THE SYLLABLE STRUCTURE: UNDERSTANDING SPANISH SPEAKERS PRONUNCIATION OF ENGLISH AS A L2

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Abstract. Many mispronounced English words by Spanish speakers can be attributed to the existence of different syllabic patterns in both languages. In this article we have examined a variety of examples taken from my experience as a teacher of English as a L2 in the University of Valladolid (Spain) and we have found explanation to many pronunciation mistakes due to transfer of the syllabic structure from the native language. This study has practical implications in the L2 classroom setting as teachers can identify some focus of difficulties are and can make special emphasis on these constraints and differences between the syllable structure in both languages so as to improve the students pronunciation and get a better understanding of the patterns underlying the new language.

Keywords: *Syllable structure, English L2, Spanish, pronunciation*

1. Introduction

The role the first language (L1) plays in the acquisition and learning of a second language (L2) has filled lots of pages of research devoted to Second Language Acquisition (SLA).[1] It has normally been considered as a threat to acquire a good competence in the L2 and something which should be avoided by all means. Nevertheless, the L1 is nowadays being recovered from its ostracism and is considered as something which is implicit in the language learner and cannot be obviated but must treated in its own right (cf. Auerbach 1993 and Dellar and Rinvolucri 2002).

The most relevant studies about the role of L1 in SLA and the idea of transfer were originally carried out by the American linguist Robert Lado in his Contrastive Analysis Hypothesis (CAH) (Lado 1957, 1964). This theory emphasises the role L1 plays in SLA and is based on the following ideas: a) that productive and receptive skills of L2 speakers are influenced by their own L1; b) that differences in the L1 and L2 lead to difficulty in learning whereas similarities help in the language learning process; c) that there is positive and negative transfer or interference in SLA (facilitative, i.e. that helps the learning of the language as it uses elements which are similar in both languages, or inhibitive, i.e. that leads to errors in the target language due to differences in both systems).

This idea of transfer was later discredited by Chomskyan linguists –Corder (1967), Dulay, Burt and Krashen (1982)- who claimed that it is the structure of the L2 and not that of the L1 which guides acquisition, that differences between languages do not necessarily lead to learning difficulties, that certain L2 errors are shared by all learners regardless of their native language and that many of these errors resemble those made by children acquiring their L1.

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[1] Originally, the term "second" language refers to a language other than the first/mother tongue which is acquired in a natural context, whereas the term "foreign" refers to that language other than the first which is acquired and learnt in an artificial context. Nevertheless, the term "second" is widely used as a neutral term to refer both the "second" and "foreign" language, and although the sample used for this study clearly corresponds to a foreign language context, the use of the neutral term has been preferred.

In recent years, however, the reputation of the weak version of CAH has revived and therefore the importance of L1 in SLA. Thus, Selinker´s (1973) Interlanguage Theory claims that L1 transfer is one of the main characteristics of the learners system and that learners go through different stages of development from the L1 to the L2. In some parts of this continuum, students reach a stage of fossilization that prevents them from acquiring native competence in the Target Language (TL), and it is the transfer from L1 the main reason for fossilized errors.

A step beyond is taken by Cook with his Multicompetence theory in which he claims that L2 learners should be looked at in their own right, not as deficient native speakers, but as multicompetent speakers standing between two languages and cultures. This theory is based on the idea that cognitive processes of an L2 user are different from those of the monolingual and the two languages are not kept separated, as it had been previously believed, but are intercorrelated and influence each other (Cook 1996). Thus, this theory reinforces the idea that the mother tongue is something that is implicit to the L2 learner and the L2 learning process and is always present in the language learner, no matter how hard we try to leave it behind in the class.

Despite the negative connotations the L1 has had throughout the history of language learning, there is no evidence for better results using 100% target language methodology. On the contrary, it has been demonstrated that a moderate use of the L1 can have beneficial effects, so as to make the most of the learning, the students and teacher relationship, the students enjoyment and to fight against that feeling of frustration and the period of limbo in which some students struggle to know what is happening around them when the L2 is exclusively used (Duff and Polio 1990, Atkinson 1993, Auerbach 1993, Lyster and Ranta 1997, Cook 1999, 2001, Dellar and Rinvolucri 2002, Gómez-Martínez and Fuertes Olivera 2003, Gómez-Martínez 2005).

Based on these assumptions, we will analyse the differences and similarities of the syllable structure of English and Spanish so as to see whether they can explain the origin of the mispronunciations we have found among several group of students of English as a L2 in the Faculty of Translation and Interpreting at the University of Valladolid (Spain). Together with a description of the syllable structure in both languages, we will offer some insights on why the characteristics and constraints of the Spanish syllable may be used to explain frequent pronunciation of Spanish speakers and we will illustrate it with a variety of examples taken from my everyday teaching.

2. Description of the Syllable Structure

Phonetically (i.e. in relation to the way syllables are produced and sound), syllables consist of a centre which has little or no obstruction to the airflow and which sounds comparatively loud (nucleus-N-) and a greater obstruction to airflow and less loud sound before and after this centre (onset -O- and coda -Cd-) (Chomsky & Halle 1991, Quilis 1993, Roca & Johnson 1999).

A syllable constitutes a rise and fall of sonority, i.e. sonority goes up from the onset to the nucleus (the peak in sonority) and then down to the coda showing that the syllable ends there. The nucleus is normally embodied by vowels as they have more sonority than consonants. So as to understand this phenomenon, Roca and Johnson (1999) argue that we typically shout [oy] and [eh] i.e. a fairly open vowel carrying the call, or lengthen the vowel for emphasis -i.e. heeeelp -, but we never use a combination of consonants. The nucleus is also flanked by segments of lower sonority, i.e. consonants which make up the onset and the coda. In sum, the nucleus is the most important part of the syllable -as it is compulsory in

order to constitute one- and the syllabic typology options are as follows: N ; N+Cd; O+N; O+N+Cd.

The nucleus and the coda group together in a constituent called "Rhyme", named after the poetic rhyme which works by matching just that part of the last syllable of a line. The rhyme is divided into the peak (normally the vowel) and the coda (normally a consonant). The syllable structure is represented in the following figure.
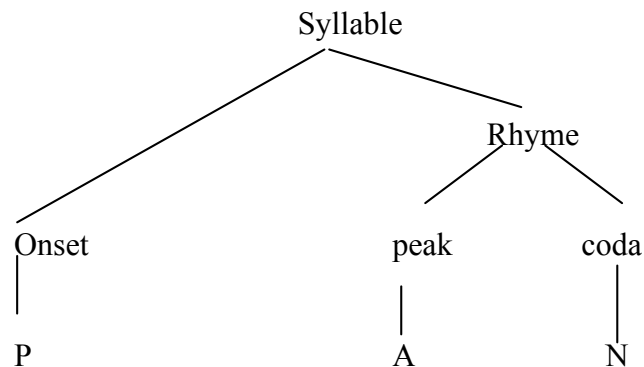

Figure 1: The syllable structure (based on Roca & Johnson (1999: 245)).

The most basic syllable structure is Consonant (C) + vowel (V). Hence, children´s early utterance at the age of six or nine months combines this basic structure by babbling consonants and vowels and not a string of just consonants or just vowels ([bmk] or [aae]). Secondly, children distort adult speech, saying [bæ:] for bird and [ka] for cup, a fact that is said to be common and seems to obey to certain unwritten and unconscious laws (Roca & Johnson 1999). Finally, C+V is almost universal as there are very few languages in the world that do not have it.

3. Differences and similarities between Spanish and English syllable structure

In addition to these "universal" features, English and Spanish offer similarities and differences. The similarities focus on the role of the nucleus and the typology of the syllables. Thus, in both languages, the nucleus is essential and the coda and the onset are optional, as we see in Spanish a.mo, o.í.a, ta.re.a or in English a.shes, e.mir.

Secondly, they contain the following similar syllable types, as we can see in the following data:

(1)   a.   Spanish: CV (me.sa); CVV (cie.lo); CVVV (buey) CVC (cap.tu.rar); CVVC (cien.to); CCV (cru.cial); CCVV (true.que); CCVC (trac.tor); CCVVC (trein.tena) CVCC (cons.tru.ir); CCVCC (trans.por.tar.); V (a.la); VV (ai.re); VC (ac.tor); VVC (ais.lar); VCC (ins.truc.ción).[2]

       b.   English: CV (<u>co</u>.lic); CVV (<u>rai</u>.ny) CVVV (<u>beau</u>.ty) CVC (<u>lim</u>.bo); CVVC (<u>pain</u>.less); CCV (<u>tra</u>.ge.dy); CCVV (<u>trai</u>.ning); CCVC

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[2] Rafael Guerra (1983) carried out a research study on the frequency of syllabic structures in spoken Spanish. Results show that the basic syllable structure (CV) scores the highest with a 55.81%. Distribution of results is as follows: CVC (21.61%), V (9.91%), VC (8.39%), CCV (3.14%), CCVC (0.98%), VCC (0.13%), CVCC (0.02%), CCVCC (0.01%).

(<u>trom</u>.<u>bo</u>.ne); CCVVC (<u>train</u>); CVCC (<u>land</u>.lord); CCVCC (<u>trans</u>.port);
V (<u>e</u>.vil); VV (<u>ai</u>.ry); VC (<u>al</u>.co.hol); VVC (<u>aim</u>); VCC (<u>ins</u>.tru.ment).

Despite these similarities, there are also differences. Firstly, the nucleus of the English syllable may fall on a consonant, whereas in Spanish this is not possible; secondly, final consonant clusters in Spanish are not as common as in English; and finally, there is an almost direct correspondence in Spanish between spelling and sound whereas in English one grapheme may have different pronunciations and some are not even pronounced. Since these differences may explain the mispronunciations here reported, they are commented in detail below.

3.1. The Nucleus

This is the essential component in the syllable which constitutes the peak of sonority. In Spanish, the nucleus is always constituted by a vowel, and its number can vary from one, to two -dipthongs- or three -tripthongs-.

Two are the types of dipthongs: a) Raising dipthongs which have a first vowel as a semiconsonant and the second vowel as the nucleus ([je] tie.ne, [jo] la.bio, [ja] su.cia, [ju] ciu.dad, [wa] a.gua, [we] sue.ca, [wi] rui.do, [wo] va.cuo), and b) falling dipthongs, where the vowel which constitutes the nucleus is placed before ([ai] ai.re, [ei] vein.te,[oi] hoy, [au] au.la, [eu] Ceu.ta, [ou] lo unió [lo unjó]). On the other hand, tripthongs are constituted by a central vowel, which makes up the nucleus and it is the one pronounced more energetically, flanked by two semi-consonants or semivowels: [uai] a.ve.ri.güais, [uei] san.ti.güéis, etc..

Despite the fact that some languages do have consonants as nucleus, the Spanish language only accepts vowels as nucleus of syllables.[3] There are other languages however, such as English, German or Czech which allow consonants such as l, r or a nasal to stand at the centre of the syllable, and are called syllabic consonants, for example: tunnel [tʌ.nl], brother (in rhotic accents) [bɹʌ.ðɹ], mutton [mʌ.tn], prism [pɹɪ.zm].

The pronunciation of this type of syllables is difficult for the native speakers of these languages as it breaks up the basic syllabic structure, and it turns to be very difficult for Spanish speakers as the Spanish language exclusively has vowels as nucleus: Thus, we find that in a few accents of English cattle is pronounced as [kætəl] instead of [kætl].[4] In order to overcome this pronunciation problem, Spanish speakers tend to add a vowel.to this syllabic consonant by analogy to their L1 pronunciation, therefore transforming it to the basic syllabic structure. My students added the following: /e/ in words such as parcel *[pa:sel], kernel *[k3:nel]; /o/ in couple *[kʌpɒl], trouble *[trʌbɒl], knuckle *[nʌkɒl]; /a/ in petal *[petal], pedal *[pedal], ducal *[dju:kal].

Pronunciation gets complicated when there is a combination of syllabic consonants in words such as national, literal or visionary. In these cases, two vowels instead of one are normally introduced by Spanish students of English. My students tend to resort to the following vowels: /io/ and /a/ for national and visionary pronounced as *[nasional] and *[visionari] instead of [næʃənl] and [vɪʒənɛɹɪ]; and /e/ and /a/ for literal pronounced as *[literal] instead of [lɪtərəl].

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[3]The only exceptions are words such as Iztaccíhuatl, Citlattépetl, Popocatépetl (names of three Mexican volcanoes).The sequence tl cannot constitute a coda as we would break the sonority hierarchy, therefore, it constitutes a different syllable with a syllabic consonant l̆ (see section 1). Nevertheless these are the original words and have been adapted to modern Spanish pronunciation: an a has been added as the nucleus of the final syllable - Iztaccíhuata- or the t has been omitted so that the l works as the coda in a CVC syllable: Popocatepel.
[4]It is usual to indicate that a consonant is syllabic by means of a small vertical mark.

3.2. The Onset

The onset is the initial phase of the syllable which precedes the nucleus and is represented by consonants, following the sonority sequencing of the syllable structure. Any consonant or pair of consonants can constitute an onset in Spanish except <y> or <ll> followed by <i> (Quilis 1993). The combination of these consonants, however, must follow the Principle of Sonority sequencing which accounts that sonority must always go up until it reaches its peak and then falls (Roca & Johnson 1999), therefore, the first consonant in the pair must be less sonorous than the second so as to reach its peak in the vowel, i.e. the nucleus coming afterwards.

There is a sonority hierarchy, i.e. a scale which ranks the segment classes on the basis of sonority and it is as follows: 1) vowels, 2) liquids, 3) nasals, 4) obstruents. According to this scale, we find the following pair of consonants which can constitute an onset in Spanish: <br, bl, cr, cl, fr, fl, gr, gl, pr, pl, dr, tr> in examples such as : a.brir, ta.bla, a.cró.ni.mo, cí.cli.co, co.fre, a.flo.jar, o.gro, si.gla, a.pre.mio, a.plau.so, la.drar, and a.tra.par.

Because of the principle of sonority sequencing, we will never find onsets such as <rb, lb>, etc, and given the case two consonants which contravene this principle were placed together in a word, they would be split in two different syllables, one consonant constituting the coda of the preceding syllable and the other consonant the onset of the following one as in cor.te, es.ca.fan.dra, and sus.to.

When a syllable is made up of a complex onset, the two consonants must also fulfil the Obligatory Contour Principle, which does not accept two consonants with similar places of articulation to be placed together (Roca & Johnson 1999). For instance, although sequences such as <tl> and <dl> do not contravene the Principle of Sonority Sequency (obstruent-less sonorous-, liquid -more sonorous-), [l] shares the specification (coronal) with [t] and [d], thus making this compound not possible. There is an exception though with Mexican towns where [tl] is accepted in onsets: Tlacho, Tlacopan, Tlahualillo, Tlalnepantla, Tlapla de Comfort, Tlapacoyán, Tlaquepaque, Tlascala, Taxcala, Tlaxco and Tlaxiaco. In the rest of those cases where we find the sequence <tl>, we divide the pair of consonants into the coda of the preceding and the onset of the following syllable as in at.las, and at.lán.ti.co.

Once we know the characteristics of Spanish onsets, we will analyse how foreign words are adapted according to the aforementioned principles and the reasons why Spanish students of English find difficulties in certain English words which differ in their syllabic structure.

English, for instance, has complex consonant clusters as onsets - an initial and post initial consonant-; thus, we find combinations such as <pl, tr, kl, bl, br, dr, gl, fl, fr> etc, which do exist in Spanish and do not present any difficulties to our students. However, the combination of pre-initial <s> plus initial consonant/s such as <c/k, l, m, n, p, q, k, t, v, w> is not used in Spanish. That could be the reason why Spanish speakers of English tend to mispronounce words such as scale, skate, slow, smoke, snake, speak, squab, stew and svelte. Something we observe in our everyday classes is that students add an e before the pre-initial consonant so as to constitute a different syllable where the epenthetic e is the nucleus and then make the word pronounceable according to their L1 pronunciation rules. Thus they mispronounce these words as *[es.keɪl], *[es.keɪt], *[es.ləʊ], *[es.məʊk], *[es.neɪk], *[es.pi:k], *[es.kwɒb], *[es.tju:], and *[es.velt].

As a result, English loanwords such as sport, stock, boy scout, stand, keep the English form but have been adapted to the Spanish pronunciation according to its syllable structure constraints. Thus, the usual pronunciation would be sport *[es.por], stock *[es.toc], boy scout *[boi.es.kau], and stand *[es.tan].

3.3. The Coda

The coda is the final part of the syllable which is constituted by a consonant representing a decrease in sonority which indicates the end of the syllable. In order to analyse those consonants which form a coda, we need to make the distinction between those consonants in implosive position at the end of the syllable - <b> (ob.ser.var), <p> (ap.to), <d> (ad.ver.bio), <t> (at.lan.te), <g> (a.míg.da.la), <l> (cul.pa), <m> (im.po.pu.lar), <n> (in.fier.no), <r> (per.ple.ji.dad), <z> (gaz.pa.cho), <s> (des.pren.der)- and those implosive at the end of the word - <d> (alud), <z> (lá.piz), <s> (tos), <n> (clan), <r> (par) and <j> (reloj). These are the only options allowed in Spanish language; others than these are loanwords which either remain the same - frac, chip, jet, crack-, lose the final consonant when being pronounced (boy-scout [bói es.cáu], cabaret [ka.ba.ré]) or are adapted into Spanish as chibalete (from the French "chevalet"), chalé (from "chalet") and bate (from "bat").

An important characteristic of the Spanish language which distinguishes it from other languages such as English is the lack of complex codas and its preference for open syllables. An "open syllable" is defined as the syllable which ends in a vowel (the vowel is said to be free) in contrast with "close syllables" which end in one or more consonants (the vowel is then said to be blocked) (Quilis 1993). The exception to this rule are the complex codas with <s> in implosive position at the end of the syllable, such as abs.te.ner.se, ads.cri.bir, ins.ti.gar, and Ams.ter.dam but never at the end of the word; thus, words ending in a consonant form their plural by adding <-es> instead of a simple <s> : alud- aludes; lápiz- lápices; clan- clanes; par- pares; reloj- relojes.

Due to these restrictions, loanwords follow different processes when adapted to the Spanish language. On the one hand, there are some situations where consonant clusters remain the same, as in golf, film, and flirt. In these examples they do not show phonological constraints, maybe because it is easier to pronounce monosyllables or because speakers already know their derivative words: golfista, filmar, filmación, filmología, flirtear, and flirteo. On the other hand, we find loanwords which remain in their original form but pronunciation is adapted to Spanish: Shopping [só.pin], camping [cám.pin], rafting [ráf.tin], ranking [rán.kin], footing [fú.tin], zapping [θá.pin], casting [kás.tin], test [tés], pressing [pré.sin], stand [es.tán], snowboard [es.nóu.bor], skateboard [es.kéit.bor], smoking [es.mó.kin], and standard [es.tán.dar]. Finally, on the other pole of the continuum, we find loanwords which have been adapted to Spanish syllable structure, thus, only one consonant is kept in implosive position at the end of the word, as in pimpón (from ping-pong) and crol from crawl.

4. Conclusions

Throughout this article, we have analysed how the study of the syllable structure can help us to understand that words are not a random selection of phonemes and that there are some underlying principles which govern the combination of sounds. The knowledge of these syllable structure constraints is relevant for a better understanding of how sounds interact with each other, how words can be divided and how this affects pronunciation. This turns out to be particularly useful in L2 learning as it helps us to understand how both L1 and L2 work, how they interact, how L1 tends to be transferred into L2, what the main focuses of difficulties in writing and pronunciation are and how we can tackle them.

Moreover, the contribution of this paper is to provide a small corpus of mispronunciations of English words which both teachers and learners of English as L2 in the Spanish speaking context will find familiar, and also to understand these patterns as

something natural and characteristic of Spanish students´ learning process. The importance of the use of the L1 in the L2 class is indirectly considered and supported here, as we cannot obviate that, despite the traditional English Only phenomenon in English Language Teaching, the L1 plays a key role in the L2 learners´ mental processes on the one hand, and can help them understand and become aware of most of the transfer errors on the other, as we have seen throughout this article.

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