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Monosyllabic Place-Holders in Early Child Language and the L1/L2 'Fundamental Difference Hypothesis'

Juana M. Liceras

University of Ottawa and Instituto Universitario Ortega y Gasset

1. Introduction

The controversy over the so-called 'Fundamental Difference Hypothesis' (FDH) as the main opponent to the 'Full Access Hypothesis' (FAH) (e. g. Epstein, Flynn and Martohardjono 1996) has been a fact of life for researchers in the field of L2 acquisition for the last two decades. The more momentum this controversy gained, the more it has brought us memories of the controversy 'contrastive analysis hypothesis' / 'error analysis hypothesis' that took place in the 1970's. At the time, many L2 acquisition researchers who adopted Chomsky's creative view of language equated any type of 'contrastive analysis' to the 'habit formation' view of language acquisition and this rejection of 'contrastive analysis' was an unfortunate pretext used as an excuse to not take advantage of the refined and powerful linguistic tools provided, at the time, by the Standard Theory (Chomsky 1977) to analyze interlanguage systems. While it would not be fair to establish a parallelism with the situation that the controversy over the FDH has created (the need to analyze non-native systems with the same tools as those used for the native system has not been questioned by any of the two camps), we believe that a blind rejection of some of the assumptions of the FDH may prevent us from determining where the actual differences between child grammars and non-native grammars reside. We believe that there are fundamental differences between L1 and L2 acquisition and we would like to propose a program of research which would address some of these fundamental differences from two angles: first, in terms of the new tools provided by linguistic theory, specifically the relevance of features, and second, by looking at different interpretations of what seems to be a specific characteristic of child data, namely, the presence of non-tonic vowels before lexical categories that researchers have referred to as fillers, protomorphemes, or monosyllabic placeholders.

What we will propose is that these elements provide evidence that the mechanisms and the processes which lead to the projection of a native mental grammar (an I-language) are fundamentally different from the ones that lead to the projection of a non-native mental grammar.

2. The Fundamental Difference Hypothesis

Epstein, Flynn and Martohardjono (1996) maintain that Clahsen and Muysken (1986), Clahsen (1998) and Bley-Vroman (1989) offer the most radical formulations of the FDH by stating that L2 acquisition is governed by cognitive faculties that are separate and distinct from the domain-

specific language faculty: Universal Grammar (UG). In fact, Clahsen talks about something similar to Slobin's (1973) Operating Principles, while Bley-Vroman talks about capacities that belong to Piaget's Formal Operating Principles (analogy, hypothesis formation and testing, and so on). However, the discussion of data presented and/or reviewed by Epstein, Flynn and Martohardjono (1996) is not convincing either way, mainly because it is usually next to impossible to determine whether it is the L1 or a UG principle that accounts for the presence of a given construction (Hale 1996). Furthermore, the presence of a given construction in an L1 and an L2 does not necessarily prove that a same underlying representation can be posited for both. This argument is in fact made by Epstein, Flynn and Martohardjono when they state that "...what is observed is often neither relevant nor significant, and what is relevant and significant is often very difficult to observe, in linguistics no less than in the freshman physics laboratory, or, for that matter, anywhere in science." (EFM 1996: 747).

In other words, we have to be cautious when we interpret acquisition data. In fact, the fundamental claim of the FAH is that L2 grammars are UG-constrained, not that the two processes are similar or that the L1 does not play a role in L2 acquisition: "Postulating that UG (Universal Grammar) constrains L2 knowledge growth does not entail identical development trajectories for L2 and first language (L1) acquisition; nor does it preclude a role for the L1" (EFM 1996: 746). This quote clearly shows that Epstein, Flynn and Martohardjono do not exclude a role for the L1, an L1 as initial state or an L1 filtering all input data, and it does not even exclude positions such as Tsimpli and Roussou's (1991), Strozer's (1994) or our own (Liceras 1996a, Liceras 1996b, Liceras et al. 1998), according to which L2 learners make use of UG principles but are not sensitive to the features which lead to parameter-setting. Thus, most L2 researchers would agree that the L2 grammar should not violate any principle of UG at any stage of development or, as Goodluck (1986) puts it when referring to child grammars, that there shouldn't be "wild grammars".

However, in the specific proposal made by Bley-Vroman (1990), which is summarized in (1), he states that adult L2 learners do not have access to Universal Grammar and that, for these learners, the initial state (or the initial representation) is the L1.

- (1) Bley-Vroman (1990:18): The logical problem of foreign language learning

<u>Child language development</u>	<u>Adult foreign language learning</u>
A. Universal Grammar	A. Native language knowledge
B. Domain-specific learning procedures	B. General problem-solving systems

In Bley-Vroman's account of L1/L2 acquisition, UG principles and parameter-setting do not seem to be differentiated. As for the relationship between A and B, the two axes of Bley-Vroman's depiction of the "logical problem", his computer metaphor is very telling. He compares UG to an installation computer program which becomes something else once it is installed:

"To use a computer metaphor, it is as if an application program came with an installation-configuration program, with which you set parameters to customize the application to your computer and your

tastes. You use this installation program just once, it sets up the application to operate properly, often also stripping it down, removing options your machine cannot implement. You never use the installation program again. The application program is now a particular program for your machine. The application program could have been otherwise, but you cannot tell by looking at it how it might have been. Nor can you tell how the installation program itself operated. It is often good practice to design programs this way, since information about the consequences of unused options and the devices to set them are not carried around as excess baggage, consuming space and perhaps slowing the operation of the program.” (Bley-Vroman 1989: 18)

An initial representation which consists of native language knowledge is different from UG even if native language knowledge refers only to an I-language (a mature language which results from the interaction between input data and UG principles as well as parametric options). However, it is not clear to us that an L1 is as different from UG as one could infer from this metaphor. In fact, many L2 researchers believe that any L1 would serve as the basis for a mental grammar and that its interaction with L2 input would produce a natural language. And this should be so even if we adopt the metaphor, since the computer also ends up with a computer program and not a different type of entity. The problem is Bley-Vroman’s axis B on (1) because if only general problem-solving systems operate over the L1, the outcome would be something like Esperanto. This seems to be what Bley-Vroman’s second reference to the computer metaphor implies:

“To indulge again in a computer metaphor, it is as if you gave your already configured copy of your word processor to a friend – but without the installation diskette. Her attempts to configure the program to her different machine might well resemble a pastiche or peripheral patches.” (Bley-Vroman 1989: 21)

Based on our belief that a non-native grammar is not the equivalent of an Esperanto-like grammar, we have attempted to provide an alternative to Bley-Vroman’s model. Thus, in order to provide a content for Bley-Vroman’s ‘pastiche’ or ‘peripheral patches’ we have proposed the modified version of the FDH depicted in (2).

(2) Licerias (1996:33; 1998: 75): Primary / non-primary language acquisition

<p><u>Primary language acquisition</u></p> <ul style="list-style-type: none"> •UG = initial state •Domain-specific learning procedures: non-modularized / non-explicit <p><u>Non-primary language acquisition</u></p> <ul style="list-style-type: none"> •Previous linguistic experience: UG = mature state; L1; other L2s •Secondary domain-specific learning procedures: modularized (degrees?); explicit (degrees?)
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The concept of ‘mature UG’ allows for a version of the critical period hypothesis where an organ (in this case language) cannot grow twice (Strozer 1994, Licerias 1996a, 1996b). This implies that parameter-setting, as a function of the interaction between UG and the input as trigger, will not proceed as in L1. In other words, as first proposed by Tsimpli and Roussou (1991) adult L2 learners will make use of UG principles but will not set

parameters the way children do. Thus, we talk about secondary domain-specific language procedures to account for the relationship established between the L2 initial state (a mature UG) and the input data, and we assume that a mature UG is modularized and much more explicit than the input system (à la Fodor 1983) that is associated to the parameter-setting procedure (Liceras 1996b, 1998).

Secondary domain-specific learning procedures (explicitness and modularization), as we understand them, would not lead to an Esperanto-like language or resemble a ‘pastiche’, but would result in local restructuring; namely, learners would learn each option of the parameter in isolation from the other options (Liceras et al. 1998a, 1998b). This restructuring of an L1 would result in a UG-constrained grammar but would not result in an I-language (a native system resulting from fixing parameters as in L1 acquisition). In this respect, we agree with Bickerton (1996) when he states that:

“Given motivation, and perhaps other variables, adults seem able to acquire existing languages, but not to create new ones... quality of access must change somehow, or adults in Hawaii would have created a creole”. (Bickerton’s commentary to EFM 1996: 717)

But we do not think that L2 grammars are pidgin-like grammars. It may be the case that some non-native systems are very much like pidgins, but not all. In reality what we have to determine is what is it that children do to ‘create’ grammars or, put in a different way, what is it that adults do not do that prevents them from achieving similar results (creating an I-language). In fact, adults may not set parameters because they do not access the inventory of features of any given language the way children do.

What we would like to propose is that the nature of the differences in the knowledge-state of L1 and L2 learners at various stages be investigated by comparing L2 and L1 acquisition data. In fact, there is a tradition of doing so, as in the case of the studies on order of acquisition of morphemes (Zobl and Liceras 1994).¹ More recently it has been argued that child grammars have truncated structures but non-native grammars do not (Prévost and White 2000, Liceras, Valenzuela and Díaz 1999). Among the possible reasons given are: (1) maturation, as in Rizzi (1994), who argues that the ROOT = COMP principle is well established in the L2 mind but not in the L1 mind; and (2) ‘pragmatic superavit’, what Hyams (1996) and Hoekstra and Hyams (1996) call pragmatic deficit, which refers to the fact that children, but not adults, make use of pragmatic devices to compensate for syntactic ones.

Nobody would deny that maturation differentiates the adult mind from the child mind, though some researchers may consider that UG is not subject to maturation the way other ‘organs’ are. But, as stated above, we believe that UG matures and that a more mature UG will confront input data differently from a less mature UG. This is one side of the coin; the other one is the specialization of refinement of capabilities that takes place in the process of acquisition. We know, for instance, that children “start as potential native speakers of any language” and that this potential fades before the first year of age. It starts with prosodic discrimination at birth and does not stop (Guasti 2002). It is well-attested that by the first year, the

child's capability for discriminating sounds and prosodic patterns is clearly geared to the native language and eventually leads to "the phonological sophistication of older children and adults" (Liceras in press, Díaz and Mongeon 2000). Thus, for older children and adults confronting a second language, prosodic patterns and phonetic features are not available (or are not perceived as they are perceived by infants) because their sensibility to the triggering effects of the input has changed. What we would like to argue is that this may be the reason why we find place-holders in child L1 grammars but not in L2 grammars

3. Place-holders in child grammars

To the best of our knowledge, the fillers or protodeterminers that occur in child L1 grammars do not seem to exist in either child or adult L2 acquisition (we do not mean very young children, even though we do not know of any study that has reported the presence of 'fillers' in early child L2 acquisition). It is not clear to us whether they have not been reported in the literature because they do not occur or because they do have a similar status. In reality, there are not many longitudinal studies of early L2 acquisition in general, nor of child L2 Spanish in particular, and no phonetic or phonoprosodic analyses of the development of the Spanish functional categories in L2 systems has been carried out. In the analysis of the morphosyntactic development of the Spanish Determiner Phrase in child L2 data conducted by Rosado (1998) and Liceras, Díaz and Mongeon (2000), no fillers or protodeterminers are reported, though in the transcription of Adil's data (Rosado 1998), a four year old speaker of Arabic learning Spanish in Madrid, two prenominal vowels were reported.

This contrasts with the case of children learning Spanish as a first language, where the presence of fillers or place-holders, as in (3), is very well documented, and several interpretations (both from the constructivist and the innatist camps) have been offered for their existence.

(3)	a for / the flower	[Magín 1;8]
	e nene / the boy	[Magín 1;8]
	a bici / the bike	[Magín 2;2]
	e agua / the water	[Magín 2;3]
	e pie / the foot	[María 1;7]
	a bota / the boot	[María 1;8]
	as manos / the hands	[María 2;1]
	e bolo (el globo) / the balloon	[María 2;5]
	a tambor / the drum	[María 2;5]

Lleó (1998) provides a narrow phonetic transcription of place holders produced by Spanish and German children. Samples of the place-holders used by one of the children, María, at age 1;10,17 appear in (4). What characterizes these place-holders is the following: (i) they consist mainly of an optional laryngeal plus a central low vowel (4a,b); (ii) the undifferentiated or default syllable occurs with both feminine nouns (4a) as well as masculine (4b); (iii) a few different syllables appear before some

masculine nouns (4c); and (iv) these vowels also appear with trisyllables, which are generally produced with a reduced first syllable, as in (4d).

(4) a.	[ha'sijã]	<u>silla</u>	'chair'
	[awÁã'gã?]	<u>vaca</u>	'cow'
	[?a'bUka ^h]	<u>vaca</u>	'cow'
	[a:mano]	<u>manos</u>	'hands'
b.	[ha'vaCO]	<u>vaso</u>	'glass'
	[há'wOwO]	<u>globo</u>	'balloon'
	[A'wOwO ^h]	<u>globo</u>	'balloon'
	[?a'?ijOh]	<u>río</u>	'river'
c.	[mb ^h EIO ^h]	<u>pelo</u>	'hair'
	[?æ'l'xuwO ^h]	<u>cubo</u>	'bucket'
	[be'bh ⁱ]	<u>lápiz</u>	'pencil'
d.	[?a:pâsanã ^h]	<u>manzana</u>	'apple'
	[?akã'Cinã ^h]	<u>cocina</u>	'kitchen'
	[apa'cacoh]	<u>payaso</u>	'clown'
	[?a?ga'dZiçã ^h]	<u>casita</u>	'house (dim.)'

3.1. Monosyllabic place holders (MPHs): an innatist approach

One of the first innatist syntactic accounts of these phenomena is provided by Bottari, Cipriani and Chilosi (1993/1994). They argue that schwa-like elements in the speech of several Italian children are in complementary distribution over time with free morphemes. MPHs hold the place of closed-class words such as articles, prepositions, clitics, copulas, modals, negative operators and interrogative pronouns.

These authors explore three hypotheses that could account for the presence of these place-holders:

- Hypothesis 1. MPHs are phonologically altered realizations of specific morphological items. They reject this hypothesis because it is too strong.
- Hypothesis 2. Children are trying to imitate sounds they hear. This hypothesis is rejected because: (i) there is not one-to-one correspondence between the word and the MPHs, as in the case of *vaca*, one of the words in (4a) above; (ii) not all the MPHs appear at the same time, a fact that is well documented by Bottari, Cipriani and Chilosi (1993/94) as well as by Lleó (2001a, 2001b, 2001c, 2001d); and (iii) MPHs occur in positions with no phonetic input, such as words made up by the child. The authors provide the example '[a] cicci' used by Viola to refer to little birds and '[e] cicci' word also used by Viola to refer to little man (Bottari, Cipriani and Chilosi 1993/94: 347).
- Hypothesis 3. MPHs identify a position; namely, they have a syntactic function. This is the hypothesis they support because these items are not imitations but retain important grammatical properties of free morphemes given that: (i) their occurrence is not random; (ii) they never replace lexical items; and (iii) they do not precede free grammatical morphemes.

The above implies that there is no phonological bootstrapping and that certain syntactic (positional) properties emerge before the full assessment of the morphophonological paradigm has taken place. In fact, Bottari, Cipriani and Chilosi propose that in the development of morphological structure, building precedes morphological checking. Thus, MPHs are the locus of abstract formal features which lack the adult features but retain the syntactic feature of heading a projection.

Given the distribution of MPHs, Bottari, Cipriani and Chilosi argue that the Spec and COMP positions of major categories that host functional categories realized as MPHs are identified very early. They also maintain that since prosodic contours match syntactic segmentation, in principle, prosodic considerations cannot be divorced from syntactic considerations.

3.2. The semantic nature of place-holders: an innatist approach

Bartra (1997) compares the context in which several Catalan children and Spanish children, (Jan, her own data), Julia (Bel, 1994), Pere, Pep and Martí (Capdevilla 1996), María (López-Ornat 1994), produce a schwa (@) and finds that these schwas appear in most of the positions identified by Bottari, Cipriani and Chilosi (1993/94).² Some of the examples provided by Bartra are listed in (5) to (9).

- (5) Determiner
 sóc @ mico, jo [Jan, 2;11.8]
 (I) am a/the ape, me
- (6) Preposition
 a. quí dintre @ gàbia [Jan, 2;11.20]
 here inside the cage
 b. @ cotxe @ papa [Jan, 2;10.21]
 the car of daddy
- (7) Clitic
 aixís @ trenquen [Jan, 2;11.03]
 so @ they broke
 ‘They get broken that way’
- (8) Modal Auxiliar
 @ posar aquí [Pere, 1;10.11. Capdevila (1996:302)]
 @ to put here
- (9) Adjective
 a. @ molt maco [Pep, 1;10.6. Capdevila (1996:231)]
 @ very nice
 b. @ blau [Martí, 1;9.16]
 @ blue

Bartra agrees with Bottari et al. that these vowels cannot simply be analyzed as phonetic shortcomings but as syntactic positions of functional categories belonging to the class of ‘free morphemes’, and maintains that similar arguments could be made for the Catalan data³. However, she argues that the explanation that the use of schwas is a language specific strategy which only occurs with languages that have free morphology is not adequate, and

tries to formulate an answer within the Minimalist Program (Chomsky 1995). Her arguments go as follows:

- 1. Under the assumptions of bare phrase structure, these schwas cannot be considered mere structural place holders but need to be given a more substantial grammatical import (satisfying principles of X-bar theory is not a valid interpretation anymore).
- 2. There is a very limited set of functional categories (FCs) within the Minimalist Program (Chomsky 1995, 1998).
- 3. FCs are bundles of formal features that have to be triggered by the input. Bartra groups all instances of ‘schwa’ under C, T and D, and discards T for reasons that I will not go into here. The child uses a single element for the interpretable [+referential] feature.⁴

According to Bartra, the schwa establishes a subset of reference, as in example (10); thus referentiality is the first feature of the Determiner, and the others will follow in an order that may depend on the language.

- (10)⁵ *MOT: Quin iogurt vols?
Which yoghourt do you want?
*JAN: un @ maco @ tots (2;11.4)
one the (more) nice of all (of them)
‘The best one’

Bartra notes that in child Catalan, many schwas correspond to an adult QUE, since they appear before yes/no questions. This leads this author to propose that given the contexts in which these schwas appear, the initial features of the Complementizer will be [+referential], which will eventually be lexicalized as “que”, and [+/-assertive], which will become NEG.

3.3. The phonoprosodic nature of Spanish protomorphemes: a constructivist approach

López-Ornat (1997) assumes that there is a pregrammatical stage where no differentiation will exist for pre-Noun Phrase (NP) and pre-Verbal Phrase (VP) vowels. When the phonoprosodic structure is differentiated, NPs and VPs will become two different categories in the child grammar. When a clear ‘e’ or ‘a’ sound occurs, these forms are considered to be fully grammatical. This author, in accordance with her creationist approach, maintains that the input instructs the neurons so that NP and VP representations are created. Nothing is innate except the ability to process data that will instruct the neurons. Thus, for this researcher, there is a pregrammatical system that maps a phonoprosodic form directly into a pragmatic-semantic function. In fact, López-Ornat is not concerned with providing an underlying representation but simply attempts to indicate the nature of a representational shift. The phonoprosodic cues that according to her are used by María (data from age 1;7 to 1;9) to bootstrap into morphology are summarized in (11) and (12).

- (11) NPs
 Stage 1: [v] sb' [sb]
 Stage 2: v sb' [sb] (v is compulsory now)
- (12) VPs
Present
 Stage 1: [sb] sb'
 Stage 2: [sb] sb' sb (a final syllable is added)
Imperative
 Stage 1: sb' [sb]
 Stage 2: sb' sb (a final syllable is added)
Present Perfect
 Stage 1: Ø
 Stage 2: v sb' sb

If these data are correct, and regardless of whether we take a constructivist or innatist approach (Liceras, in press), it may imply that there will be early evidence for the presence of the functional categories D and C in Spanish, but a late differentiation in English because of the many monosyllabic Nouns and Verbs and the phonoprosodic similarities of both. A detailed analysis such as the one carried out by Lleó (1998, 2001a, 2001b, 2001c, 2001d, forthcoming) in the case of the DP, could tell us whether this is a correct inference.

3.4. The phonoprosodic nature of Spanish predeterminers: an innatist approach

Lleó (2001a) compares the development of fillers (undifferentiated place-holders) to prenominals (differentiated vowels which agree with Nouns—"e,o,u" quality with masculine and "a" quality with feminine—in the case of Spanish) in Spanish and German and concludes that Spanish makes it easier for children to activate features of FCs because of its phonoprosodic structure. It is not a question of whether FCs are there or not but of how easily the triggers can be detected.

Lleó (forthcoming) maintains that the high frequency of determiners in Spanish, the presence of long paroxytone words that make children sensitive to unfooted syllables, and the flexibility of left edges give Spanish (and Romance) children adequate means to introduce functional elements in their grammars. Children acquiring other languages are not as well-equipped to access such elements because they lack the cues. The seeds for the development of FCs are accessible from the start of language acquisition, and in Spanish they show up as early as the one word stage. The protoarticles provide a necessary syllable to fulfill foot binarity, as in (13a). Spanish children learn how to manage trisyllabic nouns very soon (13b) and this fosters an early distinction of two prosodic layers, the foot layer and the word layer.

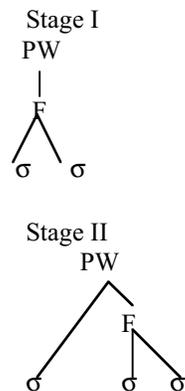
- (13) a. [ˈpah] pan 'bread'
 [ʔˈbUla^h] pala 'shovel'
 [ˈhaˈbElʔ] pala 'shovel'
 [ʔˈpa_&lœ^h] pala 'shovel'
 [lãˈbal[ʔ^h] pala 'shovel'
 [ˈmemE^h] mamá 'mum'
 [hˈguwˈ] cubo 'bucket'

- (13) b. [ʔajki:ja] rastrillo 'hackle'
 [ʔwˈBebɐh] chupete 'pacifier'
 [ʔaBEjjOh] babero 'bib'
 [ʔaba_&jO] babero 'bib'

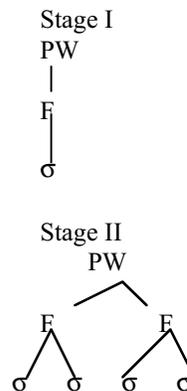
[María (1;4,21) / Lleó, forthcoming: 3]

According to Lleó (2001b), Spanish-speaking children appear to keep their syllable structures simple while they expand the number of syllables in their Prosodic Words (PWs). They soon advance to a stage of development where their PWs can contain a Foot plus an unfooted syllable. However, the status of this syllable is special. It cannot constitute a Foot (it has a CV shape) and must therefore be directly attached to the PW, as in (14a), thus involving a violation of EXHAUSTIVITY.⁶ In contrast, children learning Germanic languages appear to focus earlier on representing more syllabic structure for those syllables contained within a Foot, even if this means omitting other unfooted syllables. Access to prosodic structure larger than a Foot in German is only reached at the two-word stage, by combining two Feet, as shown in (14b).

(14)a. Spanish



(14) b. German



Lleó (2001c) therefore argues, in contrast to López-Ornat (1997), that fillers are not a prerequisite for the acquisition of morphemes, because individual differences are enormous in terms of the use of fillers and because all children reach acquisition of the article at a similar time in spite of their different —if any— ‘use’ (production) of fillers.⁷ Furthermore, these

prosodically founded productions do not represent dead ends in the acquisition of morphology because they are based on the morphoprosody of the target language. Finally, as also discussed by Bartra (1997), Lleó points out that protoarticles are used with a quantificational function: to designate a specific entity always referred to by a single Noun. They are specific and presentational, since they never appear with a Noun used as a vocative or with words such as “yes” and “no”.

3.5. Monosyllabic place-holders and the activation of formal features

We believe that Lleó’s work provides ‘physical’ evidence for the proposal (Licerias, Díaz and Mongeon 2000) that monosyllabic place-holders produced by Spanish children are linked to the activation of the [word marker] and the [gender] features of the Spanish Determiner. The [word marker], rather than a functional category (Berstein 1993), is the phonoprosodic feature that the Spanish determiner shares with other lexical categories such as Nouns and Adjectives, as proposed by Harris (1991a, 1991b) and Piera (1995). Thus, very early in the acquisition process, children become aware of the presence versus absence of a word marker in the structure of Spanish, but not in English, since as shown in (15), the structure of the Noun *perro* but not the structure of the Noun *dog* has a word marker.

- (15) a. [[perr] **ɔ**]
 b. _N [dog]

We first encountered these prenominal vowels when we set up to investigate whether or not the incorporation of N-drop—as in the a, b, and c prime examples in (16)—in Spanish L1 and child L2 grammars is directly dependent upon mastering the paradigm of determiners as such or is rather linked to the properties of lexical categories, specifically their [word marker] feature.

- (16) a. El abrigo negro
 [the coat black] / “the black coat”
 a’. El — negro (masc. sing.)
 [the — black] / “that black one”
 b. Las faldas de lunares
 [The skirts of polka dots] / “those polka-dot skirts”
 b’. Las — de lunares (fem.plur.)
 [the — of polka dots] “the polka-dot ones”
 c. La falda que tiene lunares
 [the skirt that has polka-dots] “the skirt with a polka-dot pattern”
 c’. La — que tiene lunares (fem. sing.)
 [the — that has polka-dots] “the one with a polka-dot pattern”

With this in mind, we carried out a longitudinal analysis of Determiner Phrases (DPs) produced by two children learning Spanish as a first language in Madrid, María (López-Ornat 1994) and Magín (Aguirre 1995), and two children learning Spanish as a second language also in Madrid, Adil and

Madelin (Aguirre 1996-1997). We analyzed all the transcripts available for Magín (from 1;8 to 2;7 years of age), María (from 1;7 to 3;11 years of age), Adil, a speaker of Arabic as a first language (18 interviews recorded at 2/3 weeks intervals between 14.10.1996 and 15.12.1997, when he was 4-5 years of age) and Madelin, an L1 Farsi/Swedish bilingual girl (15 interviews recorded at 2/3 weeks intervals when she was 8/9 years of age).

What we found was that in the case of María and Magín, the L1 children, the transcripts contained prenominal vowels such as the ones listed in (3) above. Thus, based on the transcripts available to us,⁸ we carried out an analysis of the evolution of these prenominal vowels in terms of gender agreement, as shown in Tables 1 and 3.

Table 1. MPHs and Gender. MARÍA (López Ornat 1994): L1 Spanish

	Type	Total	Non-Matching	% Non-Matching
1;7	e	34	2/34	5.88
	a	40	4/40	10
	o	1	—	—
1;8	e	5	—	—
	a	33	21/33	63.63
	o	2	—	—
	oa	—	—	—
1;9	e	38	2/36	5.26
	a	72	20/72	27.77
	o	1	—	—
1;10	e	27	—	—
	a	57	9/57	15.7
	o	8	1/8	12.5
	u	—	—	—
1;11	e	13	—	—
	a	19	1/19	5.26
	u	1	—	—
2;0	e	4	—	—
	a	13	4/13	30.76
	o	1	1/1	100
	u	—	—	—
	as	—	—	—
2;1	e	10	—	—
	a	6	—	—
	u	2	—	—
	as	1	—	—
2;2	e	13	—	—
2;5	e	4	—	—
	a	1	1/1	100

Tables 1 and 3 show that gender mismatches stop at approximately 2 years of age. Table 2, which we have taken from Lleó (2001d), shows the development of fillers into prenominals with gender markings. It is interesting to note that the pattern provided by the narrow phonetic transcription in the case of Lleó's subject, María, is basically the same (compare tables 1 and 2) except for the fact that accuracy in gender agreement shows up a little later. This suggests to us that children are

unconsciously activating the word marker (the neutral vowel) and the gender (the process of differentiation) features.

Table 2. Noun types, pronominal elements and gender agreement of pronominal elements produced by María between 1;1 and 2;3. [Lleó 2001d: 194]: L1 Spanish

Age	Noun types	Fillers + Noun	Fillers %	Masc Agr N	Masc Agr %	Fem Agr N	Fem Agr %
1;01,01	3	0	--	0	--	0	--
1;02,02	4	1	25	0	--	0	--
1;03,06	6	1	17	0	--	0	--
1;04,21	15	7	47	1/9	11	2/6	33
1;06,03	34	17	50	2/17	12	4/17	24
1;07,24	50	23	46	4/28	14	8/21	38
1;10,17	51	27	53	5/30	17	9/21	43
2;00,12	33	16	45	4/24	17	3/9	33
2;01,09	37	26	70	11/25	44	5/12	42
2;02,11	31	19	62	6/14	43	7/17	41
2;03,11	30	22	73	13/17	76	7/13	54

Table 3 . MPHs and Gender. Magín (Aguirre 1995): L1 Spanish

	Type	Total	Non-matching	% Non-matching
1;8	e	4	—	—
	a	8	4/8	50
1;9	e	4	—	—
	a	9	4/9	44.44
1;10	e	3	—	—
	a	23	2/23	8.69
1;11	e	10	—	—
	a	15	1/15	6.66
2;0	e	4	1/4	25
	a	2	—	—
2;1	e	—	—	—
	a	2	—	—
2;2	e	2	—	—
	a	1	—	—
2;3	e	1	—	—
2;5	e	1	—	—
2;6	e	2	—	—
2;7	—	—	—	—

Both children produce DP complements such as the ones listed in (17).

- (17) un cachorrito pequeño / a little puppy [María 3;10]
 la — azul / the blue (one) [María 2;11]
 una ‘cotita’ (gotita) de agua / a little drop of water [María 1;1]
 el — de las vaquitas / the (one) of the little cows [María 2;5]
 una cosa que he hecho / a thing that I have done [María 2;6]
 la — que está en mi cole / the (one) that is in my car [María 2;5]
- (18) un coche amarillo / a yellow car [Magín 1;10]
 otro — amarillo / another yellow (one) [Magín 1;10]
 la bolsa de los señores / the bag of the men [Magín 2;2]
 el — del pollito / the (one) of the little chicken [Magín 2;5]
 la tortuga que viene / the turtle that is coming [Magín 2;1]
 unos — que te pican / Some (ones) that bite you [Magín 2;1]

In terms of the actual Determiner used, we should point out that Magín is the only one who, according to the transcripts, produced prenominal vowels with DP complements as shown in (19).

- (19) Det N AP: Un, el, a, la, una, e, los, las, otra
 Det _N∅ AP: Otro, ese, este, un, uno, los, las, [e], el, toda, la, eso, una
 Det N PP: E, todo, la, un, el, su, una, las
 Det _N∅ PP: Las, el
 Det N CP: La
 Det _N∅ CP: Unos, el

María, as shown in (20), did not produce any prenominal vowel with DP complements. However, out of the four instances produced by Magín, only one was produced before a null Noun. This may indicate that these prenominals are not compatible with N-drop or, in our interpretation of their role, that N-drop is only productive when the [word marker] feature has been activated.

- (20) Det N AP: La, el, un, una, los, mis, las, mi las, mi
 Det _N∅ AP: Oto, ota, unos, una, uno, un, la, el, los
 Det N PP: Una, la, un, ota, las, unas, el, los, ninguna, mi, unos
 Det _N∅ PP: Eto, el, los, una
 Det N CP: Una, tu, el, la, un, los
 Det _N∅ CP: La, el, una, esta, uno, otro, esta

Tables 4 and 5 show a very low production of N-drop (the first number refers to the cases of N-drop as in the a, b, and c prime examples in (16) and the second to the total DP complements produced). However, if correlation in time suggest any type of causation, it is interesting to point out that DP complements only occur when gender markers take over.⁹

Table 4 . Production of N-drop. MAGIN (L1 Spanish)

Age	Det+Ø/+AP	Det+Ø/N+PP	Det+Ø/N+CP
1;10	1/3	—	
1;11	19/21	—	
2;0	1/1	—	
2;1	3/5	1/3	1/2
2;2	3/5	0/1	
2;3	2/6	0/2	
2;4	3/7	0/2	
2;5	4/8	1/2	
2;6	2/7	0/9	
2;7	0/2	1/2	
TOTAL	39/66 (59.09%)	3/21 (14.28%)	1/2 (50%)

Table 5 . Production of N-drop. MARÍA (L1 Spanish)

Age	Det+ Ø/N+AP	Det+Ø/N+PP	Det+Ø/N+CP
1;11	—	0/1	—
2;0	0/1	—	—
2;1	—	1/1	—
2;2	—	0/1	—
2;3	4/12	4/8	0/2
2;4	0/1	0/1	—
2;5	1/7	2/3	—
2;6	—	—	0/1
2;8	2/4	0/4	—
2;9	0/6	0/6	1/3
2;11	2/4	2/3	—
3;1	—	2/6	1/2
3;6	0/1	2/8	6/7
3;7	1/13	0/10	1/4
3;9	—	0/5	3/3
3;10	—	0/1	—
3;11	—	0/3	—
TOTAL	14/57 (24.56%)	13/61 (21.31%)	13/25 (52%)

Some of the DP complements produced by Adil and Madelin as listed in (21) and (22).

- (21) un gato persa / a Persian cat [Madelin #4]
 una — pequeña / a little (one) [Madelin #11]
- un niño con sus papas / a boy with his father [Madelin #3]
 una — con hamburguesa / a (one) with hamburger [Madelin #4]
 el mes que viene / the month that comes [Madelin #13]
 el — que está allí / the (one) that is there [Madelin #15]

- | | | |
|------|---|------------|
| (22) | un niño pequeñito / a little boy | [Adil #6] |
| | los — grandes / the big (ones) | [Adil #9] |
| | los amiguitos de Paquito / the friends of Paquito | [Adil #8] |
| | la — de arriba / the (one) of upstairs | [Adil #16] |
| | este perro que está hablando por teléfono / | |
| | the dog that is talking on the phone | [Adil #11] |
| | la que tiene ocho / the (one) that has eight | [Adil #18] |

With respect to the L2 children, the most important difference is, as we have already said, the absence of prenominal vowels. As for types of determiners, they show a pattern similar to the L1's (although somewhat poorer), as shown by the instances of determiners produce by Adil (23) and Madelin (24) respectively.

- | | | |
|------|---|---------------------------|
| (23) | Types of determiners produced with DP complements: ADIL | |
| | Det N AP: | Un, los, una, esa, el, mi |
| | Det NØ AP: | Los, el, la |
| | Det N PP: | Los, las, el, la, un |
| | Det Ø PP: | La, esa, esas |
| | Det N CP : | Este, un, esa, una |
| | Det Ø CP: | La |

- | | | |
|------|--|--|
| (24) | Types of determiners produced with DP complements: MADELIN | |
| | Det N AP: | Un, este, el, mi, los, una |
| | Det NØ AP: | Los, una, dos |
| | Det N PP: | Un, mi, el, una, las, mucho, la, los, muchas, esas |
| | Det Ø PP: | Una, uno, otra |
| | Det N CP : | El |
| | Det Ø CP: | El, un, los |

It should also be pointed out that the percentages of N-drop are also similar (tables 6 and 7) to the L1's. Another point of convergence between the L1 and the child L2 data is the total absence of gender mismatches in the very few cases of N-drop that occur. We may not have enough data, but it looks as if the referential property of the Determiner should be clearly established before N-drop occurs.¹⁰

Besides the absence of MPHs in the L2 data, we have found different patterns of mismatches between Adil and Madelin, the L2 children, as shown in tables 8 and 9. Given the numbers, the differences seem to be significant. It is highly possible that they are due to the different age of the children (4-5 and 8-9). But the previous linguistic experience of the two children was different too: L1 Arabic (Adil) versus Farsi/Swedish (Madelin).

Table 6. Production of N-drop. ADIL (L2 Spanish)

INTERVIEW	Det+Ø/N+AP	Det+Ø/N+PP	Det+Ø/N+CP
#3	—	—	—
#4	—	—	—
#5	—	—	—
#6	0/1	—	—
#7	—	—	—
#8	0/2	0/2	—
#9	1/2	—	—
#10	0/2	0/3	—
#11	—	—	0/1
#12	—	0/1	—
#13	2/4	0/1	—
#14	0/1	—	—
#15	0/1	0/1	—
#16	0/2	2/2	0/1
#17	2/5	1/2	0/2
#18	1/3	0/1	1/2
TOTAL	6/23 (26%)	3/13 (23.07%)	1/6 (16.60%)

Table 7. Production of N-drop. MADELIN (L2 Spanish)

INTERVIEW	Det+Ø/N+AP	Det+Ø/N+PP	Det+Ø/N+CP
#3	—	0/2	—
#4	0/2	1/7	—
#5	0/2	—	—
#6	—	0/1	—
#7	0/2	0/3	—
#8	0/3	0/5	—
#9	—	2/5	—
#10	—	4/9	—
#11	5/7	2/4	—
#12	0/2	1/4	3/3
#13	0/2	0/3	0/2
#14	0/3	1/3	1/1
#15	2/4	2/7	1/1
TOTAL	7/27 (25.92%)	13/53 (24.53%)	5/7 (71.42%)

In terms of mismatches, Adil seems to be closer to the L1 children. And these data clearly show that Madelin is the one who continues to have problems with gender morphology long after she uses N-drop productively, and in spite of the fact that she is the one who produces the highest number of DP complements with N-drop (tables 8 and 9).

Table 8. Gender mismatches with overt determiners

	Total DPs	mismatches	%
Magín	840	12	1.42
(L1)	1587	4	0.25
María			
(L1)			
Adil	297	6	2.02
Madelin	794	40	5.03

Table 9. Gender mismatches with DP complements

	AP	mismatches	%	PP	mismatches	%
Magín (L1)	27	1	3.7	18	1	5.5
María (L1)	43	1	0	48	—	5
			2.3			—
			2			
Adil (L2)	17	—	—	10	—	—
Madelin	20	4	25	40	4	10
(L2)						

This pattern has the flavor of the one that is systematically mentioned in the L2 literature (Lardiere 1998, among others), and that is taken as evidence for a divergence between morphological and syntactic competence.

4. Conclusions

4.1 The FDH revisited

We have proposed that in order to account for the logical problem of non-primary language acquisition the following components are to be taken into consideration: (a) a ‘mature’ UG as the initial state, which will develop into a natural language, though not exactly an I-language since the activation of features will not proceed as in L1 acquisition, due to the degree of phonoprosodic sophistication and specialization, which the non-primary language learner brings into the process, and (b) the “secondary domain-specific learning procedures” which correspond to a mature language processor¹¹.

These two components are not sensitive to language triggers, which amounts to saying that parameter-setting will not take place as in L1 acquisition. In other words, the establishment of a relationship among the various properties of a given parameter will not depend on the features of the target language but will rely on larger and more superficial language units and will be local (construction by construction). Accessing more complex units (words or maybe even phrases) instead of having the phonoprosodic structure trigger language specific features leads to restructuring rather than to parameter-setting.

It could be argued that the total inventory of features which is part of our genetic endowment is never lost as such. However, if the ability to activate features the way children do is lost, the “fundamental difference” will rest on this lack of accessibility. This implies that in L2 data (at least

after a certain age) we will not find the type of ‘catchalls’ that provide us with evidence of how L1 children activate formal features.

4.2. Interpretations of the catchall vowel of child L1 Spanish: divergence or convergence?

The various proposals concerning the presence of place-holders in child Spanish seem to converge in assigning a potential or an actual grammatical role to these elements, in spite of the differences as to the theoretical position (innatism versus constructivism), and in spite of the fact that some assign these ‘catchall’ vowels a phonoprosodic/syntactic content while others propose that they are to be interpreted as carrying semantic content, but always in relation to the features of Spanish functional categories.

Thus, we have shown that there is convergence in proposing that the phonoprosodic structure plays an important role in the activation of the formal features of the computational system in general (Bottari, Cipriani and Chilosi 1993/94, Lleó 2001a, 2001b, 2001c, 2001d, forthcoming; Licerias, Díaz and Mongeon 2000), or with the construction of phrase structure (López-Ornat 1997).¹² Authors also converge in terms of the order of acquisition of features, since both Bartra’s (1997) and Lleó’s (2001d; forthcoming) proposals imply that interpretable features are activated before uninterpretable ones. Bartra (1997) provides the early schwa with the ‘content’ [+referential] which is assigned to D° and C°, and she maintains that the ‘catchall’ vowel will encode other features eventually, the subsequent ones being [+/-definite] in the case of D° and [+/-assertive] in the case of C°. Lleó (2001d) also maintains that a [+definite] distinction occurs very early on and that the [+referential] value of the ‘catchall’ vowel is obvious because the pronominals only occur with specific presentational nouns, not with vocatives and not with words such as “yes” or “no”.

4.3. The catchall “*is*” of L1 and L2 English data: all that glimmers is not gold

Based on the above, it is obvious that if we find ‘catchalls’ that, unlike the schwa, have a similar status in both L1 and L2 grammars, this will provide evidence against the version of the FDP that we have argued for.

A case in question that may be explored is the “*is*” catchall of English L1 and L2 acquisition data as in (25) and (26) respectively.

- (25) L1 English
- | | |
|------------------------------------|-----------------|
| <i>Is</i> I can do that? | (Radford, 1990) |
| <i>Is</i> Ben did go? | (Radford, 1990) |
| <i>Is</i> you should eat an apple? | (Radford, 1990) |
| <i>Are</i> this is broke? | (Radford, 1990) |
- (26) L2 English
- | | |
|--|--------------------------|
| My dog <i>is</i> not like the cage | (Patrick; Tiphine, 1983) |
| Vava <i>is</i> want to go to the house | (Leatile; Suzman, 1999) |
| Me <i>is</i> finish | (Erdem; Haznedar, 2001) |

<i>Is</i> go	(Sun; Lee, 2001)
The boys <i>is</i> no have it	(Andrés, R16; Fleta 1999, in press)
Andrés <i>is</i> no want to sleep in the bus	(Beatriz, R13; Fleta 1999, in press)
The paper <i>is</i> not put it in the bin	(Carlos, R5; Fleta 1999, in press)
Me <i>is</i> no sit	(Diana, R11; Fleta 1999, in press)
The girl <i>is</i> the cookie	(Lakshmanan 1993/1994: 61)
The mother <i>is</i> go	(Lázaro 2000)
The dog and the reindeer <i>is</i> run	(Lázaro 2000)
The little boy <i>is</i> want the frog	(Lázaro 2000)
The boy <i>is</i> walk	(Lázaro 2000)

For L1 English it has been proposed that “*is*” occupies a C⁰ position (Roeper 1992). However, for child L2 English, the various interpretations (Lakshmanan 1993/1994, Fleta 1999, Lázaro 2000, Haznedar 2001) have linked this “*is*” to Tense and Agreement positions or features. And this is so, because even though both “*is*” seem to have a similar phonetic value, they do not have a similar distribution. Notice that in the case of the examples in (25), “*is*” appears with inflected verb forms, while this is not the case for the examples in (26).

More work along these lines may tell us about the fundamental difference—or less fundamental but about the actual differences—that occur both between the nature and the process of L1 and L2 acquisition.

4.4. A program of research

If we go back to our two points of departure, fillers and features, what we would like to emphasize is that we need more research projects where constructs of linguistic theory help us to isolate L1/L2 differences and to test our hypotheses on the following types of data:

- Comparable L1/L2 data
- Longitudinal/experimental L1/L2 data
- Institutional/natural child and adult L2 data

With respect to the latter point, and given the importance attributed to the phonoprosodic structure of Spanish in the activation of the formal features of functional categories, the question that we would like to ask is whether a learning environment in which L2 learners are forced to pay attention to phonoprosodic features will favor the production of catchall units and whether this will lead to parameter-setting. We have in mind a scenario where exposure to an L2 takes place via immersion, without instruction. A case in point would be the acquisition of a language by immigrants who do not have access to an institutional setting.

Notes

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1. In the review carried out in Zobl and Licerias (1994), it is pointed out that why adult L2 learners seem to be sensitive to the free/bound morpheme distinction, while the L1 data seems to indicate that children are more sensible to the presence of all morphemes within a given functional category, so that they begin by acquiring the DP (articles and possessive marker - 's) before they acquire the V/INFL morphemes.
2. We have used the symbol @ that Bartra uses to indicate where place-holders occur in the examples that she discusses.
3. Bartra further agrees with Bottari, Cipriani and Chilosi's explanation of why MPHs occur with free morphemes, as well as in the fact that a similar phenomenon is not found in the case of bound morphology because well-formedness constraints on the phonological structure of words and bound morphemes limit the appearance of MPHs inside words.
4. This feature has the semantic value of closing a predicative Noun, converting it into a definite description. Bartra (1997) ventures a possible hierarchy for the acquisition of D° that would go, from first to last, as follows: [+referential] > [+definite] > [+/-plural] > [+/-case] > [+/-feminine] > [+/-person].
5. This corresponds to example (101) in Bartra (1997).
6. This is one of the various principles proposed within Optimality Theory.
7. Lleó points out that some children use fillers minimally, going almost directly into the use of articles; others seem to be trapped in the use of fillers, either because they do not pay much attention to phonological segments and use fillers to approximate the number of syllables of the target language, or because they have strong prosodic binarity constraints or other prosodic constraints.
8. To the best of our knowledge, Maria's phonetic transcriptions are not available but through Lleó's analysis.
9. PP seems to be the most reliable indication because APs may be treated like Nouns and CPs appear late in child data.
10. It would be interesting to have narrow phonetic transcriptions for these data, as well as to obtain experimental data for both L1 and L2 children.
11. The issue of maturation has had its ups and downs in the literature. In fact, while Borer and Wexler (1987), among others, talk about maturation of UG as such, other researchers (Rizzi 1994) prefer to talk about maturation of logical principles.
12. This activation will have important consequences for the acquisition of a number of computational properties of Spanish because this word marker feature will determine how categories merge (including directionality of merging as in the case of N-N compounding, (Licerias, in press).

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