

## A COMPARISON OF PORTUGUESE AND ENGLISH PHONOLOGY

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### ABSTRACT

In this study, similarities and differences between the two languages, Portuguese and English, are viewed within the frame of the phonological system. “By focusing on the similarities and differences between the two sound systems, it is possible to set up scales of structural divergence. (Azevedo, 1981, p.7)” Such scales help us to determine the features of L1 that can be directly transferred to L2, and also the features of L2 that have no counterpart in L1. Probable Errors with consonants and vowels made by Portuguese speakers learning English are analyzed with the help of a hierarchy of difficulty chart. Solutions for the Pronunciation Problems of Portuguese speakers learning English is deemed to be significant in the research.

**Index terms:** phonological system, structural divergence, the hierarchy of difficulty

### 1.0 INTRODUCTION

Portuguese and English are two of the most widely spoken languages in the world today. According to Wikipedia, Portuguese is a part of a broader group known as West Iberian, which contains several minor languages or dialects with fewer speakers, all of which are mutually intelligible among them to some degree and derived some words from English. On the other hand, English is a modern language that has a list of words potentially borrowed or derived from Portuguese too. Moreover, both languages have some common origins adapted from Latin. Although they are closely related, there are also important differences between them, which can pose difficulties for people acquainted with one of the languages who attempt to learn the other.

According to this research, speakers of both languages come across many difficulties because of the differences between vowels, consonants, and word stress. To begin with, vowels are sounds that are produced with a relatively free flow of air. Vowels have intermediary positions that correspond to a combination of different degrees of tongue height or fronting. These vowels are shown in figure 1 below in reference to the terminology of cardinal vowel sounds (Yule, 1996).

**Figure 1. Common cardinal vowel sounds of English.**

	Front	Central	Back
High	i		u
	ɪ		ʊ

Mid	e	ə	o
	ε		
		Λ	
Low	æ		a

The easiest way to become familiar with the distinctions within the set of vowel sounds is to have some example of familiar words which contain those sounds i.e. [i] see, eat, key [e] tail, great, weight [ε] pet, said, dead (Yule, 1996). From the examples, we can imagine that it may not be easy for a non-native speaker of English to learn the sound system of a language whose vowels may be pronounced between high and mid. This is true for the case of Portuguese since the vowels in this language vary from high to low but not between high and mid or mid and low as in English. In figure 2 below, the difference of vowel places can be seen clearly.

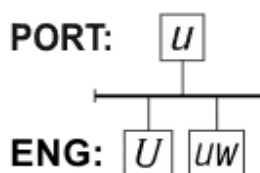
**Figure 2. Classification of Portuguese vowels (Ferreira 1999).**

	Front	Central	Back
High	i, ĩ		u, ũ u
Higher mid	e, ě		o, õ
		ɐ, ɐ	
Lower mid	ε		ɔ
Low		a	

It can be inferred, from the two charts are above given in Figures 1 and 2, that speakers of Portuguese will have difficulty in learning the vowels of English which are produced by different positions of the tongue. This is mostly because of the Phonological system of English which has a large number of vowel phonemes that require additional hearing accuracy from the speakers in recognition and production. Besides, the nasality of Portuguese and the tenseness of English will also represent a difficulty for each of the foreign learners’ accents (Schutz, 2008). However, in the case of consonants, the boundaries between one type of vowel and another are much more distinct. They can be either fricatives or stops.

**2.0 PROBABLE ERRORS WITH VOWELS AND SOME SOLUTIONS FOR PRONUNCIATION OF PORTUGUESE SPEAKERS LEARNING ENGLISH**

According to Swan & Smith, the first problem is the back/ high vowels. The phoneme /u/ confused with / u: /. Thus, there will probably be difficulties in the perception of some words such as; stood /stUd/ - stewed /stuwɔd/ , pull /pU/ - pool /puw/ etc.



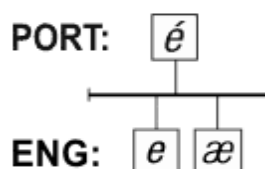
Another problem is the phoneme /ɒ / which is often confused with /o: /: caught for a cot, or spot for sport; or even with /Λ /: hut for hot (Swan & Smith, 2001).

Portuguese speakers would also experience the possibility of phonological error in words like but /bət/ and rubber /'rəbər/. "The English mid-central /ə/, especially when stressed, has no counterpart in Portuguese" (Schutz, 2008).

"Unstressed vowels are often given their full value, especially by BP speakers: Ann for an; thee for the. On the other hand, unstressed vowels at the end of words may become whispered and almost inaudible: sit for the city; cough for coffee; 'offs' for office, part for party" (Swan & Smith, 2001, p. 114; Shoebottom, 2007).

"Also, "schwa", is likely to become a persistent problem if we consider that Portuguese unstressed vowels are not normally reduced. Very likely Brazilian ESL students will be influenced by spelling in this area. For example, the word photographer might be pronounced /fô'tógrafê/ instead of the correct /fə'tagrəfər/." (Schutz, 2008).

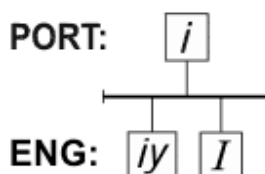
The English /æ/phoneme may cause a problem for the Portuguese speakers due to the fact that/e/ is confused with / æ/ such as head and had (Swan & Smith, 2001; Schutz, 2008).



This will lead to misunderstanding in words like:

lend /lend/ - land /lænd/, men /men/ - man /mæn/ , met /met/ - mat /mæt/ , dead /ded/ - dad /dæd/, end /end/ - and /ænd/, flesh /flesh/ - flash /flæsh/, gem /dzhem/ - jam /dzhæm/, guess /ges/ - gas /gæs/ etc.

The last error occurs in the front/high vowels. The English /i:/ tends to be pronounced too short, and is confused with /I/: rich for reach; hit for heat, pack/puck or head/had etc (Swan & Smith, 2001; Shoebottom, 2007).



Examples of some words that are confused by Portuguese speakers are illustrated below.

beach /biytsh/ - bitch /bItsh/, bead /biyd/ - bid /bId/, cheap /tshiyp/ - chip /tshIp, heel /hiyl/ - hill /hIl/, lead /liyd/ - lid /lId/, leap /liyp/ - lip /lIp/

least /liyst/ - list /lIst/, neat /niyt/ - knit /nIt/, peel /piyl/ - pill /pIl/ etc.

It is also important that the 'combined' vowel sounds which are called diphthongs may be a problem too, in the case of errors. In essence, when compared to English, diphthongs are

fewer in Portuguese. The biggest problem arises with / iə / and / eə /, which leads to confusion between such words as hear and hair (Swan & Smith, 2001; Shoebottom, 2007).

Evidence of Portuguese to English Negative Transfer: Phonology (examples of how phonological transfer affects spelling) (Garcia, 1991)

- People steal speak English with different accents (still)
- She leaves in Ankara. (lives)
- We say what we hear. (hear)

It is clear that the English vowels may cause a great misunderstanding if not learned properly in the case of Portuguese speakers.

### 3.0 SOME SOLUTIONS FOR THE PRONUNCIATION PROBLEMS OF PORTUGUESE SPEAKERS LEARNING ENGLISH

According to Schutz, the memorization of pronunciation models can help with the articulation difficulties in the target language. The following sentences provide good vowel pronunciation models because they exhibit the whole inventory of English vowels.

Lee bit Ray's best hat.

/iy//I//êy/ /e//æ/

Stew pushed Joe off the cot.

/uw//U/ /ôw//o/ /ə//a/

She is acing ten classes using the books and notes always honestly.

/iy//I//êy/ /e/ /æ/ /uw/ /ə//U/ /ôw/ /o/ /a/

“The above sentences not only portray the full inventory of vowels but also place them on a scale ranging from front-high to front-low in the first example and from back-high to mid-low in the second example. The student who memorizes these sentences with the right pronunciation will have available at all times the matrix of English vowel sounds to resort to.” (Schutz, 2008)

Schutz also suggests that sentences featuring minimal pairs that contrast commonly mistaken phonemes are also worth memorizing. Examples;

Please, sit in this seat. The gem fell in the jam.

/iy/ /I//I//iy/ /e/ /e/ /æ/

Pull me out of the pool.

/U/ /uw/

**3.1 Probable errors with consonants made by portuguese speakers learning english:**

According to Schutz, there are two types of common errors with the English consonants made by Portuguese native speakers: phonetic error and phonological error. The first one causes’s foreign accent and the phonological error can cause misunderstanding in the communication.

It is convenient, to begin with the comparison of consonant systems of English and Portuguese by examining the consonant charts of the two languages as in Figure 3.

**Figure 3. Comparison of Portuguese and English Consonants. (Schutz, 2005)**

**ENGLISH CONSONANT PHONEMES:  
(Standard American dialect)**

Position	B I L A B I A L		L A B I O D E N T A L		I N T E R D E N T A L		A L V E O L A R		P A L A T A L		V E L A R		G L O T T A L
	Vi.	Vd.	Vi.	Vd.	Vi.	Vd.	Vi.	Vd.	Vi.	Vd.	Vi.	Vd.	Vi.
STOPS	<b>p</b>	<b>b</b>					<b>t</b>	<b>d</b>			<b>k</b>	<b>g</b>	
AFFRICATES									<b>tsh</b>	<b>dzh</b>			
FRICATIVES			<b>f</b>	<b>v</b>	<b>θ</b>	<b>ð</b>	<b>s</b>	<b>z</b>	<b>sh</b>	<b>zh</b>			<b>h</b>
NASALS		<b>m</b>						<b>n</b>				<b>ŋ</b>	
RETROFLEXES										<b>r</b>			
LATERALS								<b>l</b>					
FLAPS	<i>occur only on the phonetic level. Ex: water ['wɑðâr]<sup>1</sup></i>												
TRILLS	<i>never occur in English, except in Scottish</i>												
GLIDES		<b>w</b>									<b>y</b>		

Vi. = voiceless Vd. = Voiced

**PORTUGUESE CONSONANT PHONEMES:**

Position	B I L A B I A L		L A B I O D E N T A L		I N T E R D E N T A L		A L V E O L A R		P A L A T A L		V E L A R		G L O T T A L

Manner	L		L		L		L		L		L		VI.
	VI.	Vd.	VI.	Vd.	VI.	Vd.	VI.	Vd.	VI.	Vd.	VI.	Vd.	
STOPS	<b>p</b>	<b>b</b>					<b>t</b>	<b>d</b>			<b>k</b>	<b>g</b>	o c c u r  i n  i n t e r j e c t i o n s  5
AFFRICATES	<i>occur only</i>				n e v e r	<i>on the phonetic level</i> <sup>1</sup>							
FRICATIVES			<b>f</b>	<b>v</b>		<b>s</b>	<b>z</b>	<b>sh</b>	<b>zh</b>		<b>x</b>		
NASALS		<b>m</b>					<b>n</b>		<b>ñ</b>				
RETROFLEXES	<i>rarely occur in Portuguese</i> <sup>2</sup>												
LATERALS					o c c u r		<b>l</b>		<b>lh</b>				
FLAPS							<b>ɖ</b>						
TRILLS							<b>R</b> <sup>3</sup>						
GLIDES	<i>occur only on the phonetic level</i> <sup>4</sup>												

<sup>1</sup> Ex: *leite* ['leytshi].

<sup>2</sup> A retroflex /ɣ/ occurs in areas of São Paulo state, in free variation with the trilled /R/ and the velar fricative /x/.

<sup>3</sup> Portuguese trilled /R/ occurs only in southern Brazil. It is in free variation with the velar fricative /x/, which predominates in the other dialects of Brazil.

<sup>4</sup> Ex: *veado* ['vyadu], *coelho* ['kwêlhu].

<sup>5</sup> Ex: *Ha! Ha! Ha!* (as when imitating laughing).

The examples of how the English and Portuguese consonant phonemes occur in words are shown in Appendix 2.

As from the charts given above we can infer that “some phonemes such as p, b, f, v, d, s, z, sh, m, n, l, j, h, g, k, η have equivalents or near-equivalents in Portuguese, and should therefore be perceived and articulated without great difficulty, although some confusions may still arise. The other phonemes such as t, r, tsh, dzh, θ, ð may cause problems” (Swan & Smith, 2001, p.115; Schutz, 2005).

Like the interdentalals, the English retroflex /r/ does not have a similar sound in Portuguese, except in one dialect in certain areas of the state of São Paulo. Therefore most Brazilian students will need articulator exercises (see picture below). Because of spelling interference, the English retroflex /r/ in word-initial position is easily misinterpreted as the Portuguese velar fricative /x/ (both are represented by the same grapheme). On the other hand, the English glottal fricative /h/ is close and similar to the Portuguese velar fricative /x/. (Schutz, 2005; Swan & Smith, 2001) Therefore students will easily be confused and neutralize the contrast in minimal pairs like:

*hat* [hæt] - *rat* [ræt]  
*head* [hed] - *red* [red]  
*high* [haɪ] - *rye* [raɪ]  
*hoe* [how] - *row* [row]



“Until acceptable production of the English retroflex /r/ is attained, Portuguese native speakers could substitute it with the Portuguese flap /ð/, depending on the environment it occurs. This would produce an obvious foreign accent and the possibility of phonological error: bury [ˈberɪj] - Betty [ˈbeðɪj], curer [ˈkyʊwɾɐr] - cuter [ˈkyʊwðɐr]” (Schutz, 2005).

“The alveolar fricative phoneme /s/ before /m/, /n/ or /l/ in English occurs predominantly in word-initial position, and then it is always voiceless - [s]. In Portuguese, however, it only occurs in middle position and is always voiced - [z]. Students will therefore persist in articulating words like smoke [smowk], snake [sneyk], and sleep [sliyp] as [zmowk], [zneyk] and [zliyp], producing an obvious foreign accent but no phonological error” (Schutz, 2005).

Another area that can be identified as a potential problem for Brazilian ESL students refers to consonantal clusters. In contrast with Portuguese, with its rich vocalicity and nasality and large number of diphthongs and even triphthongs, English has a strong consonantal character. “In Portuguese, the only consonants that occur in word-final position are the phonemes /ð/, /l/ and /s/; consonantal clusters, except for a few foreign words, do not occur at all” (Schutz, 2005). “/l/ in final position or before a consonant is often pronounced as a vowel similar to /u/: ‘bottu’ for bottle, and ‘heoo’ for heel” (Swan & Smith, 2001, p.115) Therefore, particularly difficulty will be the clusters occurring in word-final position, with an even higher degree of difficulty being experienced by students in the realization of English consonantal clusters which include the interdental /θ/ or /ð/, as in the following examples: asked [æskt], advanced [ədˈvænst], twelfth [twelfθ], depth [depθ], strengths [strenkθs] (Schutz, 2005).

The Portuguese unaspirated stops will lead to a clear phonetic error, with the possibility of phonological error, this is because /p/, /k/ and /t/ are unaspirated initially in Portuguese, and may be confused with /b/, /g/ and /d/: peg and beg; Kate and gate; Tin and din, pig/big or gale/kale (Swan & Smith, 2001; Shoebottom, 2007).

“Initial and medial /t/ and /d/ are both pronounced quite forcefully and may be confused: tale and dale; latter and ladder. But when followed by /i:/, /I/ or /e/, they are often pronounced as affricates, almost like /tsh/ and /dzh/: ‘cheam’ for team; ‘Jean’ for dean” (Swan & Smith, 2001, p.115).

“There is also confusion between /t/ (a short flap) and /r/ (a short trill): better and bearer; heating and hearing” (Swan & Smith, 2001, p.115).

Nasalization of the final /m/, /n/ and /ŋ/, often to the point where the final consonant is inaudible. E.g. ran, becomes rang (Swan & Smith, 2001; Shoebottom, 2007).

“Final /z/ does not occur in Portuguese, and may be replaced by /s/ (rice for rise) or (with EP speakers) by /sh/ (hash for has)” (Swan & Smith 2001, p.115).

The interdental fricatives /θ/ and /ð/ are realized either as /s/ and /z/, or as /t/ and /d/, leading to uncertainty such as sinker or tinker or ‘dinker’ for thinker, and breed or breeze for breathe. (Schutz, 2005; Swan & Smith, 2001; Shoebottom, 2008)

*math* [mætØ] - *mats* [mæts]

*breathe* [briyØ] - *breeds* [briydz]



Initial /h/ has no counterpart in Portuguese thus, it's omitted (the substitution of ear for hear, as for has, high for I), or put in because of overcompensation: “High ham is holdest friend” for “I am his oldest friend” (Schutz, 2005; Shoebottom, 2007).

“Few consonants can occur finally in Portuguese, and so a vowel is often added before, between or following consonants: e.g., estrap (for strap) or monthes (for months) ‘parkie’ for park; ‘cabbie’ for cab. Clusters between words may be simplified: ‘widis’ for with this” (Schutz, 2005; Shoebottom, 2007).

As from the data given above about the consonants and vowels of both languages, it is possible to draw a chart of the hierarchy of difficulty according to Stockwell and Bowen’s article.

	Difficulty		Comparison		Examples
	Magnitude	Order	English	Portuguese	
<b>Making New Habits</b>	II	1	0	Ob	lh,
		2	0	Op.	R, x,
		3	Op.	Ob.	b, d, g,
<b>Breaking Old Habits</b>	I	4	Ob.	Op.	r, tsh,dzh, / u, e, l, a;
		5	Ob.	0	z, θ, ð, d, t <sup>h</sup> ,d <sup>h</sup> ,k <sup>h</sup> ,b <sup>h</sup> ,p <sup>h</sup> , ʌ u,ae,
		6	Op.	0	w, y, r, h, tsh, dzh, ŋ / e: ou, au, ea
<b>Keeping Old Habits</b>	III	7	Op.	Op.	p, b, f, v, sh, zh, k, g, m,n, l, s, ð
		8	Ob.	Ob.	ñ / i:, ei, ai,

Orthography



Portuguese speakers have considerable difficulty with English spelling. They tend to represent English sounds with their standard Portuguese spelling forms. Evidence of Portuguese to English Negative Transfer: Orthography (Garcia, 1991).

- I speak inglish (falo inglês)
- a little italian village (uma pequena vila italiana)
- Imense (imenso)
- pratically (praticamente)
- vehicules (veículos)

## 4.0 WORD STRESS

Portuguese is a language whose word stress is on the syllable before the last. English word stress poses a problem because of the large number of possibilities, the nonoccurrence of one predominant pattern, and the absence of indication in spelling. (Schutz, 2008). See the examples below:

	PORTUGUESE	ENGLISH
oxítonas (stress on the last syllable)	café, estudar, computador, refrigerador, etc.	hotel, control, police, improve, exchange, etc. (only two-syllable words)
paroxítonas (stress on one before the last)	casa, modelo, Ipanema, comemorava, etc,	video, English, important, united, revolution, etc.
proparoxítonas (stress on two before the last)	figado, metrópole, hemofílico, etc.	excellent, hospital, government, photograph, photographer, etc.

However, in English, there are also useful spelling-to-sound rules that when presented to students can provide a light at the end of the tunnel. Words ending in \_ial: stress the syllable before this ending (1 syllable before the last) Ex: official. Words ending in \_ic: stress the syllable before this ending (1 syllable before the last) ex. fabric etc. (Schutz, 2008).

## 4.1 Some Similarities between Portuguese and English

Even though English is not a Latin language, there are some similarities between Portuguese and English than one might imagine. A table with vowels and consonants of both languages is given to illustrate the easy ways to teach the pronunciations for the speakers of Portuguese learning English (see Appendix 1). Still, pronunciation and stress can sometimes be very different from English as mentioned before.

## 4.2 An assessment of Sources:

For the weaknesses of data being collected, some internet-based works were too complex to understand, especially the research of Azevedo, Milton M. A Contrastive Phonology of Portuguese and English. Georgetown University, 1981. So I read some parts of his work that were clear enough and skipped the complex ones with lots of diagrams. I also did some additional data search to complete my analysis, which would be the comparison of Schutz's

research and the other internet sources. In every internet-based data and book, I could find some support for his work which could be the article of Shoebottom. I believe Schutz's research was perfect although in some cases Swan & Smith disagrees with him. This is clearly seen in the situation of "TSH, dzh" since Schutz advocates that those consonants are obligatory in English and optional in Portuguese but the situation differs when we search the Swan & Smith's book. They believe that those consonants are optional in English and none in Portuguese. However, in my opinion, Schutz is right because he has given an example of those consonants which appear only on the phonetic level. Ex: leite ['leytshi].

In the hierarchy of difficulty chart, I have also numbered the breaking old habits as the hardest thus agreed with Prof. Dr. Douglas Adams, a professor at the University of Idaho, because I think changing the sounds from the way one has learned before is more difficult than learning a new sound which is related to the negative transfer.

The strengths were that in all of my data I could find some very useful examples and charts that illustrated the comparison clearly. I have stated some of the pronunciation issues and they can give us a good idea of the serious difficulties facing ESL students who want to sound like English native speakers. And they explain why even some very proficient Portuguese speakers of English never lose their accent. I also suggest that raising our students' consciousness to the problems mentioned in this paper may be a useful way of helping them keep the two languages apart. Lastly, languages are much more complex than one might, so I believe I still have to search more and more.

## 5.0 CONCLUSION

Probable Errors with consonants and vowels made by Portuguese speakers learning English are analyzed with the help of a hierarchy of difficulty chart. Solutions for the Pronunciation Problems of Portuguese speakers learning English is deemed to be significant in the research.

## REFERENCES

- Azevedo, M. M. (1981). *A Contrastive Phonology of Portuguese and English*. Georgetown University Press.
- Cruz-Ferreira, M. (1999). "Portuguese (European)", *Handbook of the International Phonetic Association: A Guide to the Use of the International Phonetic Alphabet*, Cambridge University Press, pp. 126-130
- Frankenberg-Garcia, A. (1991). *Second Language Writing Instruction: a study of the effects of a discourse-oriented program upon the ability of skilled writers to improve their written production*. Unpublished doctoral dissertation. Edinburgh University, from <http://www.linguateca.pt/Repositorio/Frankenberg-GarciaPina1997.doc>
- Schütz, R. (2008). "Os Fonemas Vogais do Inglês e do Português." *English Made in Brazil*, from <http://www.sk.com.br/sk-voga.html>. Online. 28 de maio de 2008.
- Schütz, R. (2005) "Os Fonemas Consoantes do Inglês e do Português." *English Made in Brazil*, from <http://www.sk.com.br/>. Online. 12 de dezembro de 2005.

Shoebottom P. (2007).A guide to learning English, from  
<http://esl.fis.edu/grammar/langdiff/portuguese.htm>

Stockwell R.P. and Bowen J.D. (1965). Sound Systems in Conflict: A Hierarchy of Difficulty. P. 28

Swan, M. and Smith, B. (2001) Learner English: A teacher's guide to interference and other problems. 2nd ed. Cambridge University Press.

Yule, G. (1996). The Study of Language. Cambridge University Press, pp. 40-49  
<http://www.sonia-portuguese.com/text/pronunciation.htm>  
[http://en.wikipedia.org/wiki/Differences\\_between\\_Spanish\\_and\\_Portuguese](http://en.wikipedia.org/wiki/Differences_between_Spanish_and_Portuguese)