Integrating phonetic transcription in a Brazilian Portuguese dictionary

Luiz Carlos Cagliari

1. The dictionary
K Dictionaries has developed a series of dictionaries for learners of various languages, including Portuguese/French. This dictionary was based on European Portuguese, whose words had a phonetic transcription with European pronunciation. A group of lexicographers from the University of São Paulo, under the supervision of Ieda Maria Alves, adapted the Portuguese entries to Brazilian vocabulary, and another team from UNESP (São Paulo State University) at São José do Rio Preto, under the supervision of Claudia Xatará, adapted to Brazilian the Portuguese translations of the French entries.

In line with the change from European to Brazilian Portuguese, I gathered a group of students to be involved in modifying the phonetic transcription. The collaborators were Patrícia Ormasironi Jagallo, Bruno Sérgio Sedenho, Priscila Maria Mendonça Machado, Cristiane Jussara Romanotto, Caroline Tárrega Arantes, Eliane de Oliveira Galasiri and Lara Vieira Bulzheiro. The first three were working on their MA degrees and the other four were undergraduate students at UNESP / Campus of Araraquara.

I started learning how to operate the XML program that was used for this work and discussing all kinds of problems related to the phonetic transcription.

2. Problems with phonetic transcription
I have been working as a phonetician for the past three decades and during this period I have carried out many projects, exploring different areas of articulatory, acoustic and experimental phonetics. The task of doing phonetic transcription was present in everyday work. It is always common for a phonetician to transcribe his or her own language. When doing that, all kinds of sound variation are registered, according to the speakers’ pronunciation. On the other hand, when doing phonology, the sound patterns are interpreted following theories in order to get an abstract sound system of the language. In this case, the phonetic variation is accommodated into their phonemes. The phonological transcription does not represent a pronunciation of the language, in the same sense as phonetic transcription does. Moreover, phonological transcription does not relate to language in the same way as orthography does. According to the rules of writing systems, orthography has the function of neutralizing the phonetic variation of a language on the word pronunciation level, allowing all speakers to read. Consequently people read in their own dialectal variety or, if they wish, using another variety, for instance, a more culturally or educated pronunciation.

Of course, a dictionary presents the orthographic form for words. If it is decided to implement phonetic transcription in order to help users with the pronunciation, chiefly when the dictionary is bilingual, then nothing is more appropriate than asking a phonetician to do the job. However, not all phoneticians know exactly what is demanded and expected in such a case. Certainly, a phonological transcription is inadequate. For the reader, spelling works better than the phonological transcription in a language like Portuguese. On the other hand, which variety should represent the language in the dictionary? The option for educated pronunciation is a good choice, but it is not clearly defined.
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Since the definition of the dialect was crucial, I started to look at dictionaries to find out what they have done in such regard. The dictionaries intended for native speakers of Portuguese do not usually include phonetic transcription. This is a pity. Only some orthoepic information would appear close to the headwords when it is absolutely necessary. With the recent spelling reform of the Portuguese language, words like econômico indicate Brazilian pronunciation and econômico European Portuguese. But, this is not enough if we take into account the difficulties users face, searching for the correct pronunciation. The problem intensifies when the user is not a native speaker of Portuguese.

In the Aurélio Século XXI dictionary (1999), in the section Como Usar o Aurélio XXI (How to use the Dictionary), we find: “A ortografia entre parênteses e em tipo claro, após a cabeça, esclarece a pronúncia, quando passível de dúvida (vogal aberta ou fechada, pronúncia de consoante ou de encontro consonantal, hiato, etc.” (p. xvi).

“6. A transcrição fonética dos estrangeirismos vem logo após a cabeça, entre colchetes, e representa, no Alfabeto Fonético Internacional (adaptado) a pronúncia aproximada da palavra na língua de origem. A tabela de transcrições fonéticas encontra-se na página XVI.” (p. xvi).

That dictionary is useless with regard to phonetic transcription. It annotates irrelevant cases and does not indicate the correct pronunciation when necessary.

The Dicionário Houaiss da língua portuguesa (2004) presents some details about orthoepy and phonetic transcription (p. XIX). Like Aurélio, Houaiss uses the orthoepic information for Portuguese words and presents phonetic transcription only for foreign items. Houaiss employs the International Phonetic Alphabet (IPA) notation carefully in the phonetic transcription, but in the orthoepic indication, the spelling notation is an option (using diacritics). The transcription comes within [], which is misleading, since this symbol is properly used only for phonological transcription. Although this dictionary is more comprehensive in global terms, it does not really help readers with the pronunciation of the language.

Other dictionaries list the phonetic symbols in use with examples. In general, they are confused, incomplete and not rarely mistaken. (cf. Dicionário Unesp do Português Contemporâneo, 2004). This approach has the shortcoming of being nobody’s pronunciation. It pre-supposes the reader has a proficiency in the omitted cases.

We come across more detailed phonetic transcriptions in bilingual dictionaries. Because they transcribe all items, they must set up the variety of the language that is being used. Even in these cases, it is not always clear which is the chosen variety, because it is not indicated, and the transcriptions we see are not strictly close to one dialect. An additional problem is the use of phonetic symbols. In spite of statements indicating the use of the IPA, in practice, what we find is something adapted in a way that makes it painful to consult the dictionary.

In the Novo Dicionário Folha Webster’s Inglês/Português, Português / Inglês compiled by Antônio Houaiss and Ismael Cardim (1996), all English and Portuguese items have a phonetic transcription within || bars (which are traditionally used for morphological transcription, not for phonetics). The dictionary begins with a “phonemic transcription” that is, in fact, a phonetic one. After presenting all vowels, consonants and diphthongs, there are some notes relating to spelling forms for pronunciation in the case of Portuguese. Nothing of the kind is said for English. It says:

“[i] is a transcription for written s, z or x ending syllables, e.g. as, estas, postura, atriz, exportar, expansão. The pronunciation of [i] has two patterns, one we should call old and Paulista pattern, and the other, Rio-Lisboa pattern.” (p. viii). (Examples: Old-Paulista pattern: velhas santas [velhas sntas]; fortes garras [fortes garras]. Rio-Lisboa pattern: swas tias: [tsux tias]; fortes garras [fortes garras]’ganas].)

These examples show how confusing and inaccurate those transcriptions are.

In this dictionary, the phonetic transcription follows the Rio-Lisboa pattern, but the model has unacceptable transcriptions like the use of the same [n] for Paulista [nt] and Rio [nt]. Obviously they do not have the same pronunciation. In Paulista we have a voiced tap (or a retroflexed “t”), and in Rio a voiceless velar fricative: mar [max], porta [pɔtxa].

The Michaelis Moderno Dicionário Inglês/Português Português/Inglês (2000) presents the words, their syllable boundaries for writing and the phonetic transcription between brackets. As usual, only the primary stress is indicated, but in this case, the stress mark is the sign [’] placed just before the stressed vowel (casa [k’aze]), which is very unusual. “Foreign words were transcribed by using the phonetic scheme presented above, adapting the pronunciation as closely as possible to the foreign model (hovercraft [‘hvrkrft’])” (p. xxi). There
is an advertisement about variation on different dialects.

“A word is rarely pronounced in the same way everywhere in Brazil. There are many variations, influenced mainly by the region where the language is spoken and by factors such as the speaker’s educational level, social group and age bracket. For this reason, a choice had to be made regarding pronunciation. To date, there is no official standard for spoken Portuguese, as is the case for the vernacular French, for example. Therefore, the formal pronunciation of speakers with higher education in the city of São Paulo, and that used by radio and television announcers on national network, was adopted. Their pronunciation tends to undergo minimal influence from regional variations for this dictionary.” (p. xx).

The dictionary uses the symbol [a] and notes:

“Similar to the a in about. It corresponds to the final, unstressed open [a] pronounced (in fact, like all final unstressed vowels) faintly, almost inaudibly; in practice, it can be replaced by [a] without prejudice to communication.” (cf. example: janela, p. xx).

There is also the symbol [A] with the following observation:

“Similar to the posterior, semi-open a, as in bud, and slightly nasalized; it is always stressed and followed by m, n, nh. (example: cama, cana, câmbiao)” (p. xx).

Words like canto and órfão are transcribed as [ˈkɐ̃tu], [ˈɔɾfɐw]. Therefore, there are two ways to transcribe the same sound [a] = [a] and [ɐ]; and two ways to transcribe the nasalized “a”: [ã] and [ɐ]. This kind of alternation is confusing for the reader and unnecessary. In spite of being published in 2000 (revised edition), the sound of “R”, transcribed as [ɾ] (r with micron) (cf. rato, carro) is defined as a trill [r], a pronunciation that is very rare in the Paulista dialect today.

In the Dicionário Larousse / Ática Básico Inglês-Português, Português-Inglês, we see a systematic transcription based on the Carioca dialect (from Rio de Janeiro). It also marks the secondary stress. In practice, the dictionary avoids some vocalic reductions to approximate the phonetic transcriptions to spelling forms: escola [iʃˈkela] but embaixo [ɐ̃mˈbaju]. The word bem is noted [ˈbɛj] but bom is transcribed [ˈbɔm], which is nobody’s pronunciation (cf. [ˈbɔ̃m]). Occasionally there are dialectal pronunciations like boné [ˈbɔnɐ] (cf. [ˈbɔnɐ]). It transcribes capaz [kɐˈpaʃ], but rapaz [ʁaˈpaʃ], not following a rule.

In general, the transcription characterizes the Carioca dialect but it does not conform strictly to the sounds, sometimes providing a more phonological representation of the sound pattern.

This dictionary tour has a purpose: which model should I use to make my phonetic transcription for the new Kernerman dictionary? I finished my phonetic journey with lots of doubts and no solution. Thus, I decided to apply my own model (Cagliari, 2007).

3. The model

3.1 The option for the International Phonetic Alphabet was unquestionable. However it should be used as settled by its conventions without adaptation. It means that any linguist or person with the knowledge of the IPA should get the right pronunciation.

3.2 For computer reasons, the IPA font chosen was Arial Unicode MS.

3.3 Since there was no real speaker to be transcribed, but a variety of the language, and taking into account the fact that the educated variety of the Brazilian pronunciation is less sensitive in the whole country than the Paulista dialect, the choice to transcribe that variety was considered to be the most convenient. The most important television news announcers are trained to use what is referred to as less socially marked pronunciation. In practice, they use a modern variety of the Paulista dialect. Other varieties appear on different TV programs and in regional news bulletins. However, there are adaptations, for instance, avoiding the retroflexed sounds of any kind, introducing the modern affricates for coronal stops, now disseminated among the new generations of Paulista speakers. That strategy seemed interesting and I decided to follow the TV news announcers’ pronunciation.

3.4 A group of students, Paulista dialect speakers, helped me with the phonetic transcription. But there still remained the most important and crucial problem to be solved: as it does in all varieties of a language, the Paulista dialect presents different pronunciations in particular contexts or even for a single word. That required the statement of some conventions that should not betray a good pronunciation, but on the other hand should get some generalization, convenient for a dictionary. This particular problem was related to the transcription of nasality being consonantal or vocalic. So, the next step demanded setting up some transcription rules.
3.5 One more problem came up: the phonetic transcription needed to be as close to the spelling form of the word as possible. Portuguese orthography is friendly in this respect. In fact, this decision worked as a filter and a target when deciding between competitive pronunciations.

4. Some transcription rules

4.1 To avoid retroflex sounds, the “R” was transcribed with the symbols [ʁ]: rato [ʁaˈtu], carro [ˈkaɾu], honra [ˈõõɾa] and [ɾ]: caro [ˈkaɾu], porta [ˈpoɾa], mar [ˈmaɾ], braço [ˈbraɾu]. The voiced [y] was discarded since it varies with [x]: barriga [baˈɾiɡa] – [baˈɾiga].

4.2 As pointed out above, the coronal stops were transcribed with the affricates [ɾ] and [ʣ] when appearing before an anterior closed vowel [i]: tia [ˈtia], dia [ˈdi̯a]; or [i]: pote [ˈpoɾi], sede [ˈsed̥i], desrespeito [dεɾɾɛsˈpeɾtu].

4.3 In word final position, the unstressed vowels were transcribed as [a], [i], and [u]. The option for [e], [ę] instead of [a] runs only for European Portuguese.

4.4 The vowels [i], [u] next to another vowel mean the weak part of a diphthong except when a stress mark indicates as hiatus or in unstressed endings when [i] or [u] precede another vowel. In this case, there is a variation between the hiatus and a diphthongized pronunciation: funcionar [fuʃiŋˈnaɾ], mágoa [ˈmaɡuə], ciência [sɨˈɛnsə].

4.5 In word initial position, if the syllable is unstressed, there occurs the vowel [i] when followed by a coronal fricative in coda position: escola [ʃkoˈla], externo [iˈtʃi̯ɾnu]. This represents a clear tendency in the dialect.

4.6 There is a tendency to have des-pronounced as [dʒi̯iz·i̯:], desbloquear [dʒizblokˈɾaɾ], descobrir [dʒizkoˈbɾiɾ].

4.7 A more complicated case involving unstressed syllables in word initial position occurs with the presence of nasality. If the word starts with the vowel, the best choice was the diphthong [ɛɾ + (nasal)]: então [iˈtʃi̯ɾõ], enraivecido [iɾaivẽˈsidu]. If it starts with a consonant, the pronunciation with a diphthong used to sound emphatic, mainly when emphasized by a stop consonant: tentativa [tentəˈtiva], sentença [sẽntẽˈsũa]. The transcription marks the nasal consonant before a stop; otherwise the diphthong is the rule.

4.8 As a general rule, the nasalized vowels and diphthongs receive the tilde only when followed by a nonstop consonant. Before stop consonants, there is the transcription of a homorganic nasal consonant: cansado [kɐ̃ˈsaðu], pensar [pɐ̃ˈsar], enlatado [eɾˈlaɾadu], campo [ˈkɐ̃pʊ], tinta [ˈtĩta], trançar [tɾɐ̃ˈkaɾ]. The pronunciation without the nasal diphthong before fricatives and laterals is not encountered in the Paulista dialect.

4.9 The nasализation of the vowel “A” is always marked as [ɐ] before stop and nasal consonants and as [ɐ] before nonstop consonants: bando [ˈbɐ̃du], frango [ˈfɾɐ̃gu], cansar [ˈkɐ̃sɐɾ], lanchar [lɐ̃ˈʃar], cama [ˈkɐ̃my], banha [ˈbɐ̃ˈna]. In Portuguese, there does not occur an homorganic nasal before nonstop consonants, but only the nasalized vowel or diphthong. One exception is the transcription with [ɐ] instead of [a] in unstressed syllables when the vowel precedes a nasal consonant at the onset of the following syllable: banana [ˈbaɾnɐ], camada [ˈkɐ̃ˈmadɐ]. Phonetically, the two pronunciations occur (cf. [bɐnɐ], [kɐ̃ˈmadɐ]).

4.10 At word endings, there occurs the nasalized vowel [ɐ]: maçã [ˈmɐ̃ˈsɐ̃], irmã [iɾˈmɐ̃] and nasalized diphthongs [ɐi], [ɐi], [ɐi], [ɐi]: mães [maˈɐ̃ʃ], pão [ˈpɐ̃u], coações [ˈkɐ̃ˈoɐ̃ʃ], marrom [maˈɾu̯ɾɐ̃]. The spelling “-EM” and “-EM” were transcribed as [ɐn] and [ɐn]: fim [fɐ̃], assim [ɐʃi̯i̯], vem [vɐ̃], armazém [ɐɾmaˈzɐ̃.ɐ̃]. In these cases, the transcription with the nasalized diphthong [ɐ] and [ɐ] would be a good one, but transcriptions like fim [fim], vem [vɐ̃] and bom [bɐ̃] are misleading.

4.11 Close to the spelling form, inside the words, the phonetic transcription maintains the unstressed vocalic quality [i], [u] for “I” and “U”. For spelling “E” and “O”, the transcription varies according to the pronunciation: [ɐ] ~ [i], [ɐ] ~ [u].

4.12 The correct pronunciation of the diphthong is [u] for the spelling “UL” : sul [ˈsul], último [ˈułtɨmu], culpa [ˈkupu]. The transcription [u] is misleading. The right pronunciation is [ɐ] for “AL” and “AU”: alta [ˈɔtɐ], auro [ˈɔru], almoço [ɐlɐˈmozɐ].

4.13 Although we find in Paulista dialect diphthong reductions or diphthongization in some contexts, as used to be in Brazilian Portuguese, I have decided not to implement these rules, because without them, the pronunciation sounds more educated. Examples: caiaza [ˈkɐ̃ʃuʃ], cadeira [kɐˈdiɾɐ], pouco [ˈpʊku], rapaz [ˈɾapuʃ], freqüês [fɾɛʃuʃ], nós [nuʃ].

4.14 On the other hand, an epenthetic vowel [i] is inserted to keep the syllable pattern correct: objeto
4.15 Foreign words were transcribed as the Paulista speaker pronounces them: *shopping* [ʃɔpɪŋ], *outdoor* [autdɔɹ].

4.17 Only the stressed syllables received a stress mark: *destruição* [dɛstruˈʃwʊ], *psicologia* [pɪskɔˈlɔʒɪɐ].

4.18 In a dictionary there sometimes happens to be two orthographic words together, constituting a phonological word. One of them is unstressed and may occur before or after the principal word. In such cases, the option was to fuse them in a single phonetic utterance: *em comum* [ɛm kõomʊ], *espreguízar-se* [ɛςpregwízɐs]. If the words were individually stressed, they are presented separately: *dar para* [ˈdɐr ˈpɐɾɐ], *ir para os ares* [iɾ ˈpɐɾɐɾɔɾes]. The reason is to improve the knowledge of the occurrence of stress in the language and to facilitate the phonetic reading in the dictionary.

4.19 The reader may come across phonetic transcriptions of special cases for which a general rule could be applied, but find variations. When discussing these cases with the group of transcribers, it appeared that one pronunciation is preferable for certain words rather than another. Typically this happens at the beginning of words, involving the alternation between [ɐ] and [i]. For instance, the word *encaiçar-se* could be transcribed as *ɛnʃkaˈʃwɐs* or *ɛnʃkaˈʃwɐs*; *desaparecer* [dɛzaˈpaɾezɐɾ] or [dɪzaˈpaɾezɐɾ]. The choice was the first occurrence. Obviously, we are facing a sound change in the language: not all *a/e* have already transformed into [i], and for this reason some rules do not apply.

4.20 These rules govern most cases that were optimized in order to keep a right and educated pronunciation, and at the same time this shows a compromise with the spelling form. These procedures seemed to be very useful taking into account the use of a dictionary for foreign and native speakers of Brazilian Portuguese. All phonetic transcriptions reveal an exact and accepted pronunciation as noted by IPA symbols. They transcribe the exact pronunciation of one educated variety of the Paulista dialect. It does not mean that in particular cases and contexts some speakers might not use an alternative pronunciation.

5. Conclusion
The most important thing when transcribing the phonetic transcription for the dictionary was to avoid incongruence. The main aim of any writing system is to allow easy reading for all users. To achieve this goal all systems must have an orthography, whose most important function is to neutralize the phonetic variation in the writing system. Although these objectives must be present, because of the mobility of the sound pattern of languages, the system is always incomplete and restructuring itself. This is a problem for linguists who describe the system and for the orthography that is always out of synchrony. The phonetician feels comfortable in transcribing single speakers. The phonologist has some problems to accommodate the phonetic data into the phonological system. The orthographers are always delayed in order to save a tradition before the process of language changing. This makes the linguists’ life somewhat complicated. But with a good understanding of the phenomenon of linguistic variation it is possible to describe the language in all its peculiarities without losing its systematic character. The experience of writing the phonetic transcription for the dictionary was a challenge to the group of people involved in it, and a good opportunity to learn more about the profession of lexicography.

Notes
1. The Portuguese language has undergone many orthographic reforms over the past hundred years. The latest reform was officially implemented in Brazil in 2009. That was a minor reform affecting a few words in specific contexts (heróico = heroiço; idéia = ideia) and introducing new rules for the use of hyphen (mini-saia = minissaia; contra-senha = contrassenha), etc. Portugal has not officially implemented this reform.

2. "5. The orthoepy between brackets and in a clear type, after the headword, interprets the pronunciation, when a doubt may occur (open or closed vowel, the right pronunciation of a consonant or of a consonant cluster, a hiatus, etc." (p. xv). Example: *resinoso* (6). This kind of notation is useless, because the language morphology has clear and specific rules for such occurrences.

3. "6. The phonetic transcription of foreign words comes immediately after the headword, between brackets, and is represented by the International Phonetic Alphabet (adapted) in an approximate pronunciation of that word in its original language." (p. xv). Example: *res nullius* [ɾɛs ˈnjuʎos]; *outdoor* [ˈautdɔɹ]. With the modifications, the dictionary presents a non-conventional use of the IPA. It
means that the eccentricity in the phonetic transcription demands extra knowledge to grasp the right pronunciation.

References


Kernerman French-Portuguese dictionary: Adapting the translation from European Portuguese to Brazilian Portuguese

Helena Sakano Fernandes and Claudia Xatará

This article describes the process of integrating translation equivalents for Brazilian Portuguese (BP) in French dictionary entries that were previously translated to European Portuguese (EP). The resulting dictionary is intended for adults and students who learn or use Portuguese on the intermediate level as well as for Brazilians learning French.

The dictionary is fully bilingual and bi-directional. Each section has about 12,000 entries in the source language with translations for every sense, example and phrase in the target language.

The French entries are part of the vernacular: names of animals, flowers, common trees, fairly common dishes and drinks, frequent interjections (vive! – viva!), foreign words (camping – camping) and colloquial words (chouette – gracinha; legal, bacana), not forgetting the most complicated terms found in the press or in administrative documents (directeur adjoint – diretor adjunto; vice-diretor), as well as acronyms and abbreviations.

Common expressions usually appear as part of the entry, either within a given sense or forming a sense of their own. The meanings that denote a change of grammatical category are treated as sub-entries, but homographs come in their own entries.

The dictionary includes a bilingual geographical list with names of countries (or major regions), their demonym and corresponding languages.

The question could arise, why adapt a dictionary from Portuguese to Portuguese? When we think of Brazilian learners the answer is quite obvious. Regarding the direction French-Portuguese, the Brazilian audience wishing to decode texts produced in French might find it difficult to understand certain equivalents in EP or might use unsuitable equivalents of the Brazilian variant.

However, compared to the French audience, the benefits of having two French-Portuguese dictionaries may not be very clear. At first, it might seem commercially more viable to add the equivalents unique to BP, simply by indicating “Br”, for example. Nevertheless, separating the two Portuguese variants into two dictionaries can considerably help learners, by avoiding a lexical mix and incorrect text production that is inappropriate for any of the variants. Wittmann et al. (1995) give good examples of this type of ungrammatical phrases, which they call “aberrations”:

(1) *Quando mo deu, eu nãa tinha se apercebido...

According to the authors, this sentence “is not correct Portuguese because it mixes two syntactic phenomena from different variants: mo [contraction of the pronouns me + o] is not used in Brazilian Portuguese whereas the order of the clitic pronoun, não tinha se apercebido, is not acceptable in European Portuguese.” We could add to this that in Brazil we prefer the verb perceber rather than the pronominal verb se aperceber.

(2) *Encontrei o banheiro no banhe...

This sentence, on the other hand, cannot be accepted because of the words that are used. Banheiro, meaning lifeguard, is only used in EP (in Brazil banheiro means bathroom) and banhe, meaning tramway, is a word used only in Brazil (in Portugal, eléctrico is used).