

Spanish Phonemics

1. Phonemes

Consonant Phonemes

		<i>bilab</i>	<i>labiodental</i>	<i>dental</i>	<i>alveolar</i>	<i>palato-alveoal</i>	<i>palatal</i>	<i>velar</i>
<i>Stops</i>	<i>vl.</i>	p		t				k
	<i>vd.</i>	b		d				g
<i>Fricatives</i>	<i>vl.</i>		f		s			x
<i>Affricates</i>	<i>vl.</i>					č		
<i>nasals</i>		m			n		ɲ	
<i>laterals</i>					l			
<i>taps/trills</i>					r			
<i>semivowels</i>		w					y	

Note: the phoneme symbols /t/ and /d/ represent *dental* stops (phonetically [t̪] and [d̪]). In addition to the nasal phonemes /m/, /n/, and /ɲ/, there is /N/, which is underspecified for point of articulation.

Vowel Phonemes

	<i>Front</i>	<i>Central</i>	<i>Back</i>
<i>High</i>	i		u
<i>Mid</i>	e		o
<i>Low</i>		a	

2. Allophones

phoneme	allophones	rules
/b/	[β], [b]	stop-fricative
/d/	[ð], [d̪]	
/g/	[ɣ], [g]	
/s/	[z], [s]	s-voicing
/N/	[m], [ɱ], [ɲ], [n], [ɳ], [ŋ]	nasal assimilation
/n/	m], [ɱ], [ɲ], [n], [ɳ], [ŋ]	
/l/	[ɭ], [l], [ʎ]	lateral assimilation
/r/	[r̄], [r]	r-strengthening, tap deletion
/y/	[ÿ], [y̞], [y]	y-strengthening, stop-fricative

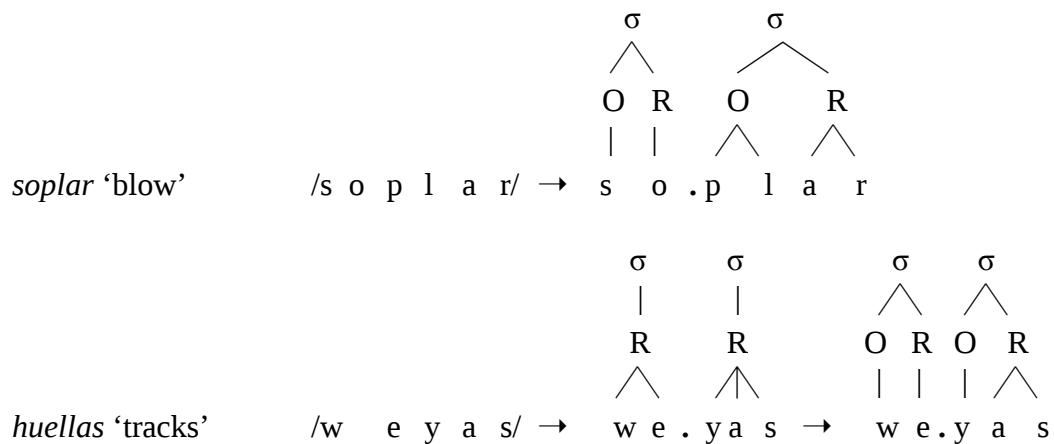
3. Rules

The rules should be applied in the order in which they are listed here (in some cases the order is crucial, in some cases it is not).

SYLLABIFICATION

Construct syllables word-by-word, from right to left. First put as much as you can into the nucleus (a diphthong or a vowel), add any free material on the right to the coda, then add a *maximal* onset, so long as the result is a possible onset. If the result is an onsetless syllable that begins with a semivowel, promote the semivowel to the onset ('semivowel promotion').

Examples:



STRESS

If there is no phonemic stress, place stress on the syllable that contains the penultimate mora (i.e., the final syllable, if it is heavy; the penultimate syllable if the final syllable is light). Ignore extra-metrical material when determining syllable weight.

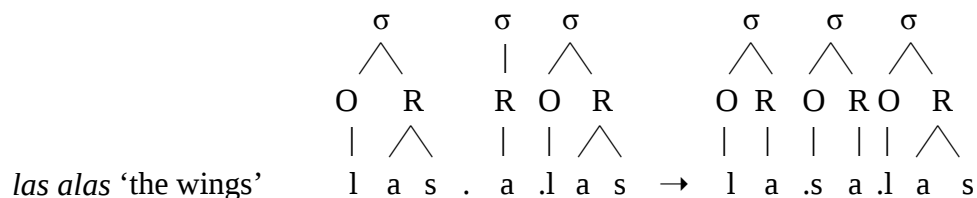
Examples:

<i>phonemic rep.</i>		<i>syllabification</i>		<i>stress</i>	<i>phonetic rep.</i>	<i>orthography/gloss</i>
/komo/	→	ko.mo	→	kó.mo	[kómo]	<i>como</i> 'I eat'
/felis/	→	fe.lis	→	fe.lís	[felís]	<i>feliz</i> 'happy'
/kastro/	→	kas.ɾro	→	kás.ɾro	[kás ɾro]	<i>Castro</i> 'Castro (surname)'
/sopla(s)/	→	so.pla(s)	→	só.pla(s)	[sóplas]	<i>soplas</i> 'you blow'
/eksámen/	→	ek.sá.men		n/a	[eksámen]	<i>examen</i> 'exam'

RESYLLABIFICATION

When an onsetless syllable is preceded by a word whose final syllable ends in a consonant, the final consonant becomes the onset of the otherwise onsetless syllable. (Note: this needs to follow the stress rule so that Feliz Año 'Happy (New) Year' is [fe.lís año], and not * [fé.li.s año] - you can test your understanding of syllabification, resyllabification, and the stress rule by seeing if you know why this fact requires the stress rule to precede resyllabification.)

Example:



Y-STRENGTHENING

/y/ → *ÿ* / in an onset

Examples:

orthography/gloss	<i>llamar</i> 'call'	<i>tiene</i> 'has'
phonemic rep.	/yamar/	/tyene/
syllabification	ya.mar	ɾye.ne
stress	ya.már	ɾyé.ne
y-strengthening	<i>ÿa.már</i>	n/a
phonetic rep.	[ÿamár]	[ɾyéne]

LATERAL ASSIMILATION

/l/ assimilates to the point of articulation of a following consonant. Note: since Spanish only allows dental, alveolar, and palatal laterals, /l/ will not assimilate to following bilabial and velar consonants.

Examples:

orthography/gloss	<i>alto</i> ‘tall’	<i>lomo</i> ‘back’	<i>colchón</i> ‘mattress’	<i>alba</i> ‘dawn’	<i>alcor</i> ‘hill’
phonemic rep.	/alto/	/lomo/	/kolčon/	/alba/	/alkor/
syllabification	al.ʔo	lo.mo	kol.čon	al.ba	al.kor
stress	ál.ʔo	ló.mo	kol.čón	ál.ba	al.kór
y-strengthening	n/a	n/a	n/a	n/a	n/a
lateral assim.	ál.ʔo	n/a	koʎ.čón	n/a	n/a
phonetic rep.	[álʔo]	[lómo]	[koʎčón]	[álβa]	[alkór]

NASAL ASSIMILATION

A nasal assimilates in point of articulation with a following consonant.

Examples:

orthography/gloss	<i>envío</i> ‘I send’	<i>enfrío</i> ‘I cool’	<i>nata</i> ‘cream’	<i>enyeso</i> ‘I plaster’	<i>cinco</i> ‘five’
phonemic rep.	/enbio/ ¹	/enfrio/	/nata/	/enyeso/	/siNko/
syllabification	en.bi.o	en.fri.o	na.ʔa	en.ye.so ²	siN.ko
stress	en.bí.o	en.frí.o	ná.ʔa	en.yé.so	síN.ko
y-strengthening	n/a	n/a	n/a	en.ýé.so	n/a
lateral assim.	n/a	n/a	n/a	n/a	n/a
nasal assim.	em.bí.o	em.frí.o	n/a	eñ.ýé.so	sín.ko
phonetic rep.	[embío]	[emfrió]	[náʔa]	[eñýéso]	[sínko]

¹The nasal in /enbio/, etc. is /n/ rather than /N/, because the morpheme /en-/ ‘with’ appears independently with /n/ (e.g., [en áβila] ‘in Avila’). The same applies with the /kon-/ in /kónyuxe/ (in the Stop-Fricative Rule examples), and in /konsyeNte/ (under the S-VOICING rule).

²Certain morphemes, such as /en-/ ‘in’ and /kon-/ act like separate words for the purpose of syllabification. Thus, the final /n/ of /en-/ does not form an onset for the syllable /ye/, and hence, the /y/ is promoted to onset. The same thing happens in [kón.ýu.xe] in the Stop-Fricative Rule examples.

STOP-FRICATIVE

Voiced stops (and the voiced affricate [ɟ]) become the corresponding voiced fricative when they are preceded by something that does not have the same point of articulation.

Examples:

orthography/gloss	<i>vaca</i> ‘cow’	<i>uva</i> ‘grape’	<i>ambos</i> ‘both’	<i>dato</i> ‘fact’	<i>lado</i> ‘side’	<i>ando</i> ‘I walk’
phonemic rep.	/baka/	/uba/	/aNbo(s)/	/dato/	/lado/	/aNdo/
syllabification	ba.ka	u.ba	aN.bo(s)	ḁaṭo	la.ḁo	aN.ḁo
stress	bá.ka	ú.ba	áN.bo(s)	ḁá.ṭo	lá.ḁo	áN.ḁo
y-strengthening	n/a	n/a	n/a	n/a	n/a	n/a
lateral assim.	n/a	n/a	n/a	n/a	n/a	n/a
nasal assim.	n/a	n/a	ám.bos	n/a	n/a	án.ḁo
stop-fric.	n/a	ú.βa	n/a	n/a	lá.ḁo	n/a
phonetic rep.	[báka]	[úβa]	[ámbos]	[ḁáṭo]	[láḁo]	[ánḁo]

orthog./gloss	<i>gato</i> ‘cat’	<i>lago</i> ‘lake’	<i>hongo</i> ‘mushroom’	<i>llamo</i> ‘I call’	<i>valle</i> ‘valley’	<i>cónyuge</i> ‘spouse’
phonemic rep.	/gato/	/lago/	/oNgo/	/yamo/	/baye/	/kónyuxe/
syllabification	ga.ṭo	la.go	oN.go	ya.mo	ba.ye	kón.yu.xe
stress	gá.ṭo	lá.go	óN.go	yá.mo	bá.ye	n/a
y-strength.	n/a	n/a	n/a	ýá.mo	bá.ýe	kón.ýu.xe
lateral assim.	n/a	n/a	n/a	n/a	n/a	n/a
nasal assim.	n/a	n/a	ón.go	n/a	n/a	kón.ýu.xe
stop-fric.	n/a	lá.ɣo	n/a	n/a	báye	n/a
phonetic rep.	[gáṭo]	[láɣo]	[ónɣo]	[ýámo]	[báye]	[kónýuxe]

S-VOICING

/s/ → z / ____ . C [+voice]

Examples:

orthography/gloss	<i>mismo</i> ‘same’	<i>somos</i> ‘we are’	<i>consiente</i> ‘s/he consents’
phonemic rep.	/mismo/	/somo(s)/	/konsyeNte/
syllabification	mis.mo	so.mo(s)	kon.syeN.ṭe
stress	mís.mo	só.mo(s)	kon.syéN.ṭe
y-strengthening	n/a	n/a	n/a
lateral assim.	n/a	n/a	n/a
nasal assim.	n/a	n/a	kon.syén.ṭe
stop-fric.	n/a	n/a	n/a
s-voicing	míz.mo	n/a	n/a
phonetic rep.	[mízmo]	[sómos]	[konsyénte]

R-STRENGTHENING and TAP DELETION

R-STRENGTHENING: /r/ → ã / # ____ or C . ____

TAP DELETION: r → ø / ____ ã

Examples:

orthography/gloss	<i>rabo</i> ‘tail’	<i>caro</i> ‘expensive’	<i>carro</i> ‘car’	<i>Israel</i> ‘Israel’	<i>por radio</i> ‘by radio’
phonemic rep.	/rabo/	/karo/	/karro/	/israel/	/por radyo/
syllabification	ra.bo	ka.ro	kar.ro	is.ra.el	por ra.ðyo
stress	rá.bo	ká.ro	kár.ro	is.ra.él	por rá.ðyo
y-strengthening	n/a	n/a	n/a	n/a	n/a
lateral assim.	n/a	n/a	n/a	n/a	n/a
nasal assim.	n/a	n/a	n/a	n/a	n/a
stop-fric.	rá.βo	n/a	n/a	n/a	por rá.ðyo
s-voicing	n/a	n/a	n/a	iz.ra.él	n/a
r-strength.	ãá.βo	n/a	kár.ão	iz.ãa.él	por ãá.ðyo
tap deletion	n/a	na/	ká.ão	n/a	po ãá.ðyo
phonetic rep.	[ãáβo]	[káro]	[káão]	[izãaél]	[poãáðyo]