One vs. two systems in early bilingual syntax: Two versions of the question*

MARGARET DEUCHAR
University of Wales, Bangor
SUZANNE QUAY
International Christian University, Tokyo

This paper identifies two versions of the question as to whether there is a single initial system in the syntax of developing bilinguals. Version 1 asks whether there are early mixed utterances, and if so, attributes this to a single initial system. Version 2 asks whether the utterances containing words from one of the child's languages exhibit the same syntax as the utterances containing words from the child's other language. We argue with reference to our own data (from an English-Spanish bilingual from ages 1;7 to 1;9) that Version 1 is not tenable because of the paucity of lexical resources when the child begins to produce two-word utterances. However, we argue that the early two-word utterances in our data do *seem to exhibit a single rudimentary syntax, based on a predicate-argument structure found in all utterance types, mixed and non-mixed. We then argue in relation to Version 2 of the question, that it can only be answered once the child's utterances can be identified as language-specific in the two languages, and that this is not possible before the emergence of morphological marking. This is illustrated by an analysis of our data from ages 1;8 to 2;3. We argue that language-specific morphology allows us to identify the language of the utterances in our data and to see evidence for the appearance of two differentiated morphosyntactic systems.*

Research on bilingual acquisition has been dominated by the question of whether the child has one or two systems from the very beginning of speech. This question has been raised in relation to phonology, to the lexicon and to syntax. In this paper we shall be concerned with syntax.

The question of whether there is a single initial system in the syntax of developing bilinguals has meant different things to different researchers. For some it has meant asking whether the child's early two-word utterances all consist of words taken from the same language, that is, are all utterances in language A or language B? The existence of mixed utterances (where one word comes from each language) has then been interpreted as indicating a single, "mixed" syntax. This is the position taken by Redlinger and Park (1980), for example. On the other hand, some investigators have considered the question of one vs. two initial syntactic systems to be a question about whether the utterances containing words from language A exhibit the same syntax as the utterances containing words from language B. These researchers (e.g. Volterra & Taeschner, 1978) often acknowledge the existence of mixed utterances but do not include them in their analysis.

In this paper we shall attempt to address both versions of the question about one vs. two initial systems. We shall argue with reference to our own data that the version which attributes mixed utterances to a single initial system (Version 1) is not tenable because these mixed utterances are often due to a paucity of lexical resources, which prevents the child from producing the word belonging to the appropriate language for the context. We shall argue that the early two-word utterances in our data *do* seem to exhibit a single rudimentary syntax, based on a predicate-argument structure found in all utterance types, mixed and non-mixed. We shall then go on to address the second version (Version 2) of the question, and argue that it can only be answered once the child's utterances can be identified as language-specific in the two languages, and that this is not possible before the emergence of morphological marking. This argument will also be illustrated in relation to our own data.

Version 1

Redlinger and Park (1980, p. 351) argued for a single initial system on the basis of finding "high mixing rates" in German-English and German-Spanish data

* An earlier version of this paper was presented at the First International Symposium on Bilingualism, University of Newcastle upon Tyne, April 9–12, 1997. We are grateful to Susanne Döpke, Aafke Hulk, Elizabeth Lanza, Elisabeth van der Linden and three anonymous referees for their helpful comments on earlier drafts. Any shortcomings, however, are our own responsibility.

Address for correspondence
Department of Linguistics, School of English and Linguistics, University of Wales, Bangor, Gwynedd LL57 2DG, UK
E-mail: M.Deuchar@bangor.ac.uk

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

from children around two years old. Several arguments against this conclusion were put forward by other researchers. For example, Meisel (1989) notes that there is considerable individual variation between the four subjects and considers that sociolinguistic factors may account for the differences. Genesee (1989) points out that studies such as this one and that by Volterra and Taeschner (1978) which argue for the "unitary-system hypothesis" did not collect their data in separate language contexts. Others, such as Bergman (1976), argue that the occurrence of mixed utterances do not necessarily provide evidence for a single initial system, since there may have been mixed utterances in the input. We shall argue, as indicated, that mixed utterances can be attributed to the limited lexical resources of a developing bilingual, and thus should not be used as evidence for a single initial system.

Version 2

Volterra and Taeschner (1978) acknowledged the existence of mixed utterances in their data, but their argument for a single initial syntactic system was based on analysing only non-mixed utterances. On the basis of multiword utterances consisting of combinations of either German or Italian utterances, they argued that the bilingual German/Italian children they studied (from ages 1;2 and 1;5) went through an initial stage where they applied the same syntactic rules to both of their languages. However, Meisel (1989) finds that their data do not support this claim, and argues, for example, that "the commonalities in the use of the two languages may be the result of transfer from the dominant language" (Meisel, 1989, p. 19). We would argue that it is unclear that the child was "speaking German," in the case of the German-only utterances, versus Italian in the case of the Italian-only utterances, given the possibility that the children's possibilities for lexical choice may have been limited.

Criticisms of the studies arguing for one single system did not always make it clear whether they were assuming Version 1 of the question, or Version 2. In practice, however, most recent researchers have taken up the question in its Version 2 form, and a number of studies have appeared arguing *for* the separate development of syntactic systems in the child's two languages. The data they draw on come mostly from children over two years of age, at a stage where the investigators could apparently distinguish between utterances in each of the two languages fairly clearly, and so conduct syntactic analyses for each set. Examples of such studies are Meisel (1989), De Houwer (1990), Meisel (1994), Gawlitzek-Maiwald and Tracy (1996), and Paradis and Genesee (1996). Meisel (1989) considered data from French–German bilinguals with an MLU of 1.75–2.25 and concluded that the data show language-specific word-order patterns in each of their languages. De Houwer (1990) studied the morphology and syntax of a child acquiring Dutch and English (focusing on an eight-month period when the child was between 2;7 and 3;4) and reported that her data were compatible with "the separate development hypothesis," according to which "a bilingual child's morphosyntactic development proceeds along separate, non-intersecting lines for each language" (De Houwer, 1990, p. 338). Meisel (1994) focused on the development of finiteness in French–German bilinguals, arguing that once the functional category IP had been acquired, French and German grammatical structures were different, the French structure being relatively adult-like while the German structure would have to be reanalysed to approximate adult grammar. Gawlitzek-Maiwald and Tracy (1996, p. 920) found in a case study of a German–English bilingual aged two that "there was structural evidence for the separation of English and German" from the beginning of data collection at age 2;1. At the same time, the child's mixed utterances could be accounted for in terms of the pooling of resources from both languages. Paradis and Genesee (1996, p. 2) assumed on the basis of previous studies that "by two years of age bilingual children have differentiated linguistic systems," but they sought to determine whether the grammars of French–English bilingual children develop independently between the ages of two and three. Following an analysis of the data from three children, in which they focused on finiteness, negation, and pronominal subjects, they concluded that their results "support the hypothesis that bilingual children acquire their languages autonomously, following the same patterns as monolinguals" (Paradis & Genesee, 1996, p. 22).

While studies such as those mentioned above represent a clear consensus that there is evidence for dual syntactic systems in bilingual children aged two and above, little progress has been made on the nature of syntactic systems in developing bilinguals *under* age two. In the case study presented here, however, we shall consider the very earliest two-word utterances, where it is not so easy to identify the language of each utterance as later on.

When does syntax begin?

There are various views on when syntax begins. Some consider that it can be found in holophrastic or single-word utterances but Atkinson (1985, p. 294),

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

reviewing arguments addressing the linguistic status of the one-word stage from a syntactic, semantic and phonological perspective, concludes that, for syntax, he does not believe that any case "can be made for the one-word child having access to a system of syntactic representation". Regarding two-word utterances, Meisel (1994, p. 93), working on German–French bilingual data, considers that "early two-word combinations do not exhibit syntactic properties". He suggests that the child may not have access to grammar at all at an early stage, and that hierarchical syntactic structures are not in evidence in "concatenations of predicates and nominal arguments" (Meisel, 1994, p. 95). However, Radford (1988), who views early two-word utterances as exemplifying small clauses, and therefore syntactic structure, takes a different position which will be further described below. In this paper we adopt one of the definitions of *syntax*, given by Crystal, as "the inter-relationships between elements of sentence structure, and of the rules governing the arrangement of sentences in sequences" (1980, p. 346). We argue that the earliest possible signs of syntax occur when two-word utterances are produced, on the grounds that there is at least juxtaposition of two words (as one of the possible relationships between words) in predicate-argument structures and sometimes hierarchical structure in some noun phrases containing two nouns. At this stage it can be argued that there is a rudimentary grammar, as we shall also explain in more detail below.

The Case Study

The subject of the case study is the first author's daughter, to be referred to hereafter as M. Data were collected as part of a funded project (ESRC ref. no. C00232393) (Deuchar, 1989). Some of the data have been deposited with CHILDES, the international child language archive which can be accessed at http://childes.psy.cmu.edu (see MacWhinney, 1995). M was exposed to English and Spanish from birth. She and her family were living in southern England at the time of the study; her mother was a native speaker of British English and her father of Latin American Spanish. Both spoke the other's language fluently. Spanish was the language used at home by both parents, whether addressing one another or the child. However, English was used when monolingual English-speaking visitors were present. The child was addressed in English outside the home, particularly on the university campus where she attended a crèche and also spent some time with her mother, who worked there. Thus the child's input was differentiated mainly according to location. It was estimated that about half of her total language input was in Spanish, the other half in English.

The data

The data came from two main sources: diary records of M kept from age six months by the mother, and audiovideo recordings made twice weekly from age 1;3. Diary records were from conversations between the mother and child, and included a note of the utterance in orthographic form, its phonetic transcription, and contextual information. These records were kept both in the English-speaking context outside the home and the Spanish-speaking context within the home, but were more extensive in the Spanish-speaking context, since the mother spent more time with her daughter at home than outside it. At first it was possible to keep an almost exhaustive list of the child's utterances, but this became more difficult later as her utterances became more frequent. This had happened by the time of the appearance of two-word utterances, and priority was then given to noting down new utterances. As for the audiovideo recordings, one was made each week of the child conversing with the maternal grandmother who spoke English, and the other with the father who spoke Spanish. The mother operated the camera, but also sometimes appeared in the recordings alongside the other adult: on those occasions she would speak English in the sessions with the grandmother, Spanish in the sessions with the father.

Both the diary and the audiovideo data were used to establish a cumulative lexicon of all words known to the child, and to collect the set of two-word utterances used in the analysis reported on below. All of the one-word and two-word utterances in the recordings used were transcribed by the authors. Two-word utterances consisted of two words sharing the same intonational contour, without a substantial pause between them. The two-word utterances analysed in this paper come mostly from the diary data (see Tables 1 and 2 below for specific information), because they occurred in larger numbers there, doubtless because the time spent collecting diary data was longer than that spent video-recording.

Analyses of our data: addressing Version 1

We shall present two analyses of our data in this section. The first will be of early mixed two-word utterances recorded between the ages of 1;7 and 1;9, and will be used to demonstrate that mixed utterances can be attributed largely to limited lexical resources rather than to an initial syntactic system.

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

We shall show that when lexical resources allow, the appropriate word for the language context is in general selected. This provides some evidence for lexical, but not syntactic differentiation. The second analysis will demonstrate that the child uses a similar rudimentary syntax for most two-word utterances recorded between the ages of 1;7 and 1;9, regardless of the language source of the words contained in them.

In what follows we shall use the term *mixed utterance* for convenience to refer to a two-word utterance consisting of one word from one language being acquired by the child, juxtaposed with a word from the other language. The term *mixed* is not intended to presuppose that the child is actually mixing languages or being confused or mistaken in any way.

Analysis of mixed utterances

The child began to produce two-word utterances around the age of 1;7, when she had an MLU of 1.06. At this time her vocabulary consisted of 126 words, of which 53 were unambiguously Spanish and 53 were unambiguously English. We shall focus on those two-word utterances which consisted of one word in English and one word in Spanish in order to evaluate the claim that mixed utterances indicate a single initial system. (We excluded all two-word utterances containing a word which was ambiguous between English and Spanish, like *train* or ***tren***, which was pronounced similarly in the two languages. Note that *banana* was counted as an English-source word, since the Spanish word for this item in the input was ***guineo***.) We shall investigate whether the child could have produced two words from the same language, and where she had a choice, how this may have been affected by the English or Spanish language context. The mixed (Spanish/English and English/Spanish) utterances are listed in Tables 1 and 2 below (N = 70). Those utterances recorded in a Spanish language context are listed in Table 1, while those recorded in an English language context are listed in Table 2. Although the utterances listed in Tables 1 and 2 are types for each day, there is only one utterance where more than one token that day was recorded (no. 15, ***more*** *pasa*, which is recorded twice in the diary in the same situation, where the child was requesting more raisins). In the final column of Tables 1 and 2, information is given as to whether the words used in the mixed utterances had translation equivalents. If the child had an "equivalent" for a word produced, there was a translation equivalent in the other language that was part of the child's productive vocabulary. A word was a "translation equivalent" of another if the two words came from different languages but were used by the child with the same meaning in similar situations.

We can see from Table 1 that seventeen of those 61 mixed utterances recorded in the Spanish context (nos. 1, 2, 10, 11, 14, 16, 21, 22, 25, 26, 31, 42, 43, 45, 47, 51, 60) were made up of words which had no equivalent in the child's lexicon at the stage at which they were produced. So in these utterances the child was using the only words available to her: it just happened that one word was English, the other Spanish. In utterances 21 and 22, for example, ***babero*** *off* ("bib off") and *off* ***babero*** ("off bib"), the child used the Spanish word ***babero*** in the Spanish context because the only word she had in her productive lexicon for "bib" just happened to be Spanish. For the same reason, she juxtaposed this word with the English word *off* because she knew only one word for the concept, and it happened to be English, so she produced it despite the Spanish context. There are other utterances in Table 1, however, where we can see that for one or both of the words used, the child did have an equivalent or equivalents in her vocabulary. In utterance 54, *juice* ***manzana*** ("juice apple"), for example, we see that she had no Spanish equivalent for the English word *juice*, but that she did have an English equivalent (*apple*) in her lexicon for the Spanish word ***manzana***. It is interesting to note that she "chose" to use the Spanish word, perhaps because of the Spanish language context. If we look at the right-hand column of Table 1, which indicates which words the child had in her lexicon, but did not use in specific utterances in the Spanish context, we see that the majority of the words in that list are English (looking at types rather than tokens). This suggests that where she had a pair of equivalents in English and Spanish, she tended to choose the Spanish item in the Spanish language context. This generalization applies to the following pairs of equivalents:

taza, *cup*
zapato, *shoe*
agua, *water*
papá, *daddy*
manzana, *apple*
sí, *yes*
crema, *cream*
cuchara, *spoon*.

Exceptions to this generalization are the following pairs:

piso, *floor*
bola, *ball*
mamá, *mummy*
más, *more*

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

Table 1. *All mixed two-word utterances (types) occurring in the Spanish context between the ages of 1;7 and 1;9 (all utterances marked with an asterisk are from the audiovideo data; all others are from the diary data)*

No.	Age	Utterance	Gloss	Equivalents?
1	1;7.0	***pasa*** *gone*	raisin gone	---,---
2	1;7.0	*gone* ***pasa***	gone raisin	---,---
3	1;7.1	***más*** *juice*	more juice	*more*,---
4	1;7.1	*juice* ***más***	juice more	---,*more*
5	1;7.2	***mamá*** *hat*	mummy hat	*mummy*,---
6	1;7.3	***más*** *juice*	more juice	*more*,---
7	1;7.4	*gone* ***taza***	gone cup	---,*cup*
8	1;7.4	***mamá*** *down*	mummy down	*mummy*,*silla*
9	1;7.5	***zapato*** *gone*	shoe gone	*shoe*,---
10	1;7.5	***tapa*** *gone*	lid gone	---,---
11	1;7.5	*gone* ***tapa***	gone lid	---,---
12	1;7.6	*more* ***agua***	more water	*más*,*water*
13	1;7.7	*mummy* ***silla***	mummy chair	*mamá*,---
14	1;7.7	***pasa*** *gone*	raisin gone	---,---
15	1;7.7	*more* ***pasa***	more raisin	*más*,---
16	1;7.7	*sit-down* ***galleta***	sit-down biscuit	---,---
17	1;7.10	***mamá*** *gone*	mummy gone	*mummy*,---
18	1;7.14	***papá*** *book*	daddy book	*daddy*,---
19	1;7.14	***mamá*** *book*	mummy book	*mummy*,---
20	1;7.15	*more* ***agua***	more water	*más*,*water*
21	1;7.15	***babero*** *off*	bib off	---,---
22	1;7.15	*off* ***babero***	off bib	---,---
23	1;7.16	*more* ***manzana***	more apple	*más*,*apple*
24	1;7.16	*banana* ***sí***	banana yes	---,*yes*
25	1;7.16	***media*** *off*	sock off	---,---
26	1;7.16	*off* ***media***	off sock	---,---
27	1;7.19	***mamá*** *down*	mummy down	*mummy*,*silla*
28	1;7.22	*more* ***pasas***	more raisins	*más*,---
29	1;7.22	*more* ***pasa***	more raisin	*más*,---
30	1;7.23	*more* ***crema***	more cream	*más*,---
31	1;7.23	***ropa*** *off*	clothes off	---,---
32	1;7.24	***mamá*** *clock*	mummy clock	*mummy*,---
33	1;7.24	*banana* ***más***	banana more	---,*more*
34	1;7.25	*more* ***crema***	more cream	*más*,---
35	1;7.25	***crema*** *more*	cream more	---,*más*
36	1;7.27	*more* ***fruta****	more fruit	*más*,---
37	1;7.28	*more* ***leche***	more milk	*más*,---
38	1;7.28	***leche*** *more*	milk more	---,*más*
39	1;7.28	*oh-dear* ***mamá***	oh-dear mummy	---,*mummy*
40	1:7.29	***leche*** *floor*	milk floor	---,*piso*
41	1;7.29	***sí*** *woof*	yes dog	*yes*,---
42	1;7.29	*oh-dear* ***cama****	oh-dear bed	---,---
43	1;7.30	*gone* ***pan***	gone bread	---,---
44	1;7.30	*more* ***pan***	more bread	*más*,---
45	1;8.0	***dos*** *clock*	two clock	---,---
46	1;8.2	*more* ***manzana***	more apple	*más*,*apple*
47	1;8.2	*off* ***ropa***	off clothes	---,---
48	1;8.2	*more* ***pasa***	more raisin	*más*,---
49	1;8.2	***pasa*** *more*	raisin more	---,*más*
50	1;8.2	***mamá*** *book*	mummy book	*mummy*,---
51	1;8.4	*hat* ***dos***	hat two	---,---
52	1;8.6	*more* ***crema***	more cream	*más*,*cream*
53	1;8.6	***galleta*** *more*	biscuit more	---,*más*
54	1;8.7	*juice* ***manzana***	juice apple	---,*apple*
55	1;8.11	***pan*** *more*	bread more	---,*más*
56	1;8.11	*more* ***pan***	more bread	*más*,---
57	1;8.12	***dos*** *ball**	two ball	---,*bola*
58	1;8.13	***cuchara*** *floor*	spoon floor	*spoon*,*piso*
59	1;8.13	*mummy* ***ropa****	mummy clothes	*mamá*,---
60	1;8.15	*oh-dear* ***dos***	oh-dear two	---,---
61	1;8.22	*ball* ***dos***	ball two	*bola*,---

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

Table 2. *All mixed two-word utterances occurring in the English context between the ages of 1;7 and 1;9 (all utterances marked with an asterisk are from the audiovideo data; all others are from the diary data)*

No.	Age	Utterance	Gloss	Equivalents?
1	1;7.26	***más*** *banana**	more banana	*more*,---
2	1;7.26	*more* ***galleta****	more biscuit	*más*,---
3	1;8.10	***dos*** *frog*	two frog	---,*sapo*
4	1;8.10	***dos*** *snow*	two snow	---,*nieve*
5	1;8.16	*daddy* ***dos****	daddy two	*papá*,---
6	1;8.16	***más*** *paper**	more paper	*more*,---
7	1;8.23	*table* ***sí****	table yes	*mesa*, *yes*
8	1;8.23	***otros*** *tables**	other tables	*other*,*mesa*
9	1;8.24	***dos*** *clock*	two clock	---,---

The occurrence of *floor* in utterances 40 and 58 in Table 1 rather than the expected Spanish ***piso*** may be explained by the fact that whereas the English word *floor* had entered the lexicon at age 1;7.4, its equivalent ***piso*** had not entered until age 1;7.29. So for the child, ***piso*** may not have been so well-established in the lexicon as *floor* at age 1;7.29 when utterance 40 is produced, nor by age 1;8.13 when utterance 58 is produced. The occurrence of *ball* ([bɔ]) in utterance 57 at age 1;8.12 and utterance 61 at age 1;8.22 may be explained by the fact that whereas a word that was phonetically ambiguous between *ball* and ***bola*** had been established at age 1;3.9, a word recognizable as ***bola*** as opposed to *ball* had only appeared recently, at age 1;7.29. As for ***mamá***/*mummy,* there are ten examples in Table 1, of which eight are ***mamá*** and so match the Spanish context.

The clearest exception to the generalization that the child uses words which match the language context, however, is the pair: ***más***, *more*. In Table 1 we can see that ***más*** occurs in utterances 3, 4, 6 and 33, but *more*, which is the "wrong" word for the language context, occurs in many utterances: 12, 15, 20, 23, 28, 29, 30, 34, 35, 36, 37, 38, 44, 46, 48, 49, 52, 53, 55 and 56. It seems as if ***más*** and *more* are being used somewhat indiscriminately, despite the language context. Below we refer to such items as "acategorial" predicates. It may be that, unlike words belonging to lexical categories, these predicates have a non-language-specific status for the child.

We now turn to discussion of the mixed utterances produced by M in the English language context. These are given in Table 2. As we can see from the right-hand column of Table 2, the presence of the Spanish words in most of the mixed utterances can be accounted for by the fact that there was no English equivalent in the child's lexicon. This is true of the Spanish words ***galleta*** ("biscuit"), ***dos*** ("two") and ***sí*** ("yes"). The exception to this pattern is ***más***, which has already been discussed above. The words which do appear in the right-hand column of Table 2 are mainly Spanish (with the exception of *more*). We can thus make a generalization complementary to that made in relation to Table 1, that where the child had a pair of equivalents in English and Spanish, she tended to choose the English item in the English language context. The relevant pairs of equivalents are the following:

sapo, *frog*
nieve, *snow*
papá, *daddy*
mesa, *table*

As before, the exception to this pattern is the pair ***más***/*more*, since both appear in the English language context just as they did in the Spanish language context.

Overall, then, we have seen that mixed utterances in both the English and the Spanish context can mostly be attributed to the lack of a contextually appropriate lexical item in the child's vocabulary. (This generalization is supported by a quantitative analysis performed on two-word utterances in the audiovideo data only, and reported in Deuchar & Quay, to appear.) What the child seemed to be doing was selecting a contextually appropriate item where she could, and where it was not available, using what lexical resources she had available. Thus the existence of mixed utterances as such cannot be taken as evidence for a single initial syntactic system. The nature of the combinations in early two-word utterances, however, can be considered in both mixed and non-mixed utterances.

The syntax of early two-word utterances

In this section we shall attempt to describe the syntax of all two-word utterances used by the child, regardless of the source language of the words contained in the utterances. (The analysis is based on a total of just under 300 two-word utterances recorded in audiovideo and diary form, and listed in Appendix III of Deuchar & Quay, in preparation.) We start by using the framework proposed by Radford

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

(1988,1990), which was designed to account for two-word utterances in early child English. Radford argued that early two-word utterances could be analysed as "small clauses" made up of a subject and a predicate, or an NP and an XP, where XP can be NP, VP, AP or PP (these four being identified as "lexical categories"). This allows for early two-word utterances to be assigned the following possible structures: [NP NP], [NP VP], [NP AP] and [NP PP]. If we try to apply Radford's scheme to our data, the following examples of utterances between the ages of 1;7 and 1;9 appear to conform (the predicates are underlined):

hat off	[NP PP]	
tummy gone	[NP VP]	
woof car	[NP NP]	("dog car")
mamá ***bajar***	[NP VP]	("mummy down")
cuchara *floor*	[NP NP]	("spoon floor")
zapato *gone*	[NP VP]	("shoe gone")
media *off*	[NP PP]	("sock off")

In all of the above utterances both words can be assigned lexical categories. (We may note that *off* would be categorized as a preposition in Radford's schema, although Quirk, Greenbaum, Leech & Svartvik (1980, p. 1151) would classify it as a "prepositional adverb". In some ways its behaviour is more akin to that of the acategorial predicates to be discussed below than to other lexical categories.) However, we also found examples in our data which do not conform to Radford's schema. Some clauses have acategorial predicates or words which cannot be assigned a lexical category (NP, VP, AP or PP). Acategorial predicates are indicated with an X in the examples below:

more juice	[X NP]	(wanting more juice)
oh-dear book	[X NP]	(after dropping a book)
más ***pasa***	[X NP]	(wanting more raisins)
fruta sí	[NP X]	(liking fruit)
no spoon	[X NP]	(not wanting spoon in egg)
more ***galleta***	[X NP]	(wanting another biscuit)
more ***leche***	[X NP]	(requesting more milk)
leche *more*	[NP X]	(requesting more milk)

The Xs in the above correspond to words which appear to function as predicates in a predicate-argument structure. So *more* seems to mean something like "I want". *Oh-dear* indicates something having gone wrong, ***sí*** indicates approval and *no* here indicates not wanting something. (In other utterances *no* is also used to indicate non-existence.) Word order at this point is quite variable as in *more* ***leche*** ("more milk") and ***leche*** *more* ("milk more"), the latter order being different from that in both English and Spanish. Variation in order did not seem to correspond to a variation in meaning of any kind, as far as one can tell from the situation.

Radford (1990, pp. 70–1) finds *more* in his data juxtaposed with verbs, as in the examples *more read*, *more sing* and *more walk,* and suggests that *more* may be analysed as a verbal adjunct. However, in our data it appears in the early utterances juxtaposed with nouns rather than with verbs. Interestingly, Radford suggests that *more* might alternatively be analysed as a verb like *want.* This suggestion is presumably made on semantic grounds, and seems compatible with our analysis of *more* as a predicate. However, we would not classify *more* as a verb because we do not expect it to develop verb morphology, and for that reason consider it to be acategorial rather than belonging to a lexical category. Radford's approach to *no* (another acategorial predicate in our analysis) is similar in that he suggests analysing it either as a verbal adjunct or as a verb.

The examples of *no* in his data show it as appearing before verbs (as in *Kathryn no fix this*), but in longer utterances than our two-word ones where *no* appears juxtaposed with nouns. Our argument against *no* as a verbal adjunct or verb in the earliest two-word utterances would be the same as that against *more* as a verbal adjunct or verb. (More and no are of course quantifiers in adult English, but we assume that they are reanalysed as such once the child ceases to use them as acategorial predicates and has developed functional categories.) The differences between Radford's analyses and our own may possibly be due to the fact that his data do not necessarily include the very first two-word utterances produced by the children observed.

Thus early-two word utterances in our data can be described as having a rudimentary syntax consisting of the juxtaposition of two words, an argument and a predicate. Although an argument-predicate analysis applies to the majority of our early two-word utterances, there are also some utterances consisting of just a noun phrase made up of two nouns, such as for example, ***fruta lata*** ("fruit tin"), a phrase used by the child to refer to tinned fruit purée. While one of the nouns may in some utterances be considered to be a predicate as in the example ***cuchara*** *floor* ("spoon floor") cited earlier (utterance 58 in Table 1), where *floor* can be considered to be a locative, this is not always the case. In an utterance like ***fruta lata***, where one noun modifies the other, this noun phrase might best be treated as an argument without a predicate, or at any rate be considered to be equivalent in function to a one-word utterance consisting of a noun.

The argument-predicate analysis outlined above applies to early two-word utterances of all types: those made up of two Spanish words, of two English

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

words, and of one word from each language. Assuming that the earliest signs of syntax appear when there is word juxtaposition, we can say that these utterances show a single rudimentary syntax consisting of the juxtaposition of two words, an argument and a predicate. However, this is not the same as saying that the same syntactic system applies to "English" and "Spanish" utterances. First we must identify language-specific utterances.

Analysis of our data: addressing Version 2

In this section we shall report on our third analysis, of the emergence of morphological marking in multiword utterances from ages 1;8 to 2;3. We shall illustrate how language-specific utterances can be identified as morphological marking appears. This process of identification is a prerequisite for considering whether the syntax of Spanish and the syntax of English utterances is the same or different. In the case of the early two-word utterances, we did not consider it possible to identify the "language" of the utterance, given that lexical choices were limited. In these utterances there was also no evidence of language-specific co-occurrence restrictions. However, we suggest that this will appear in the form of language-specific morphology. As the child gets beyond the earliest two-word utterances, we can anticipate the appearance of morphological marking (or category-appropriate inflections) on nouns, verbs and adjectives. If English inflections are attached to English stems, and Spanish inflections to Spanish stems, then we can identify language-specific morphology. Only when this has been done can we investigate syntactic differentiation.

The criterion of word order is not helpful in our case, since not only is word order variable, as we have seen, but also, because English and Spanish are both SVO languages, the adult languages are fairly similar in word order. It is interesting to note that Köppe (1996) does find word order differences in the bilingual acquisition of French and German from about the age of 1;10; though the examples of utterances given do not seem to be from among the very earliest two-word utterances. However, the criterion of word order could clearly be used alongside that of morphological marking in studies of the bilingual acquisition of two languages with different basic word orders.

We can of course expect morphological marking to emerge gradually, and to be variable at the beginning. To identify an instance of morphological marking, we also need an instance of the "bare" form in our data. So for example, if *cows* were to appear only in this form, with an apparent plural marker, but not as the singular form *cow*, identification of the plural marker for this word could not be claimed.

The emergence of morphological marking from 1;8 to 2;3

In our data, the following combinations of stems and inflections are possible:

1) English stems with English inflections;
2) English stems with Spanish inflections;
3) English stems with Spanish *and* English inflections;
4) Spanish stems with Spanish inflections;
5) Spanish stems with English inflections;
6) Spanish stems with Spanish *and* English inflections.

If we find 1 and 4, we can establish that we have language-specific morphology and if the utterances are also non-mixed, we can then go on to consider the syntax of English and Spanish utterances. Patterns 1 and 4 are in fact what we find in our data, as we shall demonstrate below. The implications of the other patterns, if they had been found, will be discussed later.

Table 3 lists examples illustrating the gradual appearance of language-specific morphology from ages 1;8 to 2;3. At age 1;8, plural marking has begun to appear in utterance 1, ***dos patos*** ("two duck [plural]") and utterance 4, ***dos niños*** ("two child [plural]"). However, this is not yet uniformly produced when required, as utterances 2 and 3 were also found in the data: ***dos pato*** ("two duck") and ***dos niño*** ("two child"). Moreover, since plural marking is phonetically rather similar in English and Spanish, this cannot really tell us anything about the language-specificity (or otherwise) of morphological marking. The same argument applies to utterance 5, ***otros*** *tables* ("other[plural] tables"), which anyway as a mixed utterance cannot be used to establish language-specific morphology, as we suggested in the previous paragraph.

At age 1;9, the situation regarding plurals is similar except that plural marking is now appearing with numerals as in the following examples from Table 3:

6) *two tables*
7) *pictures* ***dos*** ("pictures two")
8) *two pictures*
9) ***dos bolas*** ("two ball[plural]")
10) ***seis gatos*** ("six cat[plural]")
12) *two arms*
16) ***dos caballos*** ("two horse[plural]")

There is also one example (no. 21 in Table 3) of the use of the singular numeral ***uno caballo*** ("one

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

Table 3. *Examples illustrating the gradual appearance of language-specific morphology*

Occurrence	Age	Utterance	Gloss
1	1:8.4	***dos patos***	two duck[plural]
2	1;8.4	***dos pato***	two duck
3	1;8.8	***dos niño***	two child
4	1;8.13	***dos niños***	two child[plural]
5	1:8.23	***otros*** *tables*	other[plural] tables
6	1;9.2	*two tables*	
7	1;9.2	*pictures* ***dos***	pictures two
8	1;9.2	*two pictures*	
9	1;9.5	***dos bolas***	two ball[plural]
10	1;9.5	***seis gatos***	six cat[plural]
11	1;9.6	*oh-dear* ***zapatos***	oh-dear shoe[plural]
12	1;9.7	*two arms*	
13	1;9.7	***dos*** *arm*	two arm
14	1;9.10	***no quiero***	no want[first-person-singular]
15	1;9.21	***mamá vamos***	mummy go[first-person-plural]
16	1;9.22	***dos caballos***	two horse[plural]
17	1;9.22	*off* ***zapato***	off shoe
18	1;9.25	M[child's name] ***cargar***	M carry[infinitive]
19	1;9.25	***más caballo***	more horse
20	1;9.25	***caballo más***	horse more
21	1;9.27	***uno caballo***	one-masculine horse
22	1;10.1	M[child's name] ***toco***	M knock[first-person-singular]
23	1;10.2	*grandpa come*	
24	1;10.10	*grandpa doing*	
25	1;10.10	*granny doing*	
26	1;10.10	M[child's name] *do-it*	
27	1;10.11	*mummy working*	
28	1;10.23	*Peter coming*	
29	1;10.24	***mamá come***	mummy eat[third-person-singular]
30	1;10.25	***zapato pone***	shoe put-on[third-person-singular]
31	1;10.28	***papá come***	daddy eat[third-person-singular]
32	1;10.28	***panda come fruta***	panda eat[third-person-singular] fruit
33	1;10.29	***acabó gato***	finish[past-third-person-singular] cat
34	1;11.3	M[child's name] ***camina***	M walk[third-person-singular]
35	1;11.3	M[child's name] *walk*	
36	1;11.5	M[child's name] *read it*	
37	1;11.7	M[child's name]'s *book*	
38	1;11.7	***aquí pasa***	here raisin
39	1;11.7	*off* ***zapato***	off shoe
40	1;11.12	*mummy reading book*	
41	1;11.12	***zapato rojo***	shoe red[masculine]
42	1;11.25	*daddy's key*	
43	1;11.25	M[child's name]'s *bath*	
44	1;11.25	M[child's name] ***sienta***	M sit[third-person-singular]
45	1;11.25	***mamá cansada***	mummy tired[feminine]
46	1;11.29	***muchas cosas***	much[feminine-plural] thing[plural]
47	1;11.29	***mamá busca niña***	mummy look-for[third-person-singular] girl
48	2;0.26	***una vela***	a[feminine] candle
49	2;0.26	***un papel***	a[masculine] paper
50	2;0.26	***en la baño***	in the[feminine] bath
51	2;0.26	***qué es eso?***	what is[third-person-singular] that?
52	2;0.26	***donde está mi libro?***	where is[third-person-singular] my book?
53	2;1.2	*find the other one*	
54	2;1.2	*that's* M[child's name]'s *bath*	
55	2;1.2	*that is water shower*	
56	2;1.29	*no want lie down*	
57	2;2.5	***perro no quiere***	dog no want
58	2;2.17	*more una torre arriba*	more a[feminine] tower up

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

[masculine] horse''). Again, however, such markings are not uniformly produced when required as both example 12, *two arms,* and example 13, ***dos*** *arm,* were uttered on the same day at 1;9.7. The production of ***no quiero*** (''no want[first-person-singular]'') (utterance 14) and ***mamá vamos*** (''mummy go[first-person-plural]'') (utterance 15) shows the possibility that language-specific verbal morphology is appearing, but the status of ***no quiero*** and ***mamá vamos*** is unclear as there are no other instances of these verbs recorded before this date. At 1;9.25, the use of the infinitive form of the verb indicates again the non-marking of morphology on the verb in utterance 18: M[child's name] ***cargar*** (''M carry [infinitive]'').

Note that at 1;9 we still find utterances of a similar type to those found among the earliest two-word utterances, such as the following, which consist of an acategorial predicate (underlined) and an argument:

11) *oh-dear* ***zapatos***	(''oh-dear shoe[plural]'')	[X NP]
19) ***más caballo***	(''more horse'')	[X NP]
20) ***caballo más***	(''horse more'')	[NP X]

Utterances of this kind, however, are less numerous than between ages 1;7 and 1;9, but it is normal in child language for older structures to be only gradually replaced by newer structures.

At age 1;10, more examples can be found of morphological marking beginning to appear on verbs in both languages. The English ''-ing'' suffix is found, for instance, at 1;10.23 in example 28, *Peter coming*, in contrast with *grandpa come* in example 23 at 1;10.2. We may note that *coming* was in fact the earliest form of this word, recorded initially at age 1;7.10. Utterance 27, *mummy working,* is produced at 1;10.11, but no strong conclusions about the productive nature of this marking can be reached because there is no previously recorded occurrence of ''work'' in its bare form. The same argument applies to *doing* used in utterance 24, *grandpa doing,* and in utterance 25, *granny doing,* as we do not have a previously recorded occurrence of bare ''do''. However, *do-it* is produced on the same day in the same context in utterance 26: M[child's name] *do-it*. In spite of our uncertainty about the productive nature of the above morphological markings, the fact that several verbs with ''-ing'' suffixes are appearing this month suggests that this English morphological marker is beginning to emerge. More importantly, with regard to language-specific morphology, ''-ing'' does not appear as a suffix to any Spanish verbs in our data. At this point we can see the emergence of language-specific co-occurrence restrictions, such that morphological markers match the language of the stems to which they are attached and, in most cases, the language of the other word(s) in the utterance.

The Spanish verbs which *do* appear in our data seem to have appropriate Spanish morphological marking but it is not yet clear that verb morphology is productive since we do not have alternative forms of the verbs which occur, for example, in the following utterances from Table 3 at 1;10:

22) M[child's name] ***toco***	(''M knock[first-person-singular]'')
29) ***mamá come***	(''mummy eat[third-person-singular]'')
30) ***zapato pone***	(''shoe put-on[third-person-singular]'')
32) ***papá come***	(''daddy eat[third-person-singular]'')
32) ***panda come fruta***	(''panda eat[third-person-singular] fruit'')
33) ***acabó gato***	(''finish[past-third-person-singular] cat'')

At age 1;11, we find a contrast between *read* and *reading* in utterance 36, M[child's name] *read it,* and in utterance 40, *mummy reading book,* but English verbs do not yet seem to have third person singular marking. As at age 1;10, there are some examples which show appropriate morphological marking for Spanish but there is no evidence of alternative forms in the examples below:

34) M[child's name] ***camina***	(''M walk[third-person-singular]'')
44) M[child's name] ***sienta***	(''M sit[third-person-singular]'')
47) ***mamá busca niña***	(''mummy look-for[third-person-singular] girl'')

Although there are no examples of third-person marking on English verbs, we do find the first examples at 1;11 of the possessive marking on nouns. The examples are:

37) M[child's name]'s *book*
42) *daddy's key*
43) M[child's name]'s *bath*

No such possessive marking appears on Spanish nouns recorded at 1;11, which suggests that this marking is specific to English words but a Spanish-specific process which we do find this month is adjective agreement:

41) ***zapato rojo***	(''shoe [masculine] red-[masculine]'')
45) ***mamá cansada***	(''mummy [feminine] tired-[feminine]'')
46) ***muchas cosas***	(''much[feminine-plural] thing[plural feminine]'')

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

In the utterances above, the plural marking on the adjective as well as on the noun occurs only in Spanish; plural marking of English adjectives is not found in any of the child's utterances.

By the time the child is aged two we have clear evidence of language-specific morphology. In addition, after the age of 1;10 we have noted only two examples with lexical items from the two languages: 39 (*off* ***zapato***) and 58 (*more* ***una torre arriba***). Both of these are similar to the predicate-argument constructions found predominantly between the ages of 1;7 and 1;9, but as mentioned earlier, it is common for older constructions to survive after newer ones have emerged in child language. Overall, however, utterances produced after the age of 1;10 are lexically and morphologically language-specific. We have thus identified a set of English and a set of Spanish utterances, and can go on to consider the evidence for language-specific syntax.

As indicated near the beginning of this paper, under the heading "When does syntax begin?" we use Crystal's (1980, p. 346) definition of syntax as "the inter-relationships between elements of sentence structure, and of the rules governing the arrangement of sentences in sequences". This definition is equivalent to what others call *morphosyntax,* defined for example by Peters (1995, p. 462) as "the totality of those devices which can be used to express grammatical relations". As we have already seen, the child in our case-study exhibits language-specific morphology by age 1;11, and we also have examples of appropriate word order in utterances 41 (***zapato rojo***) and 45 (***mamá cansada***) considered above, where the adjective follows the noun it modifies as in adult Spanish, rather than preceding it as it would in English.

If we look now at utterances which appear from age two onwards, we can see that almost all can be clearly identified as English or Spanish, and there are many clear instances of language-specific syntax. For example, the child appropriately produces the feminine indefinite article in Spanish in utterance 48, ***una vela*** ("a[feminine] candle"), and the masculine indefinite article in utterance 49, ***un papel*** ("a[masculine] paper"), and the definite article "la" in utterance 50, ***en la baño*** ("in the[feminine] bath [masculine]"), at the same age, albeit with the feminine instead of the masculine definite article. The English definite article "the" is also used at 2;1.2 in utterance 53, *find the other one*.

In English, the contracted and uncontracted versions of the verb "to be" can be found at age 2;1.2 in utterance 54, *that*'s M[child's name]'s *bath,* and in utterance 55, *that is water shower*. In Spanish, both verbs meaning "to be" – ***estar*** and ***ser*** – appear at 2;0.26 in utterance 51, ***qué es eso?*** ("what is[third-person-singular] that?"), and in utterance 52, ***donde está mi libro?*** ("where is[third-person-singular] my book?"). Contractions of the verb translated as "to be" do not occur in Spanish and are also not found in the child's data. This shows that the use of the verb *to be* in English and its equivalents in Spanish follows language-specific processes.

Thus we have seen that, in our data, utterances can be classified as either English or Spanish by the age of about age 1;11, on the basis of language-specific morphology. We were then able to go on and identify language-specific syntax, or two systems, in the utterances we analysed from ages 1;11 to 2;3.

However, what if our data had been different, and the morphology had turned out not necessarily to be language specific? Could we have addressed the question of one or two systems in the syntax? We shall consider this question by referring to other case studies.

Klausen, Subritzky and Hayashi (1993) reported on the cases of two Danish–English developing bilinguals, Natasha and Gitte. Recordings began when the children were under one year old, and ended when they were about two years old. Gitte was found to use both Danish and English plural suffixes interchangeably on stems from both languages, leading the authors to suggest "that her inflectional system for plural marking is a compound system which consists of suffixes derived from both target languages" (Klausen et al. 1993, p. 77*)*. For those utterances which show "mixed" inflections, it would not be possible to identify the language of the utterance and so would not allow one to raise the question of one vs. two systems *for those utterances*. However, they may make up only a minority of the utterances in the data. Their exact extent is difficult to determine from the article, since only three examples of morphological "mixing" are given.

The second case reported on by Klausen et al. is that of Natasha, who was found to use Danish inflections on English stems as well as English inflections on English stems and Danish inflections on Danish stems, but not English inflections on Danish stems. Klausen et al. argue that, unlike Gitte, Natasha did not have a "compound syntax system" because the Danish and English inflections were not used in an interchangeable way. Again, we do not have quantitative information on the proportion of utterances with "mixed" inflections in the data, but it would certainly have been possible to identify the language of those utterances with nonmixed inflections. As for the mixed utterances, one would not want to argue for a mixed morphological system, since the Danish and English inflections were not

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

being used interchangeably by the child, but in two distinct ways.

Klausen et al. also reported on two Danish–Japanese cases: Adam and Genki. Adam produced only language-specific inflections as in our case, so that identifying the language of the utterances and investigating the nature of the syntactic system(s) would not have been a problem. The data from Genki included only Danish inflections including just one "mixed" one, and so is difficult to interpret. It would not at this stage be possible to identify the language of his utterances using morphological criteria as we did in our case, but it is possible that word order criteria could have been applied. However, Klausen et al.'s focus is on morphology, so that this possibility is not explored.

Just as Klausen et al. found various patterns of stem-inflection combinations in the children they studied, Lanza (1997) also found different approaches by the two Norwegian–English developing bilinguals she studied from just under age two. One of these, Tomas, did not "mix" inflections and stems, but the other, Siri, did. Siri's pattern of mixing seems to have been similar to that reported by Klausen et al. for Natasha, in that Norwegian inflections were found to combine with both Norwegian and English stems, whereas English inflections only combined with English stems. As in the case of Natasha, it would not have been possible to identify the language of Siri's mixed utterances using the criteria adopted in our study (cf., however, the criteria used by Myers-Scotton (1993, p. 3) for identifying the "matrix" language in adult code-switched utterances). However, it would be possible to say that English and Norwegian inflections in Siri's data were not interchangeable. Siri's corpus in any case contained a large number of non-mixed utterances, including language-specific morphology.

Thus if the patterns in our data had been similar to those of children who did produce morphologically mixed utterances, we would not have been able to identify the language of those utterances. However, if the child had also produced non-morphologically mixed utterances, the language of these could have been identified and the question of one or two syntactic systems raised.

Conclusion

In this paper we have pointed out that there are two versions of the question as to whether the developing bilingual has a single initial syntactic system. Taking Version 1, the question of whether early mixed utterances occur, we find that they do, but that their appearance can be attributed to limited lexical resources rather than to a single initial system. Without attempting to differentiate between "English", "Spanish" and "mixed utterances", we have then argued that a single rudimentary predicate-argument syntax was found for two-word utterances of all kinds. Then addressing Version 2, the question of whether the syntax of the set of utterances in one language is the same as the set of utterances in the other language, we have argued that the question can only be raised once language-specific morphology appears; after this point we find evidence for two syntactic systems in our data.

References

Atkinson, M. (1985). How linguistic is the one-word stage? In M. Barrett (ed.), *Children's single-word speech*, pp. 289–312. New York: Wiley.

Bergman, C. R. (1976). Interference vs. independent development in infant bilingualism. In G. D. Keller, R. V. Taeschner & S. Vera (eds.), *Bilingualism in the bicentennial and beyond*, pp. 86–95. New York: Bilingual Press.

Crystal, D. (1980). *A first dictionary of linguistics and phonetics*. London: André Deutsch.

De Houwer, A. (1990). *The acquisition of two languages from birth: A case study*. Cambridge: Cambridge University Press.

Deuchar, M. (1989). Infant bilingualism: one system or two? Report on ESRC project no. C00232393.

Deuchar, M. & Quay, S. (to appear). Language choice in the earliest utterances: a case study with methodological implications. *Journal of Child Language*.

Deuchar, M. & Quay, S. (in preparation). *Bilingual acquisition: theoretical implications of a case study.* Oxford: Oxford University Press.

Gawlitzek-Maiwald, I. & Tracy, R. (1996). Bilingual bootstrapping. *Linguistics,* 34, 901–26.

Genesee, F. (1989). Early bilingual development: one language or two? *Journal of Child Language,* 16, 161–79.

Klausen, T., Subritzky, M. S. & Hayashi, M. (1993). Initial production of inflections in bilingual children. In D. J. Messer & G. J. Turner (eds.), *Critical influences on child language acquisition and development*, pp. 65–92. New York: St. Martin's Press.

Köppe, R. (1996). Language differentiation in bilingual children: the development of grammatical and pragmatic competence. *Linguistics,* 34, 927–54.

Lanza, E. (1997). *Language mixing in infant bilingualism: A sociolinguistic perspective*. Oxford: Clarendon Press.

MacWhinney, B. (1995). *The CHILDES project: Tools for analyzing talk*, 2nd edn. Hillsdale, NJ: Lawrence Erlbaum Associates.

Meisel, J. M. (1989). Early differentiation of languages in bilingual children. In K. Hyltenstam & L. K. Obler (eds.), *Bilingualism across the lifespan: Aspects of acquisition, maturity, and loss* (pp. 13–40). Cambridge: Cambridge University Press.

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press

Meisel, J. M. (1994). Getting FAT: Finiteness, Agreement and Tense in Early Grammars. In J. M. Meisel (ed.), *Bilingual first language acquisition: French and German grammatical development*, pp. 89–129. Amsterdam: John Benjamins.

Myers-Scotton, C. (1993). *Duelling languages*. Oxford: Clarendon Press.

Paradis, J. & Genesee, F. (1996). Syntactic acquisition in bilingual children: Autonomous or interdependent? *Studies in Second Language Acquisition*, 18, 1–25.

Peters, A. M. (1995). Strategies in the acquisition of syntax. In P. Fletcher & B. MacWhinney (eds.), *The handbook of child language*, pp. 462–82, Oxford: Basil Blackwell.

Quirk, R., Greenbaum, S., Leech, G. & Svartvik, J. (1980). *A grammar of contemporary English.* London: Longman.

Radford, A. (1988). Small children's small clauses. *Transactions of the Philological Society,* 86, 1–43.

Radford, A. (1990). *Syntactic theory and the acquisition of English syntax*. Oxford: Basil Blackwell.

Redlinger, W. E. & Park, T.-Z. (1980). Language mixing in young bilinguals. *Journal of Child Language*, 7, 337–52.

Volterra, V. & Taeschner, T. (1978). The acquisition and development of language by bilingual children. *Journal of Child Language*, 5, 311–26.

Received May 11, 1998 Revision accepted October 1, 1998

https://doi.org/10.1017/S1366728998000376 Published online by Cambridge University Press