

## SEQUENCES OF VOWELS IN SPANISH<sup>1</sup>

0. The patterning of contiguous vowel sequences in Spanish can contribute to the solution of several analytical problems:

1) It helps explain syllable tempo phenomena (or sentence rhythm).

2) It shows how and by what sequence relationships vowels can become semiconsonantalized or zeroed.

3) It helps define a syllable, at least at the center if not around the edges, since we can say that there are as many syllables in an utterance as there are vowels.

4) It provides another definition of plus juncture, or open transition, which is now well established in the inventory of Spanish phonemes<sup>2</sup>.

In Spanish utterances there is a regular occurrence of syllables that are considerably shorter than the statistical norm. Though these syllables of briefer duration cannot be correlated with stress (as in English), beyond the fact that a short syllable must be weak stressed, they are predictable in other terms, namely by the occurrence of vocalic in normal transition. A preceding or an unstressed vowel in a sequence of vowels is shorter, which can be illustrated by the following

<sup>1</sup> An earlier draft of this paper was read at the Summer meeting of the Linguistic Society of America, Georgetown University, Washington D. C., 1955.

<sup>2</sup> See Robert P. Stockwell, J. Donald Bowen, and I. Silva-Fuenzalida, "Spanish Juncture and Intonation",

*Language*, 32. 4, (1956). See also I. Silva-Fuenzalida, "Estudio Fonológico del Español de Chile", *Boletín de Filología*, Vol. VII, 1952-3, Santiago, Chile, and "Syntactical Juncture in Colloquial Chilean Spanish", *Language* 27.1, (1951).

pairs of Spanish words, each of which differs only by the presence of a consonant in one form between two vowels which are adjacent in the other form:

|          |           |
|----------|-----------|
| /aorádo/ | /adorádo/ |
| /faetón/ | /fasetón/ |
| /noemí/  | /notemí/  |
| /leál/   | /legál/   |
| /aóra/   | /adóra/   |
| /peón/   | /peñón/   |
| <br>     | <br>      |
| /púa/    | /púra/    |
| /lóa/    | /lóka/    |
| /día/    | /díča/    |
| /léo/    | /lébo/    |

The pattern which emerges seems to be:

VV (a very short vowel followed by a vowel of normal duration).

$\overset{\uparrow}{V}V$  (a *stressed* vowel of normal duration, followed by a short vowel).

compared to VCV (two vowels, both of normal duration, separated by a consonant).

Adjacent syllables which bring vowels into juxtaposition can be pronounced in several different ways (determined by the style choice of the speaker, rather than the structure of the sequence). The pronunciations in close or normal transition are those indicated by the preceding formulae, consisting of a shortening of the preceding or unstressed vowel in the sequence. In addition to the patterned possibility of shortening, further reductions are also frequent, which have to be analyzed as morphophonemic variations, since a change in the phoneme sequence is always involved. If there is no phonemic modification or phonetic shortening present, that is to say, if both vowels are equally long, I would say that this pronunciation implies something *besides* normal transition, namely a plus juncture between the adjacent vowels. Such a pronunciation is possible, but foreign to any but the most artificial kind of speech. Thus:

lo híce  
se habla  
va a comer

(with the underlined vowels pronounced separately and distinctly) are correctly analyzed as:

/lo + íse/  
/se + ábla/  
/bá + akomér/

The purpose of this paper is to present the pattern of change that adjacent vowels undergo. Sequences are limited to combinations of two vowels for simplicity of presentation, though I believe that similar patterns can be worked out for the relatively rare longer sequences. For the purposes of description, vowel sequences can be divided into two groups: identical and non-identical. The first are very simple; the second, rather complex. The patterns are illustrated below.

1. Changes in *identical* contiguous vowels in normal colloquial Spanish. The pattern is /VV/ > /V/ <sup>3</sup>. It is possible that both vowels may be retained in open or in close transition, in which case the phonetic features and phonemic structure will be:

[VV] = /V + V/ (two vowels of equal length are vowel-plus juncture-vowel).

[V̆V] = /VV/ (a short vowel preceding a longer one are in normal transition).

But, if as is more probable, the reduction to one vowel occurs, the transition is of course close or normal. Perhaps this change can best be illustrated by listing a number of resulting ambiguities, which can be resolved by a lengthened vowel [V̆V] or more likely by the insertion of a /+ / between the two vowels. The following transcriptions are subject to the interpretations indicated <sup>4</sup>:

<sup>3</sup> The following symbols are used in this paper:

V = vowel: i e a o u

V<sup>hml</sup> = high, mid, low

C = consonant: p t k b d g f θ  
s ç h m ñ l r

S = semiconsonant: y w

stress: ' ˘

pitch: 1 2 3

internal open

juncture: +

terminal juncture: | ↓↑

ˆ = shortening (noted as a reminder in some phonemic transcriptions).

<sup>4</sup> Some of these pairs are not minimal, of course, in dialects where consonant allophones mark /+ / such as /s/ = [ʃ] before /C/ or /+ /, [s] elsewhere.

|            |  |                                      |   |
|------------|--|--------------------------------------|---|
| /ii/ > /i/ | / <sup>2</sup> é <sup>1</sup> míto↓/                   | Es mito.<br>Es mi hito.              | (It's a myth.)<br>(It's my milestone.)                |
|            | / <sup>2</sup> sílo <sup>1</sup> tyéne↓/               | Silo tiene.<br>Si hilo tiene.        | (He has a silo.)<br>(If he has thread.)               |
| /ee/ > /e/ | / <sup>2</sup> kré <sup>1</sup> okesángo↓/             | Creo que salgo.<br>Creo que es algo. | (I think I'm going out.)<br>(I think it's something.) |
|            | / <sup>2</sup> kés <sup>1</sup> és <sup>1</sup> o↓/    | ¡Qué seso!<br>¿Qué es eso?           | (What a brain!)<br>(What's that?)                     |
| /aa/ > /a/ | / <sup>1</sup> está <sup>2</sup> yá <sup>1</sup> ndo↓/ | Estallando.<br>Está hallando.        | (Bursting.)<br>(Is finding.)                          |
|            | / <sup>2</sup> lá <sup>1</sup> bá↓/                    | Lava.<br>La haba.                    | (He washes.)<br>(The horse bean.)                     |
| /oo/ > /o/ | / <sup>2</sup> és <sup>1</sup> ótro↓/                  | Es otro.<br>Eso otro.                | (It's another.)<br>(That other.)                      |
|            | / <sup>1</sup> sin <sup>2</sup> ol <sup>1</sup> ór↓/   | Sin olor.<br>Sino olor.              | (Without odor.)<br>(Except odor.)                     |
| /uu/ > /u/ | / <sup>1</sup> konsú <sup>2</sup> mo <sup>1</sup> ↓/   | Consumo.<br>Con su humo.             | (I consume.)<br>(With his smoke.)                     |
|            | / <sup>2</sup> súr <sup>1</sup> to↓/                   | Surto.<br>Su hurto.                  | (I supply.)<br>(His theft.)                           |

## 2. Changes in *non-identical* contiguous vowels in normal colloquial Spanish.

In general, when two vowels which are not identical are placed together, the first (unless there is some interference from the stress pattern) normally undergoes some type of modification, which may be shortening, semiconsonantalization, or reduction. Since these changes are somewhat more complex, they are treated in groups according to the type of change and the pattern it occurs in.

2.1 *High or mid front vowels* before another vowel (except /e/ before /i/) become semiconsonant /y/ : /iV/ and /eV (-i) / > /yV/.

The following minimal pairs illustrate this change:

| A             | B                             | C                                |
|---------------|-------------------------------|----------------------------------|
| Before:       | /i/ = [ i̞ ] > /y/            | /y/                              |
| /e/ /syésta/  | si ésta (if this)             | siesta (afternoon nap)           |
| /a/ /myásma/  | mi asma (my asthma)           | miasma (miasm)                   |
| /o/ /myoséna/ | mi ocena (my foul breath)     | miocena (Miocene)                |
| /u/ /myúra/   | mi hura (my car-buncle)       | miura (person name)              |
| Before:       | /e/ = [ ɛ ] > /y/             | /y/                              |
| /i/           | (excepted)                    | (doesn't occur)                  |
| /a/ /kyásma/  | que asma (than asthma)        | quiasma (part of animal's spine) |
| /u/ /dyúrna/  | de urna <sup>5</sup> (of urn) | diurna (diurnal)                 |

The forms in column B may or may not appear as transcribed in column A, i.e., they appear as [VV] as well as /SV/. The point is that they *can* and frequently *do* appear as /SV/ and cannot be then considered as incorrect or sloppy.

The picture is balanced neatly on the other side of the vowel triangle.

2.2 *High and mid back vowels* before another vowel (except /o/ before /u/) become semiconsonant /w/: /uV/ and /oV (-u) / > /wV/.

The following minimal or near minimal pairs illustrate this change:

<sup>5</sup> Not to be confused with the complex nucleus of /dewdór/ *deudor* (debtor), i. e. /yu/, not /ew/.

| A             | B                               | C                          |
|---------------|---------------------------------|----------------------------|
| Before:       | /u/ = [u] > /w/                 | /w/                        |
| /i/ /swi . ./ | su isla (his island)            | suiza (Swiss)              |
| /e/ /swéko/   | su eco (his echo)               | sueco (Swedish)            |
| /a/ /swábe/   | su ave (his bird)               | suave (smooth)             |
| /o/ /wó . ./  | su oca (his goose)              | cuota (quota)              |
| Before:       | /o/ = [ɔ] > /w/                 | /w/                        |
| /i/ /lwísa/   | lo iza <sup>6</sup> (hoists it) | Luisa (Louise)             |
| /e/ /nwés/    | no es (isn't)                   | nuez (nut)                 |
| /a/ /ywá . ./ | yo ando (I walk)                | yuambu (gallinaceous bird) |
| <br>          |                                 |                            |
| /u/           | (excepted)                      | (doesn't occur)            |

This leaves the possibility of clustering a low central vowel with another vowel. There is a two way pattern, before a high vowel and before a mid vowel.

2.3 Before a high vowel /a/ may be shortened, but usually the high vowel is semiconsonantalized: /aV<sup>h</sup>/ (= [a<sub>ɾ</sub>V<sup>h</sup>]) > /aS/. Thus:

/baybén/ va y ven (he goes and vaivén (fluctuation  
you see)

but: /bāibén/ va y ven (he goes and  
you see)

The tendency for the change from /ai/ to /ay/ can be noted when a derivational suffix shifts the lexical stress, as in:

/país/ país (country); but /paysáhe/ paisaje (country—  
side)  
/maís/ maíz (corn); but /mayséna/ maicena (corn flour)

It is perhaps significant that some Spanish dialects have changed the first forms to /áy/ shifting the stress to the /á/:

/páys/ país  
/máys/ maíz

<sup>6</sup> Not to be confused with the complex nucleus of /sóy/ soy (I am), i.e. /wi/, not /oy/.

Likewise:

/awsénsya/a Usencia (to your reverence)      ausencia (absence)  
 but: /ɤúsénsya/a Usencia (to your reverence)

As in the case of /ai/, /au/ readily becomes /aw/ when a derivational suffix shifts the stress, as in:

/baúl/ baúl (trunk); but /bawlsító/ baulcito (small trunk)

/rraúl/ Raúl (Ralph); but /rrawlító/ Raulito (Rolly)

2.4 Before a mid vowel /a/ is shortened or is dropped.

The /ae/ and /ay/ are kept clearly apart:

/laéko ~ léko/ la Eco (Miss Echo) but /láyko/ laico (lay)

Similarly:

/laesposa ~ lespósa/ la esposa (the wife)  
 /laembaháda ~ lembaháda/ la embajada (the embassy)  
 /kyoraés ~ kyórés/ ¿Qué hora es? (What time is it?)

Also /ao/ and /aw/ are kept distinct:

/laóra ~ lóra/ la hora (the hour); but /lávra/ Laura

Similarly:

/laórka ~ lórka/ la horca (the gallows)  
 /laortografía ~ lortografía/ la ortografía (the orthography)  
 /laoportunidad ~ loportunidad/ la oportunidad (the opportunity)

The changes /ae/ > /e/ and /ao/ > /o/ have been illustrated as occurring at morpheme boundaries, but it is quite possible for them to occur within morphemes as:

/maestríta ~ mestríta/ maestríta (little teacher)  
 /aoríta ~ oríta/ ahorita (right away)

The combinations of front mid plus front high, and back mid plus back high, which were excepted earlier, pattern like the low plus mid just described.

2.5 An /e/ before /i/ and an /o/ before /u/ are shortened or dropped.

The sequences /ei/ and /ey/ are rarely confused:

/se̞isába ~ sisába/ se izaba (was being hoisted) /seysába/ seisaba (sixth,

Similarly:

/se̞inča ~ sínča/ se incha (swells)  
 /se̞interésa ~ sinterésa/ se interesa (is interested)  
 /se̞esté̞íntimo ~ esté̞íntimo/ este íntimo (this intimate)

and in compound numerals with /béynte/, 'veinte' as /béyntiuos, béyntisínko/, veintidós, veinticinco, etc. One expression illustrates the potential drop of /e/ before /i/ especially well. When the question "What time shall I meet you?" is answered /'álasdós<sup>1</sup>imédyá<sup>2</sup>↓/, there usually follows a request for clarification. Is /dós (imédyá) / 'dos y media' or /dóse (imédyá) / 'doce y media' intended? It makes a difference of two hours, which is too long to wait on a street corner, even in Latin America.

Likewise, an /o/ before a /u/ patterns as /ou/ or /u/. There's no chance of confusing /ou/ with /ow/ because /ow/ can be established only syntactically, and under a different stress pattern. Otherwise /ou/ patterns just like /ei/:

/loútil ~ lútil/ lo útil (the useful)

And similarly:

/loúniko ~ lúniko/ lo único (the unique)  
 /téngouno ~ ténguno/ tengo uno (I have one)  
 /domíngouúltimo ~ domíngúltimo/ domingo último (last Sunday)

3. Changes in *non-identical* contiguous vowels in normal colloquial Spanish *when the first is stressed*.

When a strong stressed vowel is brought into juxtaposition with a following weak stressed vowel (/VV/) there are regularly modifications of semiconsonantalization, shortening, or zeroing accom-

panied by a stress shift to the second vowel. These patterns of change, though not the same for all speakers or for all dialect areas, are all storable. Two variant patterns are listed below:

- 3.1 A stressed vowel followed by a high vowel (/i/ or /u/) changes to the sequence of a stressed vowel followed by a semiconsonant (/y/ or /w/), though sometimes changing to the sequence of zero followed by the second vowel; expressed by formula as: / $\dot{V}V^h$ / > / $\dot{V}S$ / (~ / $\emptyset V$ /).

|                      | Pattern I | Pattern II (points of variance from I listed) |
|----------------------|-----------|---|
| Before /i/           |           |   |
| /é/ que esté Inés    | /éy/      | /i/   |
| /á/ está Inés        | /áy/      | /í/   |
| /ó/ habló Inés       | /óy/      |   |
| /ú/ y tú Inés        | /úy/      |   |
| Before /u/           |           |   |
| /i/ sí Unamuno       | /íw/      |   |
| /é/ que esté Unamuno | /éw/      |   |
| /á/ está Unamuno     | /áw/      |   |
| /ó/ habló Unamuno    | /ów/      |   |

- 3.2 A stressed vowel followed by a mid or low vowel is pronounced with the second vowel shortened, though sometimes the first vowel is zeroed out and the second vowel is regularized to normal duration; expressed by formula as: / $\dot{V}V^{m1}$ / [ $\dot{V}V^{m1}$ ] (~ > / $\emptyset V$ /).

|                      | Pattern I | Pattern II (points of variance from I listed) |
|----------------------|-----------|---|
| Before /e/           |           |   |
| /i/ sí Elena         | /ie/      | /é/   |
| /á/ está Elena       | /áe/      | /é/   |
| /ó/ habló Elena      | /óe/      |   |
| /ú/ y tú Elena       | /úe/      |   |
| Before /o/           |           |   |
| /i/ sí Orlando       | /io/      |   |
| /é/ que esté Orlando | /éo/      |   |
| /á/ está Orlando     | /áo/      |   |
| /ú/ y tú Orlando     | /úo/      |   |

Pattern I      Pattern II (points of variance from I listed)

Before /u/

|                     |       |
|---------------------|-------|
| /í/ sí Alicia       | /īa/ |
| /é/ que esté Alicia | /é̄a/ |
| /ó/ habló Alicia    | /ó̄a/ |
| /ú/ y tú Alicia     | /ú̄a/ |

4. Changes in *non-identical* contiguous vowels in normal colloquial Spanish *when both are stressed*.

The pattern of change is fairly simple to describe. Unless both stressed vowels are retained by the occurrence of a /+/ between them, the first stress is dropped and the sequences then pattern as if they were /VV/, i.e., as described in sections 1 and 2 above. Following are a few short sample utterances in open and in normal transition:

|                     | junctural (slow, careful)                                   | normal                          |
|---------------------|---|---------------------------------|
| ¿Qué anda haciendo? | /k <sup>2</sup> +ánda+asyéndo <sup>1</sup> ↓/               | /kyándasyéndo <sup>1</sup> ↓/   |
| ¿Qué hora es?       | /k <sup>2</sup> +óra+és <sup>1</sup> ↓/                     | /kyóres <sup>2 1</sup> ↓/       |
| Sólo entró una.     | /sólo+entró <sup>1</sup> +úna <sup>1</sup> ↓/               | /sólwentrúna <sup>1</sup> ↓/    |
| Que esté íntimo.    | /ke+esté <sup>2</sup> +íntimo <sup>1</sup> ↓/               | /kestíntimo <sup>1 2 1</sup> ↓/ |
| ¿Dónde está Ana?    | /dónde <sup>2</sup> +está <sup>1</sup> +ána <sup>1</sup> ↓/ | /dóndestána <sup>1</sup> ↓/     |

5. In summary then, if two vowels in a sequence appear with equal duration, there is a plus juncture between them. Each vowel, of normal duration or shortened in normal transition, is the center of a separate syllable. Shortened vowels tend to become desyllablized by semiconsonantalization or by dropping.

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