A Contrastive Analysis of the Evolution of the Vocalic Systems in Castilian and Portuguese

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Hispanists have repeatedly referred to Portuguese as a less evolved form of Castilian. And, in all fairness, it must be admitted that there are a number of final present-day forms in Portuguese that correspond to the intermediate forms used in Castilian. However, this generalization cannot be applied when considering the vocalic systems of the two languages under analysis. The purpose of this study is to analyze the existing differences between the vocalic systems of the two languages in order to determine if one of the two languages is either more or less evolved than the other from a diachronic point of view.

The methodology employed is the following: the evolution of the vowel or vowels under consideration are analyzed from Vulgar Latin to their present-day form, the latter defined according to either Menéndez Pidal (1904) or Williams (1962). First, the tonic vowels from Vulgar Latin are considered. Then the pretonic, posttonic, intertonic and final vowels are taken into consideration.

An evaluation procedure is used to determine if the evolution of a certain vowel is more evolved in one language than the other. When the final form in one language corresponds to an intermediate form in another language, the former is defined as less evolved and the latter as more evolved. In the following example, Portuguese is defined as less evolved:

lacte (C.L.) > /ai̯/ > /ei̯/ (leite: Port.) > /ẹ/ (leche: Cast.)

When the systems follow different stages to arrive to their final form, irregardless of the number of changes, the resulting sound in which the

mode and point of articulation is more like the original Vulgar Latin sound is defined as less evolved. In the example below, Castilian is more evolved:

$$/\xi/ \text{ (medo: Port.)}$$
$$\text{mĕtum (C.L.)} > /\xi/ >$$
$$/\text{ye}/ \text{ (miedo: Cast.)}$$

In addition to closing an open /ę/ to a close /ẹ/, a dipthong is formed.

Since the purpose of this paper is to analyze and classify the vocalic differences of Castilian and Portuguese, only those forms which differ will be considered.

Tonic Vowel /a/

It is more evolved in Castilian in two cases:
1) when followed by a fourth-class yod due to its complete reciprocal assimilation;
   lacte (C.L.) /aị/ > /eị/ (leite: Port.) > /ẹ/ (leche: Cast.)

2) when followed by a wow it also undergoes complete reciprocal assimilation;
   causam (C.L.) > /au/ > /ǫụ/ (cousa: Port.) > /ǫǫ/ > /ǫ/ (cosa: Cast.)

As in Castilian, there are two cases in which its evolution is more developed in Portuguese:
1) when followed by a nasal it produced nasal vocalic residence;
   mānum (C.L.) /a/ (mano: Cast.) /ã/ (mão: Port.)
2) sometimes a following nasal caused tonic /a/ to close to an open /ǫ/;
   fāmem (C.L.) > /a/ (hambre: Cast.) > /ǫ/ (fome: Port.)

Tonic Vowel Open /ę/

It is more evolved in Castilian in four cases:
1) when not impeded by a following yod it dipthongized in Castilian, a more evolved development than the closing of the open /ę/ through metaphony in Portuguese;

$$/\xi/ \text{ (medo: Port.)}$$
$$\text{mĕtum (C.L.)} > /\xi/ >$$
$$/\text{ye}/ \text{ (miedo: Cast.)}$$

2) the dipthong that formed in Castilian was reduced to /i/ in some cases;

$$/\xi/ \text{ (anel: Port.)}$$
$$\text{anĕllum (C.L.)} > /\xi/ >$$
$$/\text{ye}/ > /i/ \text{ (anillo: Cast.)}$$

3) followed by a yod, it resulted in complete assimilation of the latter in

Castilian instead of a decreasing dipthong as found in Portuguese;
matĕria (C.L.) >ei̯/ (madeira: Port.) > /e̦/ (madera: Cast.)
4) likewise, in combination with a yod formed through vocalization of a velar occlusive in a medial consonant group the yod was assimilated completely;
intĕgru (C.L.) > /ei̯/ (inteiro: Port.) > /e̦/ (entero: Cast.)

The mode of articulation is more evolved in Portuguese in two cases:
1) followed by a consonantal group beginning with a nasal, the nasal element closes and nasalizes the open /e̦/;

$$/\tilde{e}/ \text{ (dente: Port.)}$$

dentem (C.L.) > /e̦/ >

$$/ye/ \text{ (diente: Cast.)}$$

2) The same effect is also created by the nasal in final position. In addition to closing and nasalizing the preceding vowel, the nasal creates an off-glide in word final position;

$$/ye/ \text{ (bien: Cast.)}$$

bĕne (C.L.) > /e̦/ >

$$/\tilde{e}/ > /ei̯/ \text{ (bem: Port.)}$$

Tonic Vowel Close /e/

There is one environment which is more developed in Castilian;
1) followed by a yod formed through vocalization of a velar occlusive before a dental the yod palatalizes the dental and is assimilated in Castilian while it isn't assimilated in Portuguese;
dīrectu (C.L.) > /ei̯/ (direito: Port.) > /e̦/ (derecho: Cast.)

There are five environments in which the evolution developed more in Portuguese:
1) in proparoxytones it became /i/ when the penult was /i/ from C.L. ĭ;
dēbĭtam (C.L.) > /e̦/ (deuda: Cast.) > /i/ (dívida: Port.)
2) in hiatus with a following /a/ or /o/ through the fall of an intervocalic consonant it became /ei̯/ in Portuguese and remained /e̦/ in Castilian;
foedum (C.L.) > /e̦/ (feo: Cast.) /ei̯/ (feio: Port.)
3) followed by a syllable ending in /a/, it became an open /e̦/ in Portuguese due to metaphony;
apothecam (C.L.) > /e̦/ (bodega: Cast.) > /e̦/ (bodega: Port.)
4) metaphony of a final /u/ closed it to /i/ in Portuguese;
ĭpsum (C.L.) > /e̦/ (eso: Cast.) > /i/ (isso: Port.)
5) followed by a nasal in a consonant group with a velar, it closed to /i/ in Portuguese;
lĭngŭam (C.L.) > /e̦/ (lengua: Cast.) > /i/ (lingua: Port.)

Tonic Vowel /ǫ/

It evolved more in Castilian in two environments:
1) it dipthongized when not impeded by a yod;

$$/ o / \text{ (jogo: Port.)}$$

jǒcu (C.L.) > /ǫ/ >

$$/ wo / > / we / \text{ (juego: Cast.)}$$

2) it reduced the dipthong to /e/ after a liquid that is preceded by a labial sound;

$$/ ǫ / \text{ (fronte: Port.)}$$

frǒnte (C.L.) > /ǫ/ >

$$/ we / > / ę / \text{ (frente: Cast.)}$$

It evolved more in Portuguese in two environments:
1) a nasal consonant beginning a medial consonant group closed the preceding vowel in both Castilian and Portuguese, and it nasalized the preceding vowel in the latter;
   *cǒmperat (C.L.) > /ǫ/ > /ǫ/ (compra: Cast.) > /õ/ (compra: Port.)
2) at times a nasal consonant that was lost closed, nasalized and later became oral with respect to the preceding vowel;

$$/ we / \text{ (buena: Cast.)}$$

bǒnam (C.L.) > /ǫ/ >

$$/ õ / > / ǫ / \text{ (boa: Port.)}$$

Tonic Vowel /ọ/

It developed more in Castilian in two cases:
1) the yod attracted from the following syllable gives the /we/ dipthong through analogy in Castilian;
   sale mǔria (C.L.) > /oi/ (salmoira: Port.) > /we/ (salmuera: Cast.)
2) followed by a final /o/ in hiatus it gave /ou/ in Portuguese and eventually /ọ/ in Castilian;

$$/ ou / \text{ (dous: Port.)}$$

dǔōs (C.L.) >

$$*/ oo / > / ọ / \text{ (dos: Cast.)}$$

It evolved more in Portuguese in three environments:
1) it gives an open /ǫ/ in many learned and semilearned words;
   sacerdōtem (C.L.) > /ọ/ (sacerdote: Cast.) > /ǫ/ (sacerdote: Port.)
2) metaphony of a final /a/ inflects the close /ọ/ to an open /ǫ/;
   formōsam (C.L.) > /ọ/ (hermosa: Cast.) > /ǫ/ (formosa: Port.)
3) metaphony of a final /u/ inflects the tonic close /ọ/ to /u/ in Portuguese;
   tōtum (C.L.) > /ọ/ (todo: Cast.) > /u/ (tudo: Port.)

Pretonic Vowel /a/

It is more evolved in only one environment in Castilian:
1) in combination with a following yod complete reciprocal assimilation gives /ẹ/ in Castilian instead of the intermediate step of a decreasing dipthong found in Portuguese;

   basiare (C.L.) > */aị/ /eị/ (beijar: Port.) > /ẹ/ (besar: Cast.)

Likewise, Portuguese is more developed in only one environment;
1) it is reduced to the schwa in syllable initial position;
   apertum (C.L.) > /a/ (abierto: Cast.) > /ə/ (aberto: Port.)

Pretonic Vowel /e/

It evolved further in Portuguese in five environments:
1) it reduced to the schwa in Portuguese;
   caepŭllam (C.L.) > /ẹ/ (cebola: Cast.) > /ə/ (cebola: Port.)
2) in word initial position it closed to /i/ in Portuguese but remained a close /ẹ/ in Castilian;
   aeternum (C.L.) > /ẹ/ (eterno: Cast.) > /i/ (eterno: Port.)
3) a following medial consonant group that begins with a nasal nasalizes the preceding vowel in Portuguese;
   mendicum (C.L.) > /ẹ/ (mendigo: Cast.) > /ẽ/ (mendigo: Port.)
4) followed by a closed intertonic /ẹ/ in hiatus it became an open /ę/ in Portuguese;
   crēditorem (C.L.) > /ẹ/ (creedor: Cast.) > /ę/ (Credor: Port.)
5) in hiatus with the tonic /ọ/ it becomes /i/ in Portuguese;
   lĕõnem (C.L.) > /ẹ/ (león: Cast.) > /i/ (leão: Port.)

Pretonic Vowel /o/

It developed further in Portuguese in three environments:
1) it reduced to /u/ in Portuguese;
   dŏrmire (C.L.) > /ọ/ (dormir: Cast.) > /u/ (dormir: Port.)
2) followed by a consonantal group that begins with a nasal it is nasalized in Portuguese;
   compŭtare (C.L.) > /ọ/ (contar: Cast.) > /õ/ (contar: Port.)
3) in hiatus with the tonic vowel /a, e, o, i/ it becomes /u/ or /w/ in Portuguese;

   vŏlāre (C.L.) > /ǫ/ > /ọ/ (volar: Cast.) > $\begin{Bmatrix} /u/ \\ /w/ \end{Bmatrix}$ (voar: Port.)

Posttonic Vowel /a/

It evolved more in Portuguese in two environments:
1) it reduces to the schwa;
   stŏmăchum (C.L.) > /a/ (estómago: Cast.) > /ə/ (estômago: Port.)
2) it nasalizes with the fall of the intervocalic nasal;
   raphănum (C.L.) > /a/ (rábano: Cast.) > /ə/ > /ɔ̃/ (rabão: Port.)

Posttonic Vowel /e/

It develops further in Castilian through complete elimination while it
sometimes reduces to /i/ in Portuguese:
   dēbĭtam (C.L.) > /i/ (dívida: Port.) > Ø (deuda: Cast.)

Posttonic Vowel /o/

As in the case of the Castilian evolution of posttonic /e/, it falls in Castilian
while in hiatus with final /a/ it reduces in Portuguense:
   nēbŭlam (C.L.) > /o̧/ > /w/ (névoa: Port.) > Ø (niebla: Cast.)

Intertonic Vowel /e/

In one environment it is more evolved in Castilian because of syncope
creating its loss, since in Portuguese when an /m/ precedes the intertonic
and the /n/ follows it, it doesn't suffer syncope:
   nomĭnāre (C.L.) > /e/ > /i/ (nomear: Port.) > Ø (nombrar: Cast.).

   In a different environment Portuguese has a more evolved develop-
ment for the same reason —syncope. An intertonic vowel preceded by /r/
suffered syncope in Portuguese but not in Castilian:
   herēdĭtāre (C.L.) > /ee/ > /ȩ/ (heredar: Cast.) > Ø (herdar: Port.)

Final Vowel /a/

Through apocope Castilian shows a more developed evolution of this
vowel in one case:
   mĕam (C.L.) > /a/ (minha: Port.) > /ȩ/ > Ø (mi: Cast.).

It developed farther in Portuguese in two environments:
1) preceded by an open tonic /o̧/ in hiatus it became an open /o̧/ in
   Portuguese while remaining /a/ in Castilian;
   *auulam (C.L.) > /a/ (abuela: Cast.) > /o̧/ (avó: Port.)
2) a following nasal nasalized it in Portuguese;
   amant (C.L.) > /a/ (aman: Cast.) > /ə/ > ə̃/ (amam: Port.)

Final Vowel /e/

It developed farther in Castilian through apocope after /d/:
veritátem (C.L.) > /e/ (verdade: Port) > Ø (verdad: Cast.)

It evolved more in Portuguese than in Castilian in four different environments:

1) in proparoxytones, /e/ preceded by /r/ falls in Old Portuguese, but is restored in Modern Portuguese;
arbŏrem (C.L.) > Ø (árbol: Cast.) > /e/ (árvore: Port.)

2) with a preceding /e/ in hiatus that results from the loss of an intervocalic nasal, it nasalizes;
hŏmĭnes (C.L.) > /ę/ (hombres: Cast.) > ẽe/ > /ẽ/ (homens: Port.)

3) in hiatus with an open /ę/ forming through the fall of an intervocalic lateral it became /i/;
crūdēlēs (C.L.) > /ę/ (crueles: Cast.) > /i/ (cruéis: Port.)

4) a following nasal in word final position nasalizes the vowel and creates a decreasing dipthong;
debent (C.L.) > /ę/ (deben: Cast.) > /ẽ/ > /ei̯/ (devem: Port.)

Final Vowel /i/

It developed farther in Castilian when found in hiatus with the tonic vowel /a/ since it is completely assimilated to /ę/ while it remains at the intermediate stage of /ei̯/ in Portuguese:
amãvi̅ (C.L.) > /ai/ > /ei̯/ (amei: Port.) > /e/ (amé: Cast.)

It is more evolved in Portuguese when hiatus provoked through the loss of an intervocalic nasal nasalizes the vowel:

$$/\tilde{e}i/ > /ii/ > /i/ \text{ (vim: Port.)}$$
vēni (C.L.) >
$$/ei/ > /i/ \text{ (vi: Cast.)}$$

Final Vowel /o/

It is more evolved in Portuguese in four different environments:

1) final /o/ became /u/ in Portuguese;
amō (C.L.) > /ǫ/ (amo: Cast.) > /u/ (amo: Port.)

2) in hiatus with /a/ or open /ę/ it becomes /w/;
caelum (C.L.) > /ę/ (céu: Port.) > /ye/ (cielo: Cast.)

3) final close /ǫ/ in hiatus with the tonic close /ǫ/ through the fall of the intervocalic nasal becomes nasalized;
$$/\tilde{o}o/ > /\tilde{o}/ \text{ (bom: Port.)}$$
bonum (C.L.) >
$$/ǫ/ > /we/ \text{ (bueno: Cast.)}$$

4) it combines with the tonic close /u̬/ formed by the loss of an intervocalic nasal to produce the nasal /ũ/;
ūnum (C.L.) > /ǫ/ (uno: Cast.) > /u/ > /ũ/ (um: Port.).

As we have seen, it is not possible to say that either Castilian or Portuguese has a more evolved vowel system.

With respect to the tonic vowels, each language is more evolved than the other in certain points. The primary forces at work with the tonic vowels that make Castilian more evolved are complete reciprocal assimilation and dipthongization. And the primary forces at work that make the Portuguese evolution more developed are metaphony and nasalization.

With pretonic vowels, Portuguese is much more evolved. In addition to nasalization, vowel reduction and hiatus are key factors. Castilian is only more evolved with respect to complete reciprocal assimilation.

The posttonic vocalic evolution tends to be more developed in Castilian since /a/ is the only posttonic vowel retained in Castilian. However, since the Portuguese posttonic /a/ undergoes vowel reduction, it is more evolved.

The intertonic vowels are more evolved in one language and then the other for the same reason - syncope.

The final vowels that are more evolved in Castilian are due to vowel loss. In Portuguese they are more evolved due to hiatus and nasalization.

In conclusion, we can divide the primary forces that act upon the evolutionary development of the vocalic systems of Castilian and Portuguese into two separate groups: those that affect both Spanish and Portuguese in varying linguistic environments; and those that affect only one or the other.

Syncope is the only shared primary force that accounts for varying results. In addition, Castilian undergoes complete reciprocal assimilation, dipthongization and apocope to a more evolved stage than Portuguese. On the other hand, Portuguese is more evolved than Castilian because of metaphony, nasalization, vowel reduction and hiatus.

Therefore, we can conclude that neither is more evolved than the other from a diachronic point of view. They are two separate systems from Vulgar Latin which have final products that correspond to the intermediate forms of the other at times since they evolve according to some of the same primary forces. However, the fact that each have their own unique primary forces has created two separate systems which are relatively more or less developed in their evolution from Vulgar Latin.

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