

## ILLUSTRATIONS OF THE IPA

# Standard Chinese (Beijing)

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The style of speech illustrated is that typical of the educated younger generation in Beijing. The recording is that of a 25-year-old female graduate student who has lived all her life in Beijing.

### Consonants

	Bilabial	Labiodental	Dental	Alveolar	Post-alveolar	Palatal	Velar
Plosive	p p <sup>h</sup>		t t <sup>h</sup>				k k <sup>h</sup>
Affricate			ts ts <sup>h</sup>		tʃ tʃ <sup>h</sup>	tɕ tɕ <sup>h</sup>	
Nasal	m		n				ŋ
Fricative		f	s		ʃ	ç	x
Approximant	w				ɹ	j	
Lateral Approximant			l				

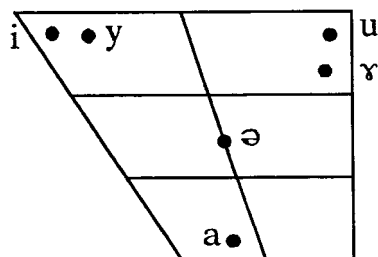
p	pa˧	‘eight’	t	ta˧	‘to build’	k	kɤ˧	‘song’
p <sup>h</sup>	p <sup>h</sup> a˧	‘to lie prone’	t <sup>h</sup>	t <sup>h</sup> a˧	‘he/she’	k <sup>h</sup>	k <sup>h</sup> ɤ˧	‘subject’
m	ma˧	‘mother’	n	na˧	‘to include’	ŋ	aŋ˧	‘dirty’
f	fa˧	‘to send’	s	sa˧	‘to cast’	ʃ	xɤ˧	‘to drink’
			ts	tɕa˧	‘to circle’	tʃ	tʃa˧	‘residue’
			ts <sup>h</sup>	tɕ <sup>h</sup> a˧	‘to wipe’	tʃ <sup>h</sup>	tʃ <sup>h</sup> a˧	‘to insert’
						ç	çia˧	‘shrimp’
						tɕ	tɕia˧	‘to add’
						tɕ <sup>h</sup>	tɕ <sup>h</sup> ia˧	‘to nip off’
w	wa˧	‘frog’	l	la˧	‘to pull’	ɹ	ɹən˧	‘person’
						j	ja˧	‘duck’

### Syllabic consonants

ɹ	sɹ̩	'to think'
	ʃɹ̩	'poem'

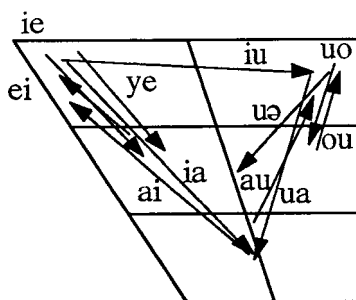
### Vowels

i	i̯	'clothes'	in̩	'sound'
y	y̯	'fish'	yn̩	'dizzy'
a	fa̯	'to send'	an̩	'safe'
ə	ə̯	'son'	ən̩	'favour'
u	u̯	'house'	xu̯ŋ̩	'bombing'
ɜ	ɜ̯	'goose'		



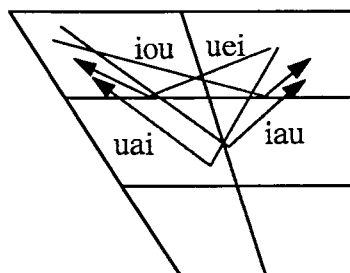
### Diphthongs

ai	ai̯	'sorrow'	
au	au̯	'hollow'	
ou	ou̯	'Europe'	
uo	ʃuo̯	'to speak'	
ei	xei̯	'black'	
ye	cye̯	'boot'	cye̯n̩ 'to announce'
ie	cie̯	'some'	cie̯n̩ 'fresh'
ia	cia̯	'shrimp'	cia̯ŋ̩ 'fragrant'
ua	xua̯	'flower'	xua̯ŋ̩ 'merry'
uə			xuə̯n̩ 'marriage'
iu			ciu̯ŋ̩ 'chest'



### Triphthongs

iau	ciau̯	'to disappear'
uai	ʃuai̯	'to fall down'
iou	ciou̯	'to rest'
uei	xuei̯	'ash'



### Tones (citation forms)

[˥]	(high level)	[pa˥]	'eight'
[˨˥]	(mid to high rising)	[pa˨˥]	'to pull out'
[˨˨˥]	(mid to low to mid dipping)	[pa˨˨˥]	'to hold'
[˨˦]	(high to low falling)	[pa˨˦]	'father'

### Conventions

#### Consonants, syllabic consonants, vowels, diphthongs, and triphthongs

Syllable-initial [t, t<sup>h</sup>, n] and syllable-final [n] are apico-laminal denti-alveolar; syllable-initial [s, ts, ts<sup>h</sup>] are apico-laminal or laminal denti-alveolar; syllable-initial [ʃ, ʒ, tʃ, tʃ<sup>h</sup>] are apical post-alveolar; syllable-initial [ç] is lamino-anterodorsal post-alveolar or pre-palatal; syllable-initial [tç, tç<sup>h</sup>] are apico-anterodorsal or lamino-anterodorsal alveolo-palatal; and

syllable-initial [l] is apical denti-alveolar or apical alveolar. [c, tɕ, tɕ<sup>h</sup>] occur only before [i] or [y]. Voiceless syllable-initial obstruents often become voiced when the following rhyme is associated with the neutral tone. [m] occurs only in syllable-initial position; [n] occurs in both syllable-initial and syllable-final positions; and [ŋ] occurs only in syllable-final position. [w] has a free variant form of [ʋ].

[ɿ] occurs only in isolation or after [s, ts, ts<sup>h</sup>, ʃ, tʃ, tʃ<sup>h</sup>]. [ɿ] in isolation or when following [ʃ, tʃ, tʃ<sup>h</sup>] is a syllabic apical post-alveolar approximant; when following [s, ts, ts<sup>h</sup>] it is a syllabic apico-laminal or laminal denti-alveolar approximant. Syllabic apico-laminal or laminal denti-alveolar and syllabic apical post-alveolar approximants, often called apical vowels, occur only in open syllables.

Vowels [i, y, a, u] occur in open syllables as well as syllables closed by a nasal; [ɣ] occurs only in open syllables. In open syllables, [i, y, u] are about cardinal, [a] = [a̠], and [ɣ] is slightly diphthongized from [ɣ] to [ʌ]. In syllables closed by a nasal, [i, y] are about cardinal, [a] = [a̠], and [u] = [ʊ]. [ə] is a plain mid-central schwa in syllables closed by a nasal; in open syllables [ə] is rhotacized, i.e. [ə̃].

Diphthongs [ai, au, ou, uo, ei] occur only in open syllables; [ie, ia, ye, ua] occur in open syllables and syllables closed by a nasal; and [uə, iu] occur only in syllables closed by a nasal. [ai] = [ai], [au] = [aʊ], [ou] = [oʊ], [uo] = [uɔ], [ei] = [ɛi], [ie] = [iẽ], [ye] = [yẽ], [ua] = [ua], and [iu] = [iu].

All triphthongs occur only in open syllables. In [iau, uai, iou, uei], [a] = [a̠], [o] = [ɔ], and [e] = [ɛ].

A rhyme which may be a monophthong, diphthong, triphthong, ‘vowel+nasal’, or ‘diphthong+nasal’ may undergo *er-hua*. *er-hua* refers to suffixation of a rhotacized subsyllabic [ə̃] to a rhyme, or to rhotacization of a vowel or a sequence of two vowels in a rhyme. In the cases where the rhyme ends with [o], [ɣ] or [u], the vowel is rhotacized, i.e. [ɔ̃], [ɣ̃] or [ũ], instead of the rhyme being suffixed with [ə̃]; and in the cases where the diphthong or triphthong ends with [i] or [e], [i] or [e] is deleted. Thus, [i, y, ɿ, a, u, ɣ] → [iə̃, yə̃, ɿə̃, aə̃, u, ɣ̃], respectively; [ie, ye, ai, ei, ia, ua, uo, ou, au] → [iə̃, yə̃, aə̃, ə̃ə̃, iə̃ə̃, uaə̃, uə̃ə̃, uə̃ə̃, oũ, aũ], respectively; and [uai, uei, iou, iau] → [uaə̃, uə̃ə̃, iə̃ə̃, iə̃ə̃], respectively. In the cases where the rhyme ends with [n], the nasal ending is deleted. Thus, [in, yn, ən, an] → [iə̃, yə̃, ə̃ə̃, aə̃], respectively; and [ien, yen, uən, uan] → [iə̃ə̃, yə̃ə̃, uə̃ə̃, uə̃ə̃], respectively. And, in the cases where the rhyme ends with [ŋ], the nasal ending is deleted and the rhyme is nasalized. Thus, [iŋ, əŋ, aŋ, uŋ] → [iə̃̃, ə̃̃̃, ã̃̃, ŋ̃̃], respectively; and [iaŋ, uaŋ, iuŋ] → [iã̃̃̃, uã̃̃̃, iũ̃̃̃], respectively.

## Tones

[˨] on monosyllables may realize as [˨] or [˨]+silence+[˨]. On compounds, [˨] → [˨] before another [˨], and [˨] → [˨] before [˨, ˨, ˨] or the neutral tone; and optionally, [˨] → [˨] after [˨] or [˨] and before any tone, and [˨] → [˨] or [˨] before another [˨]. On a component syllable of a compound, [˨], [˨], [˨] or [˨] may lose its citation form and become the neutral tone. The pitch value for the neutral tone varies, depending mainly on the preceding citation tone. The general rules are: (˨) when following [˨], (˨) when following [˨], (˨) when following [˨], or (˨) when following [˨].

## Transcription of recorded passage

iou˨ i˨ xuei˨ | pei˨ fəŋ˨ kən˨ t<sup>h</sup>ai˨ iaŋ(˨) tʃəŋ˨ tsai˨ naə˨ tʃəŋ˨ luən˨ ʃei˨ də(˨)  
 pən˨ liŋ˨ ta˨ || ʃuo˨ dʒə(˨) ʃuo˨ tʃə(˨) | lai˨ lə(˨) i˨ kə(˨) kuə˨ lu˨ tə(˨) | ʃən˨  
 ʃaŋ(˨) tʃ<sup>h</sup>uan˨ lə(˨) i˨ tɕien˨ xou˨ p<sup>h</sup>au˨ tsɿ(˨) || t<sup>h</sup>a˨ mən(˨) lian˨ tɕiou(˨) ʃaŋ˨  
 lian(˨) xau˨ lə(˨) | ʃuo˨ | ʃei˨ nən˨ ɕien˨ tɕiau˨ tʃei˨ gə(˨) kuə˨ lu˨ tə(˨) pa˨ d<sup>h</sup>a˨  
 tə(˨) p<sup>h</sup>au˨ tsɿ(˨) t<sup>h</sup>uo˨ ɕia˨ lai˨ | tɕiou˨ suan˨ ʒɿ(˨) t<sup>h</sup>a˨ də(˨) pən˨ liŋ˨ ta˨ ||

peɪ̯ɴ fəŋ̊ɿ̯ tɕiəu̯ɴ mau̯ɴ tsu̯ɿ̯ lə̯(ɿ̯) tɕiə̯ɴ | pʰin̊ɿ̯ min̊ɴ də̯(ɿ̯) tʃʰuei̯ɿ̯ || kʰɿ̯ɴ ʃɿ̯ɴ | tʰa̯ɿ̯  
 tʃʰuei̯ɿ̯ də̯(ɿ̯) ye̯ɴ li̯ɴ xai̯(ɿ̯) | nei̯ɴ gə̯(ɿ̯) ʒə̯ɴ tɕiəu̯ɴ ba̯ɴ tʰa̯ɿ̯ də̯(ɿ̯) pʰau̯ɿ̯ tsɿ̯(ɴ)  
 kuə̯ɴ də̯(ɿ̯) ye̯ɴ tɕin̊ɴ || tau̯ɿ̯ muə̯ɴ lia̯-ɿ̯ | peɪ̯ɴ fəŋ̊ɿ̯ mei̯ɿ̯ tʃɿ̯ɿ̯ lə̯(ɴ) | tʃɿ̯ɿ̯ xau̯ɴ  
 tɕiəu̯(ɿ̯) suan̊ɴ lə̯(ɿ̯) || i̯ɿ̯ xuə̯ə̯ɴ | tʰai̯ɴ iaŋ̊(ɿ̯) tʃʰu̯ɿ̯ lai̯(ɿ̯) i̯ɿ̯ ʃai̯ɴ | nei̯ɴ gə̯(ɿ̯)  
 ʒə̯ɴ ma̯ɴ ʃaŋ̊ɴ tɕiəu̯(ɿ̯) ba̯ɴ pʰau̯ɿ̯ tsɿ̯(ɿ̯) tʰuə̯ɿ̯ lə̯(ɿ̯) ɕia̯ɴ lai̯(ɿ̯) || suo̯ɿ̯ i̯ɿ̯ | peɪ̯ɴ  
 fəŋ̊ɿ̯ pu̯ɴ də̯(ɿ̯) pu̯ɴ tʃʰəŋ̊ɿ̯ ʒə̯ɴ | xai̯ɿ̯ ʃɿ̯(ɿ̯) tʰai̯ɴ iaŋ̊(ɿ̯) pi̯ɴ tʰa̯ɿ̯ də̯(ɿ̯) pən̊ɿ̯ liŋ̊ɿ̯ ta̯ɴ ||

### Orthographic version

有一回，北風跟太陽正在那兒爭論誰的本領大。說著說著，來了一個過路的，身上穿了一件厚袍子。他們倆就商量好了，說，誰能先叫這個過路的把他的袍子脫下來，就算是他的本領大。北風就卯足了勁兒，拼命的吹。可是，他吹得越厲害，那個人就把他的袍子裹得越緊。到末了兒，北風沒轍了，只好就算了。一會兒，太陽出來一晒，那個人馬上就把袍子脫了下來。所以，北風不得不承認，還是太陽比他的本領大。

### Notes

1. The palatographic and linguagraphic data collected by the authors of this study from the native speakers of Beijing, male and female, in their early twenties show that there are no retroflex sounds in their speech.

2. [ɿ], an apical post-alveolar approximant, in this study was transcribed as [z], representing a voiced apical pre-palatal fricative in Karlgren (1915–1926) and as [ɿ], representing a retroflex approximant in Chao (1968).

3. [ʃ, tʃ, tʃʰ], apical post-alveolar fricative and affricates, in this study were transcribed as [s, tʂ, tʂʰ], representing apical pre-palatal fricative and affricates in Karlgren (1915–1926) and as [ʂ, tʂ, tʂʰ], representing retroflex fricative and affricates in Chao (1968).

4. [ɿ̯], a syllabic apico-laminal or laminal denti-alveolar approximant when following [s, ts, tsʰ], in this study was transcribed as [ɿ], representing an apical alveolar vowel in Karlgren (1915–1926) and as [z̥], representing a syllabic voiced dental fricative in Chao (1968).

5. [ɿ̯], a syllabic apical post-alveolar approximant when following [ʃ, tʃ, tʃʰ] or in isolation, in this study was transcribed as [ɿ], representing an apical post-alveolar vowel in Karlgren (1915–1926) and as [ɿ̯], representing a syllabic retroflex approximant in Chao (1968).

6. The non-IPA symbols, [ɿ] and [ɿ̯], representing the ‘apical vowels’ in the Peking (Beijing) dialect first appeared in Karlgren (1915–1926) and are widely used by the linguists in China.

### References

- CHAO, Y.-R. (1968). *A Grammar of Spoken Chinese*. Berkeley: University of California Press.  
 KARLGREN, B. (1915–1926). *Etudes sur la phonologie chinoise*. Leyde: E.-J. Brill.