Brazilian Portuguese

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Portuguese, a language of the Ibero-Romance subgroup of the Romance languages, has a variety which is spoken in Brazil, a country with circa 170 million inhabitants, of whom about 161 million speak Portuguese and 138 million live in cities. For this illustration of Brazilian Portuguese (henceforth BP), we have recorded a speaker whose choice was guided by two demographic criteria, namely, to represent the most populous dialectal region, that of São Paulo, and the most frequent age range (15–29 years, corresponding to 28% of the Brazilian population. Source: IBGE, Demographic census 2000). The speaker was a female undergraduate student at the University of Campinas at age 21 at the time of the recording. She was born in the city of São Paulo, where she lived up to age 10. From then on she has been living in Valinhos, a city on the outskirts of Campinas.

BP comprises several regional dialects, which can be roughly identified with the boundaries of the States of the federation. It is further possible to subcategorise these dialects into urban and rural. The following illustration is based on an urban variety of the São Paulo State dialectal region.

In the transcriptions that follow, stress marks are omitted in penultimately stressed words, since this stress pattern is canonical in Portuguese.

BP is distinct from European Portuguese (EP) in several respects. One of the most striking differences concerns vowel reduction, including the extreme case of deletion. Both phenomena are far less extreme in BP (cf. *pagar* paˈgaɾ 'to pay' in BP vs. pɐˈgaɾ in EP), which does not present the long sequences of consonants typical of pre-stressed position in EP (cf. depenʲiˈkaɾ 'to pluck', in this variety of BP vs. *depenicar* dpniˈkaɾ in EP). By contrast, BP exhibits vowel epenthesis, breaking most two-obstruent sequences. For phonotactic reasons common to both BP and EP, one of the consonants is always an apical: *psicologia* pisɪkoloʒiɐ or pɪsikoloʒiɐ 'psychology' in BP vs. psɪkoloʒiɐ in EP. The epenthetic vowel is always [i] or [ɪ], a fact which follows in part from the high front position of the tongue body at the (apical) consonant release, since the tongue front is involved in raising the tongue tip.

In the consonant table and in the vowel inventory, allophones are indicated by parentheses. When not explicitly signalled, all transcriptions of this illustration are phonetic, in order to give a detailed account of the dialect presented here. For brevity and convenience, capital roman letters between slashes are used to indicate archiphonemes.

Consonants

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Palatal	Velar
Plosive	p b		t d				k g
Affricates			(t͡ʃ) (d͡ʒ)				
Nasal	m		n			ɲ	
Tap				ɾ			
Fricative		f v		s z	ʃ ʒ		ɣ
Lateral approximant				l		ʎ	

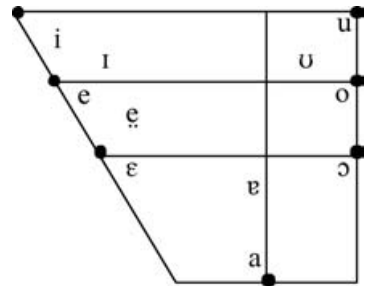|								
p	patɐ	*pata*	'paw'	b	batɐ	*bata*	'knock!'
t	tatɐ	*tata*	'kind of house for African chiefs'	d	datɐ	*data*	'date'
t͡ʃ	t͡ʃitɐ	*Tita*	a proper name	d͡ʒ	d͡ʒitɐ	*dita*	'said (fem.)'
k	katɐ	*cata*	'(s/he) picks out'	g	gatɐ	*gata*	'she-cat'
f	fakɐ	*faca*	'knife'	v	vakɐ	*vaca*	'cow'
s	sakɐ	*saca*	'sack'	z	zakɐ	*zaca*	'Buddhist high priest'
ʃ	ʃagɐ	*chaga*	'open sore'	ʒ	ʒakɐ	*jaca*	'jackfruit'
m	matɐ	m*ata*	'woods'	n	natɐ	*nata*	'cream'
				ɲ	gẽɲʊ	*ganho*	'profit'
l	galʊ	*galo*	'rooster'	ʎ	gaʎʊ	*galho*	'branch'
ɣ	kaɣʊ	*carro*	'car'	ɾ	kaɾʊ	*caro*	'expensive'

Voiceless plosives are unaspirated, as in other Portuguese varieties, and their contrast with the voiced series is ensured by clear, early voicing and shorter total duration of [b d g]. In BP, unlike EP, voiced plosives are seldom realised by their homorganic fricatives in intervocalic position (e.g. *acabar* aka'baɾ 'to finish' in BP vs. ɐkɐ'βaɾ in EP). Dental plosives are realised as affricates before [i] and [ɪ] in the variety illustrated here (see transcribed passages). This affrication apparently follows from extensive coarticulation between the consonant and the vowel (see Albano 2001: 68–86 for details). Affrication is quite common in the State of São Paulo, but still more widespread in other states, such as Rio de Janeiro and Bahia. The palatal nasal very frequently reduces to a nasalised palatal approximant. In intervocalic position there is a phonemic contrast between the so-called strong and weak 'r's', /r/ vs. /ɾ/. While the latter phoneme is always realised as a tap ([ɾ]) in this position, the former varies considerably across the Brazilian territory. In the variety described here, it is a velar fricative, usually voiced between voiced sounds and voiceless elsewhere (which justifies the use of the symbol [ɣ] to indicate the realisation of /r/). It can nevertheless be realised as a glottal fricative, usually in weak prosodic positions, particularly in casual speech.

In coda position, four archiphonemes are allowed in BP: /R/, /S/, /N/, /L/ (cf. D'Angelis' (2002) reanalysis of Câmara's (1970) treatment of the issue). If complete contrasts such as *carta* /kaRta/ kaɾtɐ 'letter' vs. *casta* /kaSta/ kastɐ 'chaste (fem.)' vs. *canta* /kaNta/ kẽtɐ '(s/he) sings' vs. *calta* /kaLta/ kaʊ̯tɐ 'marsh marigold' are rare, a three-archiphoneme contrast is frequently found. As regards /R/, its phonetic realisation is extremely variable in BP, and it may even include a tap. Within the framework of Labovian sociolinguistics, Callou, Moraes & Leite (1996) showed, on the basis of phonetically transcribed data, that an isogloss for /R/ realisations can be established between the States of São Paulo and Rio de Janeiro: a higher frequency of the tap from São Paulo southwards, as opposed to a higher frequency of the velar and glottal fricatives from Rio de Janeiro northwards (this result still awaits confirmation by means of instrumental phonetic analysis). The tap is the preferred realisation for /R/ in the variety presented here. In infinitives, however, this sound usually drops word-finally

except if followed by a vowel. The archiphoneme /S/ surfaces either as a voiced or as a voiceless alveolar fricative. As in most varieties, it tends to assimilate the voicing of the following sound. The archiphoneme /N/, in words such as *canta* /kaNta/ '(s/he) sings' or *irmã* /iR'maN/ iɾ'mẽ 'sister', triggers the nasalisation of a preceding vowel, as detailed in the next section. Moreover, it also surfaces as a reduced nasal taking the place of articulation of a following, non-fricative sound. The archiphoneme /L/, which some generations ago used to be a velarised lateral approximant, is changing into a labial-velar approximant throughout the entire Brazilian territory, producing homophones such as *mau* maʊ̯ 'bad' and *mal* maʊ̯ 'evil'.
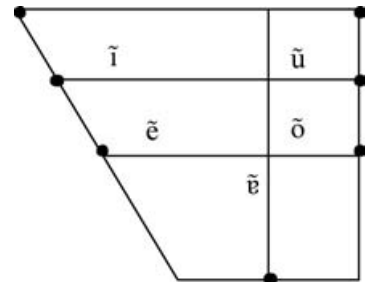
Vowels

i	sikʊ	*sico*	'chigoe'
e	sekʊ	*seco*	'dry'
ɛ	sɛkʊ	*seco*	'(I) dry'
a	sakʊ	*saco*	'bag'
ɔ	sɔkʊ	*soco*	'(I) hit'
o	sokʊ	*soco*	'hit (noun)'
u	sukʊ	*suco*	'juice'
(ɪ)	sakɪ	*saque*	'withdrawal'
(e̞)	'nũme̞rʊ	*número*	'number'
(ɐ)	sakɐ	*saca*	'sack'
(ʊ)	sakʊ	*saco*	'bag'

Nasalised vowels

(ĩ)	sĩⁿtʊ	*cinto*	'belt'
(ẽ)	sẽⁿtʊ	*sento*	'(I) sit'
(ɐ̃)	sɐ̃ⁿtʊ	*santo*	'saint'
(õ)	sõⁿdʊ	*sondo*	'(I) probe'
(ũ)	sũⁿtʊ	*sunto*	'summed up'

The most intuitive way to analyse the Portuguese vowel inventory is by reference to the lexical stress pattern (see next section for details), as proposed by Câmara (1970). Portuguese phonemically contrasts seven oral vowels in stressed position: /i e ɛ a ɔ o u/, as illustrated above. There is a phonetic contrast of five nasalised allophones in stressed position before the archiphoneme /N/ (which induces the so-called phonological nasalisation, illustrated by the preceding list), as well as before heterosyllabic nasal consonants (which triggers the so-called phonetic nasalisation): [ĩ ẽ ɐ̃ õ ũ]. The latter condition is exemplified by the following list: (*em*) *cima* sĩmɐ 'above', *sema* sẽmɐ 'seme', *sama* sɐ̃mɐ 'pine tree leaf', *soma* sõmɐ 'sum', (*em*) *suma* sũmɐ 'to sum up'. This yields a total of twelve contrasting vowels in stressed position. In pre-stressed position, there is a ten-vowel phonetic contrast, where the quality of the corresponding stressed vowel is roughly preserved: [i e a o u ĩ ẽ ɐ̃ õ ũ]. Nasalised vowels in this position surface either before /N/ (e.g. *temporal* tẽᵐpo'raʊ̯ 'temporal') or before /ɲ/ (e.g. *ganhar* gɐ̃'ɲaɾ '(to) win'). In post-stressed position, the variety studied here contrasts four oral vowels, including a centralised version of [e] (in this variety, only in non-final post-stressed position under antepenultimate stress, as in *ópera* 'ɔpeɾɐ 'opera' and *número* 'nũme̞rʊ

'number'): [ɪ ɐ ʊ ẹ]. There is also a five-nasalised-vowel opposition after lexical stress, as illustrated by *imã* 'imẽ 'magnet', *hífen* 'ifẽɪ̯̃ 'hyphen', *próton* 'prɔtõ 'proton', *ínterim* 'ĩtẹr̝ĩ 'interim', and *álbum* 'aʊ̯bũ 'album', even though minimal pairs cannot be found.

A large list of oral diphthongs can be formed by combining the stressed oral vowels above with the offglides [ɪ̯] and [ʊ̯], *[iɪ̯] being the only impossible diphthong in the dialect illustrated here (a similar-sounding sequence, however, is found in dialects in which a palatal approximant often substitutes for the palatal lateral, e.g. *filho* fiʝʊ 'son'). Nasalised diphthongs are formed by combining [ẽ ɐ̃ õ ũ] with the offglide [ɪ̯̃]. With [ʊ̯̃], on the other hand, the only possibility is [ɐ̃ʊ̯̃]. There are two post-stressed nasalised diphthongs: [ɐ̃ʊ̯̃], as in *bênção* 'bẽsɐ̃ʊ̯̃ 'blessing', and [ẽɪ̯̃], as in *hífen* 'ifẽɪ̯̃ 'hyphen'. Due to the realisation of /L/ as a labial-velar offglide, which has a vocalic quality in BP, it is possible to add an inventory of phonetic diphthongs to the preceding list, which yields a larger diphthong inventory than that of EP (see, for instance, *sol* sɔʊ̯ 'sun' and *sul* suʊ̯ 'South' in the transcribed passages). Following [k], the onglide [ʊ̯] can form additional diphthongs such as *quando* kʊ̯ɐ̃ⁿdʊ 'when' (including sequences of diphthongs, traditionally called triphthongs in BP, e.g. *quais* kʊ̯aɪ̯s 'which ones'). In casual and fast speech, adjacent heterosyllabic vowels usually turn into diphthongs, triphthongs or sequences of them (e.g. *o menino e o amigo* u minĩnʊ̯iu̯amigʊ 'the boy and his friend'). Diphthongs also emerge in this variety from yodisation of vowels (with the exception of [i]) followed by /S/, as in *arroz* aɣoɪ̯s 'rice' and *mas* maɪ̯s 'but' (see Albano 2001: 86–91 for details).

Prosodic features

Lexical stress

Lexical stress in BP can fall in final, penultimate or antepenultimate position, penultimate being the most frequent pattern. Minimal triplets such as *sábia* 'sabɪɐ 'wise (fem.)', *sabia* sabiɐ '(s/he) knew' and *sabiá* sabi'a 'a Brazilian thrush' can be found. In a rather formal and conservative style, it is further possible to find stress on the fourth syllable leftwards, as in phonological words such as *falávamo-nos* fa'lavɐmʊnʊs '(we) talked to each other' (however, in BP, the proclitic position for the pronoun *nos* nʊs 'us' is by far preferred). In post-stressed position, vowels are realised as non-peripherical allophones. The main acoustic correlates of lexical stress are a longer duration of a syllable-sized unit in stressed position (Massini 1991, Barbosa 1999) and an intensity fall from stressed to post-stressed position (Fernandes 1976) where applicable.

Rhythm

Duration is also the main acoustic correlate for phrasal stress. Peaks of duration of V-to-V units followed by a duration reset are the main acoustic events for the delimitation of stress groups in BP (see Barbosa 1999). Lexical stress that is not phrasally prominent introduces perturbations (local oscillations) in a general tendency for duration to increase rightwards in the direction of phrasal stress. The alleged stress timing of BP has been disputed in Barbosa (2000), who found a strong component of syllable timing, within the framework of a coupled-oscillators theory of speech rhythm production. Intonation serves mostly to signal major boundaries within the utterances, at least in lab speech.

Transcription

A narrow phonetic transcription is given below, in order to highlight BP specificities, mainly in relation to EP (for this purpose, the first orthographic version of the passage is the same as in the EP illustration). Stress is indicated with the appropriate symbol except if not penultimate.

Orthographic version

O vento norte e o sol discutiam qual dos dois era o mais forte, quando sucedeu passar um viajante envolto numa capa. Ao vê-lo, põem-se de acordo em como aquele que primeiro conseguisse obrigar o viajante a tirar a capa seria considerado o mais forte. O vento norte começou a soprar com muita fúria, mas quanto mais soprava, mais o viajante se aconchegava à sua capa, até que o vento norte desistiu. O sol brilhou então com todo o esplendor, e imediatamente o viajante tirou a capa. O vento norte teve assim de reconhecer a superioridade do sol.

Narrow transcription

u vẽⁿtʊ nɔɾtʃɪ u sɔʊ̯ dʲiskutʃiɐ̃ʊ̯ kʊ̯aʊ̯ duz doɪ̯z ɛɾɐ u maɪ̯s fɔɾtʃɪ ǁ kʊ̯ẽⁿdʊ suseˈdeʊ̯ paˈsar ũ viaʒẽ̃ⁿtʃĩvoʊ̯tʊ ˈnũma kapɐ ǁ aʊ̯ velʊ põɪ̯sɪ d͡ʒɹakordʊ ĩ kõmakelɪ kɪ primeɾʊ kõsɪˈɡiʃ obriˈɡar u viaʒẽ̃ⁿtʃɪɐ tʃiˈrar a kapɐ seɾiɐ kõʃdeˈradu maɪ̯s fɔɾtʃɪ ǁ u vẽⁿtʊ nɔɾtʃɪ komeˈsoɐ̯ soˈprar kõ ˈmũɪ̯ta fuɾɪɐ ǀ mas kʊ̯ẽⁿtʊ maɪ̯sopravɐ maɪ̯z u viaˈʒẽⁿt sɪ̯akõʃˈeˈɡava sʊɐ kapɐ ǀ aˈtɛ kɪʊ̯ vẽⁿtʊ nɔɾtʃɪ dʲizisˈtʃiʊ̯ ǁ u sɔʊ̯ briˈʎoʊ̯ ĩˈtʲ̊ẽʊ̯ kõⁿ todʊɪsplẽⁿdor iːmed͡ʒɹatamẽⁿtʃɪ u viaʒẽ̃ⁿtʃ tʃiˈroʊ̯ a kapɐ ǀ u vẽⁿtʊ nɔɾtʃ tevɪɐˈsĩ dʲi ɣekõɲeˈser a superioridadʲɪ du sɔʊ̯

An alternative translation of the North Wind passage is offered below, which not only replaces EP idioms with BP ones, but also makes some adjustments taking the southern-hemisphere position of Brazil into consideration.

Orthographic version

O vento sul e o sol discutiam qual dos dois era o mais forte, quando passou um viajante envolto num casaco. Ao vê-lo, apostaram que aquele que primeiro conseguisse obrigar o viajante a tirar o casaco seria considerado o mais forte. O vento sul começou a soprar com muita força, mas quanto mais soprava, mais o viajante se embrulhava no seu casaco, até que o vento sul desistiu. O sol brilhou então com toda intensidade, e imediatamente o viajante tirou o casaco. O vento sul teve assim de reconhecer a superioridade do sol.

Narrow transcription

u vẽⁿtʊ suɪ̯u sɔʊ̯ dʲiskuˈtʃiɐ̃ʊ̯ kʊ̯aʊ̯ duz doɪ̯z ɛɾeʊ̯ maɪ̯s fɔɾtʃ ǀ kʊ̯ẽⁿdʊ paˈsoʊ̯ ũ viaʒẽ̃ⁿtʃĩvoʊ̯tʊ nũ kazakᵚ ǁ aʊ̯ velö aposˈtaɾɐʊ̯ kɪ̯akelɪ kɪ primeɾʊ kõsɪˈɡiʃ obriˈɡar u viaʒẽ̃ⁿtʃ a tʃiˈrar u kazakᵚ seɾiɐ kõʃderadʊ maɪ̯s fɔɾtʃɪ ǁ u vẽⁿtʊ suʊ̯ komeˈsoɐ̯ soˈprar kõ ˈmũⁿta forsɐ ǀ mas kʊ̯ẽⁿtʊ maɪ̯sopravɐ maɪ̯z u viaˈʒẽⁿt sĩᵐbruʎavɐ nʊ seʊ̯ kazakʊ̯ ǀ aˈtɛ kɪʊ̯ vẽⁿtʊ suʊ̯ dʲizisˈtʃiʊ̯ ǁ u sɔʊ̯ briˈʎoː ĩˈtʲ̊ẽʊ̯ kõⁿ todeĩⁿtẽsidad͡ʒɪ ǀ iːmed͡ʒɹataˈmẽⁿtʃ u viaˈʒẽ̃ⁿtʃ tʃiˈroʊ̯ kazakʊ̯ ǁ u vẽⁿtʊ su tevɪaˈsĩ dʲi ɣekõɲeˈser a superɪoridadʲɪ du sɔʊ̯

There are four noteworthy aspects of the typical variation of this dialect, brought up by different realisations for the same word or by particular words across both passages. First, even though /o/ is pronounced as [ʊ] in post-stressed position, e.g. velʊ (first passage), a much more conservative pronunciation for this phoneme can be found, as in velo (second passage). Second, the sequence /eN/ is often pronounced as [ĩ], in pre-stressed, word-initial position, as in the words ĩˈtʲ̊ẽʊ̯ and ĩᵐbruʎavɐ (first and second passages). Third, the diphthong [uʊ̯] and its reduction to [u] are both instantiated in the word *sul* in the second passage. Fourth, the extreme reduction of post-stressed /u/ emerged in the pronunciation of the Brazilian word for 'coat', *casaco*, in its first and second repetition (second passage). All four processes are probably conditioned by prosodic factors, in addition to sociolinguistic factors.

Acknowledgements

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