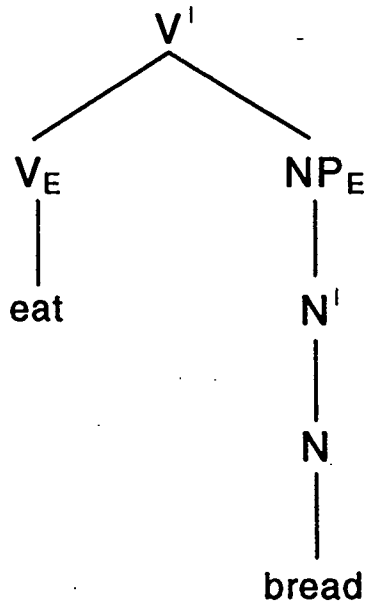
Appendix 3. Sample two-word utterances from Manuela at ages 1;7 and 1;8

No.	Age	Utterance	Gloss	Situation	Equivalents?
SPANISH LANGUAGE CONTEXT					
1.	1;7.0	<i>pasa gone</i>	raisin gone	she had been denied more raisins	---- ----
2.	1;7.1	<i>más juice</i>	more juice	requesting more juice	more ----
3.	1;7.1	<i>juice más</i>	juice more	requesting more juice	---- more
4.	1;7.2	<i>oh-dear book</i>		after dropping book	---- ----
5.	1;7.5	<i>zapato gone</i>	shoe gone	showing mother only one shoe	shoe ----
6.	1;7.6	<i>more agua</i>	more water	requesting more water	más water
7.	1;7.7	<i>no papá</i>	no daddy	father was absent	daddy
8.	1;8.0	<i>agua fruta</i>	water fruit	pretending that water in toy cups is pureed fruit	water ----
9.	1;8.15	<i>fruta sí</i>	fruit yes	wanting fruit; milk had been spilled on table	---- yes
ENGLISH LANGUAGE CONTEXT					
10.	1;7.17	<i>hat off</i>		wanting to take her hat off	---- ----
11.	1;7.26	<i>más banana</i>	more banana	wanting more banana	more ----
12.	1;7.26	<i>gone ball</i>		walking off with ball	----
13.	1;8.10	<i>dos frog</i>	two frog	pointing to drawings of frogs	---- sapo
14.	1;8.10	<i>dos snow</i>	two snow	noticing snowflakes falling	---- nieve
15.	1;8.23	<i>oh-dear table</i>		constructed table falling down	---- mesa

Appendix 4. Sample multi-word utterances used for code-switching analysis
 (bold = English; bold + italics = Spanish; < > = literal translation; " " = gloss)

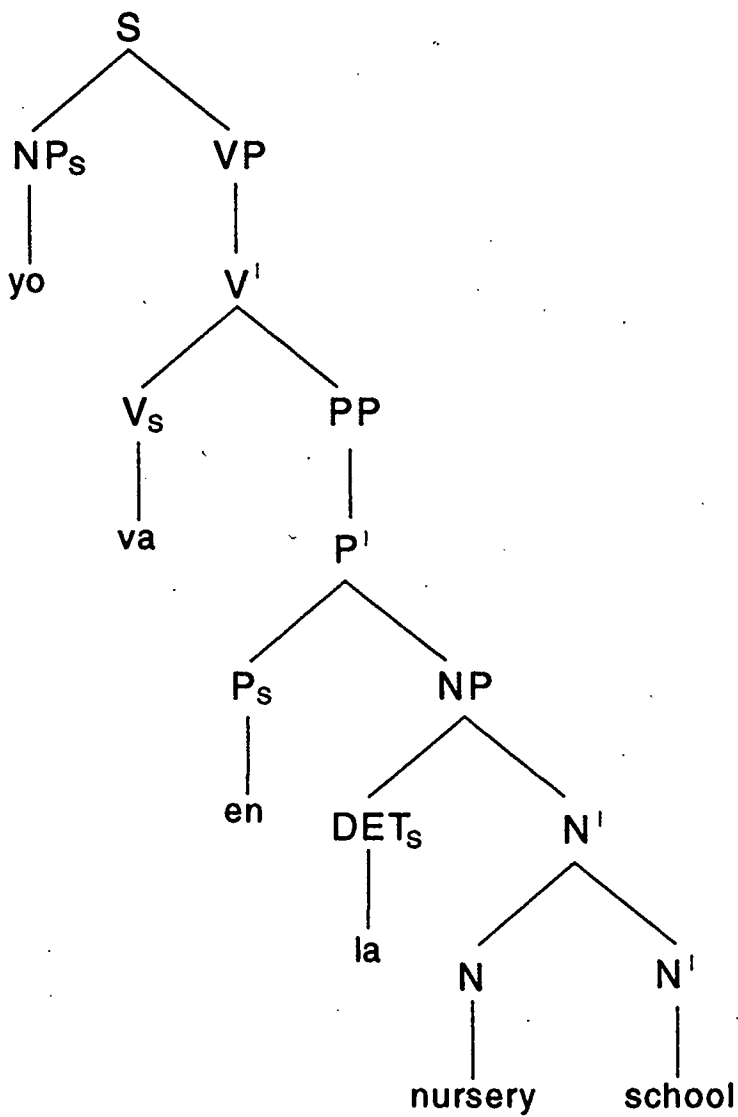
-
1. 2;4.16
***yo pone más grande yo va en la* nursery school**
 <I puts more big I go in the>
 "when I get bigger, I will go to the nursery school"
 2. 2;4.20
***yo está poniendo* gently**
 <I am putting>
 "I am putting them on gently"
 3. 2;5.2
I have two años
 <years>
 "I am two years old"
 4. 2;5.10
***cuando yo está muy muy grande, yo va* nursery school**
 <when I are very very big I go>
 "when I am very very big, I will go to nursery school"
 5. 2;5.12
would you like see candles in *iglesia*?
 <church>
 "would you like to see the candles in the church?"
 6. 2;5.13
yo se fue* Christmas carols *con papá
 <I went> <with daddy>
 "I went to the Christmas carols with daddy"
 7. 2;5.20
***yo hice pipí en la* Christmas carols**
 <I did wee in the>
 "I did a wee during the Christmas carols"
 8. 2;5.29
***otro día tienes un* bicycle**
 <other day you-have a>
 "the other day you had a bicycle"
 9. 2;6.0
***vamos* watch Playschool**
 <we-go>
 "let's watch Playschool"
-

Appendix 5. Tree diagrams for “eat bread” and “eat the bread/pan”



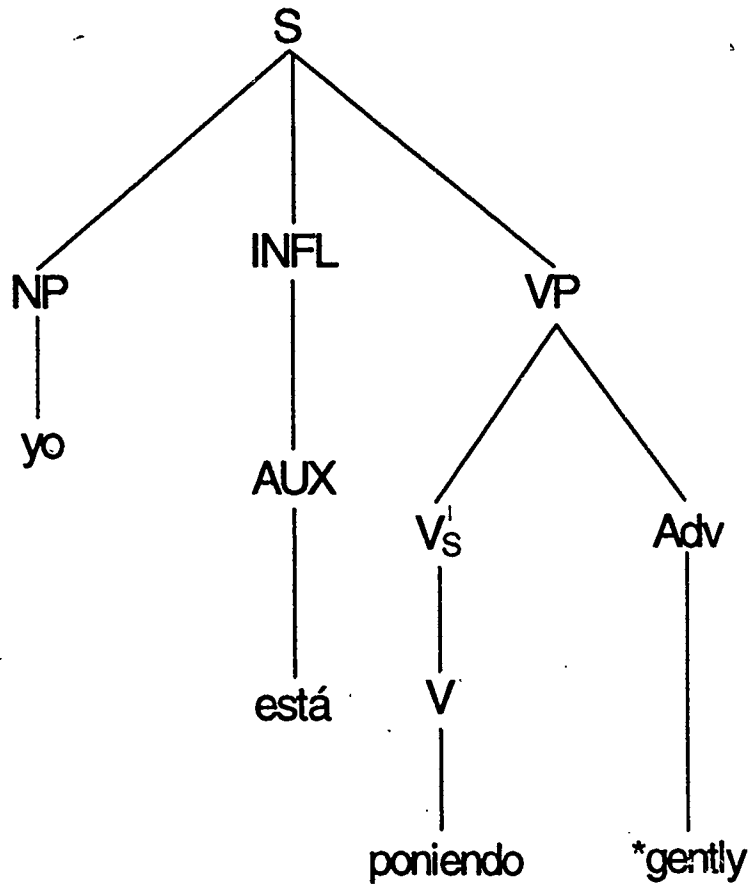
E: language index is English.

Appendix 6. Tree diagram for "yo va en la nursery school"



S: language index is Spanish.

Appendix 7. Tree diagram for "yo está poniendo *gently"



S: language index is Spanish.