# Aspects of early bilingualism in Brittany and Wales 

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#### Abstract

Haurrek bigarren hizkuntza bereganatzen duten inguru elebidunak eragina du hizkuntza bien berezitasunen. Bretoiera eta galesa hizkuntza zeltikoak dira eta zenbait ezaugarrik elkar hurbiltzen dituzte. Bretoierak eta galesa frantsesarekin eta ingelerarekin, hurrenez hurren, izan dituzten harremanek apurka-apurka aldaketak ekarriko dizkietela dirudi. Bretoiera eta galesa biak bigarren hizkuntza bezala bereganatzeko garaian erkatzen dituen ikerlan honek bigarren hizkuntzaren jabekuntzan haurren ekoizpenen artean ikus daitezkeen aldeak arakatzen ditu.

Giltz-Hitzak: Goiztiar jabekuntza elebidun. Hatsarreak eta parametroak. Hizkuntza zeltikoak. Hizkuntzarteko erkaketa. Hizkuntzen elkar ukipena. Interferentzia. Kategoria funtzionalak eta lexikoak. Kode-nahasketa.

El ambiente bilingüe en el que los niños desarrollan su segundo idioma se ve influido por las características convergentes y divergentes de los dos idiomas. El bretón y el galés son dos idiomas celtas y tienen gran cantidad de propiedades comunes. También es evidente que las situaciones de prolongado contacto con el francés y el inglés, respectivamente, producen cambios de forma gradual en el bretón y en el galés. La siguiente comparación entre una temprana adquisición bilingüe en Bretaña y Gales examina las diferencias en la adquisición del segundo idioma por parte de niños en esos lugares.

Palabras Clave: Lenguas celtas. Mezcla de códigos. Comparación de lenguas. Adquisición bilingüe temprana. Categorías funcionales y léxicas. Interferencia. Lenguas en contacto. Principios y parámetros.


L'ambiance bilingue dans laquelle les enfants développent leur langue seconde est influencée par les caractéristiques convergentes et divergentes des deux langues. Le breton et le gallois sont deux langues celtes et possèdent une gran cuantité de propriétés communes. Il est également évident que les situations de contact prolongé avec le français et l'anglais, respectivement, produit des changements de façon graduelle chez le breton et chez le gallois. La comparaison suivante entre une acquisition bilingue précoce en Bretagne et en Pays de Galles étudie les différences dans l'acquisition de la seconde langue de la part d'enfants de ces contrées.

Mots Clés: Langues celtes. Mélange de codes. Comparaison de langues. Acquisition bilingue précoce. Catégories fonctionnelles et lexiques. Interférence. Contact de langues. Principes et paramètres.

## INTRODUCTION

Bilingual situations differ from monolingual situations in many respects. In the majority minority context found in the Celtic countries the two languages have been in contact for centuries and speakers have been bilingual for several generations.

In more recent times the minority languages have receded mainly because language transmission in the home and the community is no longer the norm. Nonetheless the revival of the Celtic languages in Wales and Brittany has encouraged many parents to send their children to Welsh or Breton medium schools from a very young age, before three, and some have also opted to speak the minority language to their children. The speech of young bilinguals reflects the fact they are exposed to two languages: they code-mix, code switch and their utterances also reflect more subtle interference resulting in transfer of grammatical features from one language into the other.

The universal characteristics of first language acquisition are well recognised. Children go through broadly the same stages whatever the language and the socio-cultural environment to which they are exposed. However variations from language to language play an important role in the acquisition process. A number of studies have suggested that languages with a rich inflectional morphology like Italian or Spanish promote the early development of grammatical morphemes. Pizutto \& Caselli (1994) reports that children acquiring Italian as a first language speaking children use verbal inflections earlier than English speaking children. In another study Snchell de Acudo (1994) found that Spanish speaking children use articles earlier than English children and the explanation is that the Spanish determiner system is much richer than in English.

The languages which make up the bilingual environment of the child show convergent and divergent properties which must in turn influence the language and speech of the early bilinguals. The comparison between two separate bilingual situations, in Brittany and in Wales, offers the opportunity to observe how the bilingual linguistic environment contributes to the development of the grammatical systems of these young children.

The comparison will be limited to the noun phrase. It is the most common structure in early child language. Two aspects have being studied; one is the development of the determiner system and the other the interaction between the two languages as observed through co-de-switching and interference.

The paper is divided as follows: the method section includes information on the data and the subjects and a brief introduction to the Principles \& Parameters Approach adopted for the comparison of the articles in French, Breton, English and Welsh. It is followed by the analysis of the data and the final section discusses the importance of the linguistic environment on the language acquisition process in the Welsh-English and the Breton-French contexts respectively.

## 1. METHOD

### 1.1. Subjects

All subjects are young children attending pre-school institutions in Wales and Brittany. The eight Welsh children attended Welsh medium nursery schools and were aged between two and a half $(2 ; 6)$ and four years and five months $(4 ; 5)$. The ten Breton children attended Breton medium nursery schools and were aged between two years and eight months ( $2 ; 8$ )
and four years eleven months $(4 ; 11)$. All the Welsh children had been spoken Welsh at home but most of the Breton children were not spoken Breton by their parents.

The children are identified by a code consisting of a letter and the child's age given in brackets. The data were collected in the schools by recording spontaneous or semi- spontaneous conversations between the children and an adult on audiocassettes and transcribed orthographically.

### 1.2. Theoretical model: Principles \& Parameters

The Principles and Parameters approach (Chomsky, 1996) distinguishes between the universal constraints which determine the nature of human language and the parameters which allow for language specific variations within the universal principles.

In the Principles \& Parameters approach syntactic categories are divided into two main groups. The lexical categories include nouns, verbs, adjectives/adverbs and prepositions and their respective projections into phrasal categories according to X-bar syntax (Jackendoff, 1977): NP, VP, AP AND PP. The functional categories have an essentially grammatical role and are grouped into three systems. These functional systems have the same X-bar structure as the lexical categories. The Inflectional system closely related to the verbal group and includes tense and agreement morphemes as well as aspect and voice markers. The complementiser system carries information relating to the clause indicating whether a clause is declarative or interrogative, a main or a subordinate clause. It can be filled by a subordinate conjunction, a relative or an interrogative pronoun.

The grammatical information attached to the noun phrase is part of the Determiner system. This determines gender and number features as well as the definite-indefinite contrast. The determiner position can be filled by an article, a possessive or a demonstrative pronoun.

### 1.3. Language Acquisition

Radford (1990) has clearly shown that in English functional categories emerge after the lexical categories appearing relatively early, between 24 and 27 months.

When the children start nursery school at two and a half or so the functional categories have emerged, but they are not fully developed yet. These young children do not use the full range of grammatical morphemes of the functional systems.

Wells's (1985) study on the acquisition of English in the pre-school years has identified the progression in the acquisition of the functional systems and the noun phrase in particular. English speaking children start using the noun in the singular form and without article at around eighteen months, followed by the noun with the indefinite article and the plural form. The definite article with a singular noun appears at two. Then follows the demonstrative with a singular noun at two and a half and the definite article with a plural noun. The nominal structure increases in complexity with the insertion of complements and modifiers, with subordinate and relative clauses emerging last.

### 1.4. Cross-linguistic comparison

Cross-linguistic comparison can be made in terms of the parameters which determine the range of options or values within a given principle or category.

The four languages in the study share the same $D$ parameter: $D$ is morphologically realised (Roberts 1997). The structure is illustrated below:


However the realisation of the determiner is not uniform across the four languages. French has the richest morphological system with six articles contrasting in gender and number. Breton and English are fairly similar contrasting only definite versus indefinite. Welsh is the poorest with only one definite article. Indefiniteness is marked by the null realisation of the determiner.

Table 1: Definite and indefinite determiners

|  | French |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | definite |  | indefinite |  |
|  | masculine | feminine | masculine | feminine |
| singular plural | le | la | un | une |
|  | Breton |  |  |  |
|  | definite |  | indefinite |  |
|  | masculine | feminine | masculine | feminine |
| singular plural | ar/an/al |  | ur/un/ul |  |


|  | English |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | definite |  | indefinite |  |
|  | masculine | feminine | masculine | feminine |
| singular plural | the |  | a/an |  |
| Welsh |  |  |  |  |
|  | definite |  | indefinite |  |
|  | masculine | feminine | masculine | feminine |
| singular plural |  |  |  |  |

## 2. ANALYSIS

As already stated, all the children in the project are two years old or more and they can all use articles. Given the language internal variations to the D-system it is interesting to look at the children's progression in the acquisition of the morphemes and the definiteness, number and gender values of the determiners and the DP. Wells (1985) has described the progression for monoglot English speaking children, but there is no equivalent study for the other languages of the project.

### 2.1. Definite / Indefinite

The Welsh / English bilingual data indicate that the children have a marked preference for the singular indefinite nominal without the article and the definite article is rare. These nominal structures are grammatical in Welsh but not in English.

## Welsh

carafan hefyd (a caravan too), defad (a sheep), buwch (a cow), mochyn (a pig) (S 2;07)
pysgodyn (a fish) llygoden (a mouse) y drws (the door) (S 3;08)
afal (an apple), arth (a bear), llaeth (milk), y dwr (water) (G 2;10)
(2) English
elephant, a picture, the tail ( $\mathrm{G} 2 ; 10$ )
In the French / Breton data both the definite and indefinite are widely represented even in the youngest under three age group.
(3) Breton
ur vag, (a boat), an heol (the sun) (M 2;11)
ar c'hillog hag ar yar (the cockerel and the hen), un nor (a door), an aval (the apple) (A 2;08)
(4) French
une grenouille (a frog), la neige (the snow), un camion (a lorry) (A 2;08)
la table (the table) (M 2;11)

It has to be noted however that these children are still making a number of errors especially with regards to gender concordance of the type illustrated in (5).
(5) *un carotte (a carrot) (M $2 ; 11$ ) instead of une carotte

Code-mixing in (6) within the DP between the article and the noun was not infrequent either.
(6) *ur flûte (a flute), ur cheval (a horse) (LS 3;3)
*ur casserole (a saucepan), *ur canard (a duck) (F 4;11)

### 2.2. Number distinction: singular / plural

The French plural is marked by two articles, the definite les and the indefinite des placed in front of the noun whereas in the other languages a plural morpheme is suffixed to the noun and the article remains invariable. The English regular plural morpheme is $\{-s\}$. Breton and Welsh have a variety of plural endings associated with noun groups (see Thomas, 1996, for Welsh and Favereau, 1998, for Breton).

All the children have produced plural forms. In English the s-morpheme was correctly used so were the French articles les and des. The Breton and Welsh forms were restricted to the two more productive forms: -où, -ioù, -ed and -au or -iau respectively.

English
keys (LI 2;02)
piggies (G 2;10)
flowers, millions (M 4;05)
(8) Welsh
blodau (flowers) (LI 2;02) \& G 2;10)
blociau arall (other blocks) (Ff 2;09)
wyau (eggs), pethau (things), breichiau (arms) (M 4;05)
(9) Breton
ar stalafioù (the shutters) ar marmouzed (the monkeys) (M 3;01)
des wechoù (some times) mariennoù, marienedoù, (puppets), al levrioù (the books) (B4;04)
lapoused (birds), pesked (fish), babiged (babies) (F 4;08)
traoù (things) arzoù (bears) tresadennoù (drawings) (C 4;11)
(10) French
les canards (the ducks), des moutons (sheep), des peintures avec des maisons (paintings of houses), des choses (things) (M 2;11)
des sourires (smiles), les fleurs (flowers), les tapis (the blankets), des pingouins (penguins) (M3;01)

### 2.3. Borrowings

### 2.3.1. FROM ENGLISH INTO WELSH

Interference can be observed in the Welsh / English data in the borrowing of plural forms from English into Welsh whereas this has not occurred in the Breton / French data.

English nouns borrowed into Welsh with the English plural ending are not infrequent in the data.
gems (games) (M 4;05)
dominoes (dominoes) (G4;07)
mwy o crocodiles (more crocodiles) (G 2;10)

### 2.3.2. FROM FRENCH INTO BRETON

It should be noted that this kind of borrowing is not uncommon in adult Welsh. The reason why such transfers do not occur in the Breton / French context could be explained by the difference in plural formation in the two languages: Breton requiring a suffix whereas the French plural is marked by the article preceding the noun and not by suffixing since the last consonant is deleted in spoken French. French borrowings into Breton are easily given a Breton plural form by suffixing the appropriate plural affix (12).
(12) cahier (writing book), cahieroù (writing books)

One child (M $3 ; 1$ ) used a Breton noun marmouz (monkey) once with a French article and once with the Breton article, (example 13). When the French article was used, the noun remained in the singular unsuffixed form but when the Breton article was used the plural suffix -ed was attached to the noun, indicating the child's ability to select and apply the rule in each language.
les marmouz (monkeys), ar marmouzed (monkeys) (M 3;01)
All the children have acquired the singular/plural contrast. However the Welsh and Breton children are not yet using the full range of plural morphemes whereas they have mastered the French and English systems which are comparatively simpler.

### 2.4. Gender distinction: masculine/feminine

There is no gender distinction in the English D-system but it exists in the other three languages. In French the gender distinction is realised in the determiner preceding the noun (see table 2). In Breton and in Welsh the article is invariable and the gender distinction is carried by mutation. Mutation is a phonological change affecting the first segment of the noun when preceded by a determiner. The absence of mutation signals the masculine form, except for the Breton $k[k]$ changing to $c^{\prime} h[x]$, and a change from the dictionary entry form as the result of mutation signals the feminine. Table 2 gives an overview of the gender distinction in the four languages but a more comprehensive picture of the mutation systems in Welsh and Breton can be obtained from Thomas et al. (1996) and Favereau (1998).

Table 2: Gender contrast in Welsh, Breton, English \& French

|  | Welsh | Breton |  |  |
| :---: | :---: | :---: | :---: | :---: |
| merch |  | $(\mathrm{Y})$ ferch | merc'h | ar ferc'h |
| mab |  | y mab | mab | ar mab |
|  | English |  | French |  |
| daughter | the daughter | fille | la fille |  |
| son | the son | fils | le fils |  |

The Welsh data were characterised by the near absence of mutated forms and indefinite noun phrases without an article and these are more common than noun phrases with the definite article. Example (14) is a rare example in the data of a mutated noun following the article.
(14) $\quad$ r goeden (the tree) coeden (S $3 ; 08$ )

The situation is the opposite in Breton where mutations are frequent even among the younger children with $87 \%$ of mutated forms after the article (Stephens, 1996). The examples in 13 show how children are correctly using mutations in Breton.
(15) balafenn, ur valafenn (a butterfly), gwezenn, ur wezenn (a tree) kontell, ur gontell (a knife) (F 4;11)
kado, c'hado (a present), krokodil, ur c'hrokodil (a crocodile) (S 3;01)
gwezenn, ar wezenn (the tree), kazetenn, ur gazetenn (a newspaper) (D 3;09)
It would appear that the Breton children are learning the mutated forms before the dictionary entry forms whereas the Welsh children proceed from non-mutated to mutated. Can we then conclude that the Breton children are ahead of the Welsh children in the acquisition of the mutations?

A closer look at the data indicates that the Breton children are not aware of the grammatical value of the mutation and the mutated form is considered to be the only one available. It is only later at around the age of five that minimal pairs can be observed.

This might be linked to the understanding of grammatical gender which is not easier for monoglot French speaking children either. The data collected by Suppès et al. (1973) indicate that the masculine/feminine distinction and the corresponding agreement realisations present difficulties for the young child and errors are frequent. This is also the case for the bilingual children who in French produce wrong article noun combinations as in (16):

> *un guitare (a guitar), *la singe (the monkey) (L 2;09)
> *la coq (the cockere), *un tortue (a tortoise), *la crabe (the crab) (L 3;01)
> *un banane (a banana) (C 3;05)
> *la pain (the bread) (L 2;09)

### 2.5. Importance of the linguistic environment

The importance of the linguistic environment cannot be underestimated. Firstly, Breton offers a much greater number of mutation contexts than Welsh which lacks the indefinite article. The Breton indefinite article carries stress when preceding a monosyllabique noun. Secondly
the French and Breton determiner systems have similar configuration with the grammatical information being placed in word initial position. In Breton this is the case for gender and sometimes number. Thirdly the way Welsh children use the possessive determiner reinforces the non-application of the mutation rule. In English, French and Breton the possessive marker precedes the noun but in Welsh it is divided into two morphemes placed either side of the noun. The first morpheme triggers the mutation of the noun.

| English | Welsh | French | Breton |
| :--- | :--- | :--- | :--- |
| father | tad | père | tad |
| mother | mam | mère | mamm |
| her father | ei dad hi | son père | he zad |
| her mother | ei fam hi | sa mère | he mamm |

The contrast in the use of mutation between the Breton and Welsh children is maintained in the possessive construction. The Breton children use forms mutated correctly or incorrectly but the Welsh children appear to avoid mutations by omitting the first pronoun in effect further reducing the number of contexts for mutation.

## Child form

a. $\quad$ Dad fi yw e (C 3;07) dad me is he
I t's my father
b. tractor ti (your tractor) (G 2;10)
llygoden i (her mouse), llaw i (her hand), frind i (his friend) (S 3;08) trwyn fi (my nose), mam ti (your mother), enw fi (my name) (M 4;05)
The initial possessive is used occasionally but without mutation:
Child form
ei mami (his mother) (S 3;08)
fy pensil (my penci) (M4;05)

## Adult form <br> ei fami <br> fy mhensil

To conclude this first part the complexity of a bilingual linguistic environment has an influence on the children's verbal output. It does not follow however that differences exist at the more fundamental level of grammatical concepts.

### 2.6. Code mixing in the nominal group

In a bilingual situation changing from one code to another is inevitable. According to Grosjean, $(1982,145)$ code-switching is the alternate use of two languages. He also described code switching as the alternate use of two or more languages in the same utterance. Gumperz $(1982,59)$ defines it as the juxtaposition in the same verbal exchange of sequences belonging to two different grammatical systems or sub-systems.

According to MacLure (in Hoffmasn 1991) instances of code switching can vary. Young children tend to use isolate words form one language into structures of the other whereas older children code-switch entire phrases or clauses.

Comparing the data from the Welsh/English context on the one hand and the Breton/French context on the other it is noticeable that the latter code switch frequently whereas the former do not. A statistical analysis by Evans (1996) on the Project data showed that only $5.1 \%$ of the children utterances involved code-switching. The explanation might be found in the fact that these children came from Welsh speaking families. The Breton data on the
contrary contains numerous instances of code-switching and very often inside the noun phrase. The switch takes place between the determiner and the noun (written in bold characters).

```
ur pomme (an apple) (D 2;09)
war an terre (on the earth) (D 2;09)
un c'har-nij (an aeroplane) (M 2;11)
ur ver de terre (a worm) (F 2;11)
il est beau le tarv (the bull) (F 4;11)
et Pot war un canard (and Spot on the duck) (L 2;09)
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This kind of code-switching reflects a common phenomenon in bilingual speakers triggered by the need to quick access to a lexical item. It merely reflects a gap in the lexicon of one or the other languages.

It enables the youngest children who are taking their first steps in the acquisition of Breton to keep the conversation apace. It provides also a way of learning and reinforcing the new language as illustrated in the following dialogues:
(F $4 ; 11$ ) Elle est belle cette vache!
(L 2;09) ur vuoc'h
( $\mathrm{F} 4 ; 11$ ) un taureau
Adult ya, un tarv eo
(F $4 ; 11$ ) il est beau le tarv
Adult: Ha pelec'h emañ an hipopotam?
Child: Aze
Child: E-barzh ur brouette
Adult: Ya, 'barzh ur garrigell

That's a nice cow!
a cow
a bull
yes, it's a bull
it's nice, the bull
and where is the hippopotamus?
there
in a wheelbarrow
yes, in a wheelbarrow

Code-switching at the lexical level can also be explained by a gap in the vocabulary of the lesser used language. Technical terms such as spaceship may not necessarily be part of the vocabulary of a young Welsh or Breton speaker.

However according to MacLure this form of code -switching should evolve into a more complex form involving inter and intra code-switching.

### 2.7. Interference

Interference or transfer as it sometimes called is another aspect of bilingual speech, less striking than code-switching but not less real.

### 2.7.1. ENGLISH/ WELSH: POSSESSIVE STRUCTURE

The possessive construction seems to be affected in both contexts. In English, the order of the possessive noun phrase is possessor possessed and it is marked by the genitive morpheme 's. In Welsh it is the reverse order possessed possessor but there is no genitive marker:

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English daddy's car (G 2;05)
Welsh car dadi
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In the early stage of acquiring the possessive construction young children leave out the ' $s$ (Wells, 1985) but respect the word order as in (22).

English daddy car (M 2;06)

Welsh children who have been exposed to both languages from an early age use the English word order instead of the Welsh one: shampoo mami (25).

Welsh mami shampoo (M 4;04) for shampoo mami

### 2.7.2. FRENCH/BRETON

Transfers from French into Breton have also been observed in the data with the Breton possessive which is identical to Welsh being replaced by the French possessive phrase with a preposition:

| child form |  |  |
| :--- | :--- | :--- |
| a. | levrioù deus ma tadig <br> books of my father | adult form <br> levrioù ma zadig <br> my father's books |
| b. | ar wetur deus ma mamm <br> the car of my mother | gwetur ma mamm <br> my mother's car |
| c. | ar vaeron deus ma c'hoar <br> the godfather of my sister | paeron ma c'hoar <br> my sister's godfather |

However the situation is not as straight forward as it may seem. There are other examples from the same child constructed on a similar pattern which have been regarded as intermediary structures in the acquisition of the possessive noun phrase with the preposition followed by a pronoun instead of the inflected preposition din me as in (27) and (28).

| ar c'hi deus me (le chien de moi) | ma c'hi (mon chien) |
| :--- | :--- |
| the dog of me | my dog |
| ar c'hi da me | my dog |

This particular child appears not have yet mastered certain constructions involving movement, for instance she has not yet mastered the rule for clitic placement in French reflexives, saying:
elle gronde à moi

she reprimands at me $\quad$ instead of the réflexive $\quad$| elle me gronde |
| :--- |
| she reprimands me |

She tells me off.
What might appear as interference or transfer in this case may well be a stage in the developmental process affecting both languages at the same time. However more research is needed on Breton language acquisition before the distinction between development and interference can be clarified in early bilingualism.

## 3. CONCLUSION

Children exposed to two languages at an early age grow up in a complex linguistic environment in which the interaction between the two languages has an influence on their speech and language. This has been observed for other languages. Henry and Tangney (1996) in Belfast has also found that the Irish Gaelic spoken by young school children in Belfast has features not found in the Republic. As far as the Breton and Welsh children are concerned there are variations in their language output but this does not necessarily affect the grammatical concepts underlining their language development.

## REFERENCES

CHOMSKY N. (1996), The Minimalist Programme, Cambridge, Massachusetts, MIT Press.
EVANS L. (1996), "Code-switching strategies", In Teod, Teanga,Tafod, Welsh/English bilingual children, Work in Progress 2, Cardiff UWIC, 33-47.
FAVEREAU F. (1998), Gammaire Bretonne, Rennes, PUR.
GROSJEAN F. (1982), Life with two languages. An Introduction to Bilingualism, Cambridge Massachusetts, Harvard University Press.

GUMPERZ J.J. (1982) Discourse strategies. Cambridge: CUP
HENRY A. \& TANGNE Y. (1996), "Functional categories and parameters setting in the second language acquisition of Irish in Belfast", In M. Degraff (Ed.), Creolisation, Acquisition \& Diachrony, Cambridge MS, MIT Press.
JACKENDOFF R. (1977), X-bar Syntax, Cambridge, MIT Press.
KESSLER C. (1984), "Language acquisition in bilingual children", In Miller N. (Ed), Bilingualism and Lan guage Disability, London, Chapmam \& Hall.
MCCLURE E. (1997), "Aspects of code-switching in the discourse of bilingual Mexican-American children", Technical Report 44, Center for the Study of reading, University of Illinois, Urbana Champaing.
PIZUTTO E. \& CASELLI M. C. (1994), "The acquisition of Italian verb Morphology in a cross-linguistic perspective", In Y. Levy (Ed.), Other children Other Languages, Hillsdale, NJ, LEA.
RADFORD A. (1990), Syntactic Theory and the Acquisition of English Syntax, Oxford, Blackwell.
ROBERTS I. (1997), Comparative syntax, London, Arnold.
SNCHELL DE ACUDO B. (1994), "Early morphological development: The acquisition of articles in Spanish", In J. L. Sokolov \& C. Snow (Eds.), Handbook of Research in Language Development using CHILDES, Hillsdale, NJ, LEA.
STEPHENS J. (1996), "The acquisition of mutations in Breton", Teod, Teanga, Tafod, Work in Progress 2, Cardiff UWIC, 22-33.
SUPPES P., SMITH R. \& LÉVEILLÉ M. (1973), "The French syntax of a child's noun phrase", Archives de Psychologie 42.
THOMAS P. W. (1996), Gramadeg y Cymraeg, Caerdydd, Gwasg Prifysgol Cymru.
WELLS G. (1985), Language Development in the Pre-school Years, Cambridge, CUP.

