

Introduction to Phonetics I

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Instructor: Karen Steffen Chung 史嘉琳

Associate Professor, Department of Foreign Languages and Literatures

National Taiwan University



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11. Wrapping up Chapter One

I. Outline for today:

1. Going over the exercises for Chapter One (footnotes)
2. Going over the Hanyu Pinyin assignment (footnotes & Q & A)
3. *A Course in Phonetics*: Chapter 2: Phonology and Phonetic Transcription
4. Homework

II. Notes

1. Going over exercises for Chapter One (footnotes)

Answers for the chapter exercises are not given in the handout; we expect future students to come up with the answers on their own. However, you can read things Ms. Chung mentioned during the discussion and corrections here.

- a. Is *technical terms* a compound noun? If not, why don't we stress both words like we do for other noun phrases?
 - A lot of noun phrases with an adjective that ends with *-al* or *-ic* have compound noun stress
→ (X) technical *terms (O) *technical terms
 - The reasons may be
 - i. the modified noun is relatively "empty" (it has a relatively generic meaning and is not semantically strong)
 - ii. the adjective implies a contrast with other adjectives e.g. *political vs. economic*
- b. We are easily influenced by writing systems; native speakers can be strongly affected by spellings while we can be affected by Chinese characters and the Mandarin Phonetic Symbols (MPS 注音符號).
 - e.g. ㄅ vs. ㄅ一
 - Why do we write ㄅ for ㄅ一 although the latter sounds so different from the former? Why don't we write ㄅ一ㄅ?
 - Place of articulation: Your tongue is a bit higher for ㄅ一 than it is for ㄅ, because 一 is a high vowel (一 changes the vowel quality of ㄅ).
 - cf. (English) *tea vs. true*: your tongue will be more front for *tea* ([i] high front vowel) and more back for *true* ([ʌ] – post alveolar and [u] – high back vowel)
 - Other similar questions worth thinking about:

e.g. ㄊㄩˊ vs. ㄊㄩㄨˊ vs. ㄊㄩㄨˊ Why do we write ㄊㄩㄨˊ when it actually sounds more like ㄊㄨㄛˊ [ɕioŋ] (i.e. instead of a single rounded front vowel [y] (a monophthong), we hear it separated into the diphthong [io], rather than [ɕyŋ])? cf. (Pinyin) xú 徐 vs. xún 巡 vs. xióng 雄 → the Pinyin suggests a totally different phonetic structure for xióng 雄 as opposed to xún 巡. In fact, xún 巡 is also somewhat diphthongal – it sounds like [ɕyən].

e.g. 博 ㄅㄛˊ Why don't we write ㄅㄨㄛˊ ?

The answer: ㄅㄨㄛ and ㄅㄨ are all **labial** sounds, and were considered by the designers of the system to have **inherent lip rounding**, so they decided not to mark rounding with ㄨ, as is done with: ㄅㄨㄛ, ㄅㄨㄛ, ㄅㄨㄛ, ㄅㄨㄛ, ㄅㄨㄛ, ㄅㄨㄛ, ㄅㄨㄛ, ㄅㄨㄛ, ㄅㄨㄛ, and ㄅㄨㄛ. However, although ㄅㄨㄛ and ㄅㄨ all involve the lips in their articulations, they do not actually have inherent rounding; rounding depends completely on the following vowel, e.g. ㄛ. And ㄅㄨ, ㄅㄨ, ㄅㄨ, ㄅㄨ actually **do** have an ㄨ glide before the ㄛ! So your grade school intuition was correct!

In addition, you will notice that ㄅㄨㄛ and ㄅㄨ cannot be combined with ㄛ, like most of the other symbols can – except in the artificially constructed symbol names ㄅㄨㄛ and ㄅㄨ! (They were originally called ㄅㄨ, ㄅㄨ, ㄅㄨ, ㄅㄨ, but were later called ㄅㄨ, ㄅㄨ, ㄅㄨ, ㄅㄨ so they'd be more like ㄅㄨ, ㄅㄨ, ㄅㄨ, ㄅㄨ and the rest, even though no characters are pronounced in this way.)

Also: One student felt strongly that ㄅㄨ must be a “diphthong” 雙母音, because it is written with a single symbol, so in his mind it “had” to represent a “single” sound (but ㄅㄨ [an] contains a nasal, and diphthongs are two *vowels* put together into a single syllable; they can't include a consonant)

→ Once we get used to a writing system (or anything else), especially if we learned it in early childhood, it strongly affects how we think and see the world, and it is very difficult to imagine that any other viewpoint is possible; it is even harder to change how we think, even in the face of strong evidence.

- Taiwanese learners are less likely to be as influenced by English spellings as English native speakers are, since most (so far) know KK – though this is now changing.

c. Dental vs. interdental:

- Dental consonants: in Mandarin ㄅㄨㄛ
- Interdental consonants: in English *th* [θ] and [ð] → Always say “interdental” for English, because we need to reserve “dental” for a different articulatory position in Mandarin.

d. Vocabulary (meanings, pronunciation, etymology, etc.)

- **Do not take things for granted. Make sure you check the dictionary whenever you encounter words that you don't know. Don't just guess.** You can use *Merriam-Webster Online* to check standard American pronunciation, and the *Oxford Advanced Learner's Dictionary* and *Macmillan*

Dictionary for the standard British pronunciation.

- vat (n.): 一缸
 - rave (v.): to get very excited over something
 - rough [ʌf]: the *-gh* was originally a Germanic sound [x] (voiceless velar fricative) but has become an [f] or a silent sound in English e.g. *tough* [f], *eight* (silent)
 - dumb [dʌm]: the final *b* is silent!
 - stomach ['stʌmək]: remember the /t/ is not aspirated!
 - wad [wʌd] (n.): 一捲, 一坨, 一絡 (鈔票) *a wad of bills*
 - gate [geɪt]: the vowel [eɪ] is actually a front diphthong
 - ether ['iθə] (n.): 鉞鈇 cf. *either* ['iðə]
 - lodger ['lɒdʒə] (n.): 寄宿人 cf. *larger* ['lɑːdʒə] 更大 (These two can be easily confused. For *larger*, the [ɑ] is slightly more rounded, and don't forget to pronounce the [l]! In British English, it is ['lɑːdʒə], but we should try to be consistent and stick to one variety at one time.)
 - mast (n.): 桅杆
- e. lull [lʌl] – two realizations of /l/
- before a vowel → alveolar “l” = clear “l” [l] e.g. *light, love, luscious* (美味多汁的)
 - after a vowel → velarized (舌根化/舌後化) “l” = dark “l” [ɫ] (the tongue doesn't necessarily make contact with the alveolar ridge) e.g. *Bill, ball, doll*
 - recording: the intonation for the original word goes from high to low, but if we play it backward, the intonation will go up, which makes it sound a little bit funny (students will be able to reverse a recording and even learn to talk backward after learning to use the software Praat – may be an assignment); but aside from the intonation, you can clearly hear how different the two “l”s sound when their positions are reversed.
 - Professor Chao Yuen Ren 趙元任 could talk backwards, fluently! (If you don't know who 趙元任 was, look him up online – he is certainly one of the greatest Chinese linguists who ever lived!)
- f. If you listen to Ms. Chung's pronunciation of *good*, does the vowel sound like a pure monophthong to you?
- In American English, all of the short vowels are actually *diphthongs*. They are all followed by a short schwa sound [ə]. e.g. *fit, bet* (though it may not be as obvious with the very short vowels /ɪ, ε, ʌ/) cf. The vowel [ɔ] is also followed by a little schwa or even [a]; it sounds like ㄅㄛ in Southern Min compressed into a single syllable (but it's a **long** vowel!).
- an off-glide: the vowel that is less prominent and is **at the end** of a **falling diphthong** e.g. [aɪ eɪ əʊ oʊ ɔɪ]
- vs. an on-glide : the vowel that is less prominent and is **at the beginning** of a **rising diphthong** e.g. [jʊ]

*About the phonetics that we are learning now:

- Keep in mind that it was largely developed in British English-speaking England.
- Many things we are learning about apply well to British English, but many changes in American English are not taken into account.

- g. In English, the palato-alveolar consonant [ʒ] (as in *genre*) is seldom at the beginning of a word. except in loanwords from French or occasionally other languages like Hungarian, e.g. *genre*. Is has long been in English word-internally, e.g. *pleasure, vision*, or as a final, e.g. *garage, massage, rouge*.
- h. In English, there is only one palatal consonant, the approximant 接近音 [j]. It is voiced, so there is no turbulent flow of air when producing it. In words such as *pure*, however, [j] is affected by the preceding voiceless aspirated [p] and it also becomes voiceless. This applies to other approximants as well.



Items	fricatives	approximant (voiced)	approximant (voiceless)
Sound quality	friction (audible turbulence)	no audible turbulence	friction (audible turbulence)
Reasons	The articulators are very close to each other. → The passage for the airflow is very narrow.	The articulators are not that close to each other. → The passage for the airflow is not narrow enough.	Approximants by definition have turbulence when there are voiceless. In the following cases, /j/ becomes voiceless due to assimilation 同化 by the preceding voiceless stop
e.g.		<i>your</i> [juɹ], <i>lay</i> [leɪ], <i>ray</i> [reɪ], <i>win</i> [wɪn]	<i>pure</i> [pʰjuɹ], <i>play</i> [pʰleɪ], <i>pray</i> [pʰreɪ], <i>twin</i> [tʰwɪn] ([j] voiceless)

- i. About the mid-sagittal head diagrams:
- When drawing mid-sagittal head diagrams for non-nasal sounds, make sure to draw the velum **raised** to show that air is **blocked** (so the velum should **touch** the pharyngeal wall) from flowing into the nasal cavity.
 - When drawing diagrams for interdental sounds, do not make the tongue stick out too much.
 - Keep practicing drawing the figures. Use scratch paper – or an iPad! – whatever is handy.
- j. About alveolo-palatal and palato-alveolar:
- Keep in mind that they are different!
 - Alveolo-palatal: in Mandarin ㄐ ㄑ ㄒ and in Polish
 - Palato-alveolar: in English [ʃ] [ʒ] [tʃ] [dʒ]
- k. About diphthongs:
- The more prominent vowel in a diphthong will not appear in the form of monophthong, and vice versa.

e.g. *bite* (X) [bart] (O) [bart]

1. Waveforms: *Tom saw nine wasps*. (See Figure 1.17, p.32 in the textbook.)
 - Pause: flat line (= silence)
 - Voiceless stop: flat line (= closure = silence) + burst
 - Voiceless fricative: irregular lines (= friction = noise)
 - Vowel: regular vertical lines (= voiced), larger amplitude
 - Nasal: regular vertical lines (= voiced), smaller amplitude (muffled)
 - Voiced approximant: regular vertical lines (= voiced), even smaller amplitude

*Why is there a pause?

- *Tom saw nine wasps*. (monosyllable content words → all stressed)
 - In English, it is not acceptable to have two stresses too close to each other.
 - ⇒ We need pauses in between (English is **stress-timed**).
2. **Going over Hanyu Pinyin assignment** (footnotes & Q & A)
 - a. 他們 (ㄊㄚˊ 們) = tāmen (although in Taiwan Mandarin we often say ㄊㄚˊ 們)
 - b. The tone mark in ㄚˊ ㄝ and ㄨˊ is always over the left-hand letter. e.g. ㄞˊ ㄝˊ ㄤˊ ㄛˊ
 - c. The tone mark in other diphthongs is always over the right-hand letter. e.g. ㄟˊ ㄨㄟˊ ㄨㄟˊ
 - d. Rules for separating characters into words can be found on the Internet, but we will not spend time on these or require you to learn the rules for this class.
 - e. For 台北, should we write Táipěi or Táiběi?
 - Táiběi: Hanyu Pinyin (the way we pronounce it) vs. T'ai²pei³: Wade-Giles Romanization
 - f. Do we have to capitalize letters for Hanyu Pinyin?
 - Yes, we capitalize letters that are at the beginning of a sentence and that are at the beginning of a proper noun.

3. *A Course in Phonetics: Chapter 2: Phonology and Phonetic Transcription* (p. 33)

- a. There is a lot more to phonetics than simply knowing how to do phonetic transcription. To be a phonetician, we also need to know (1) how to describe speech, (2) how speech production and speech perception work, and (3) how languages use these mechanisms. The knowledge of phonetic transcription, nevertheless, plays a very important and useful role in the description of speech.

4. Homework

- a. Do the first of the three tutorials on voicing: links on **webpage 7**.

<http://homepage.ntu.edu.tw/~karchung/intro%20page%2017.htm> 

b. Webpages 14 and 15 “Phonemes and Allophones”

<http://homepage.ntu.edu.tw/~karchung/intro%20page%2014.htm> 

<http://homepage.ntu.edu.tw/~karchung/intro%20page%2015.htm> 

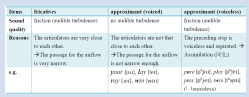







c. Class notes due Monday, Oct. 22.

 **Pronunciation corrections:** framed syllables are stressed; * = tonic stress 

zip	[zɪp]	→ [zɪp] (vowel)
lull	[lʊl]	→ [lʌt] (vowel; consonant)
mother	['mʌðə]	→ ['mʌðə] (vowel) cf. brother, another
robber	['rʌbə]	→ ['rʌ:bə] (vowel: make it long enough)
leisure	['li:zə]	→ ['li:zə] (system: most Americans pronounce it this way) cf. (BE) ['li:zə]
wad	[wæd]	→ [wad] (vowel)
cop	[kʌp]	→ [kɑ:p] (vowel: make it long enough)
good	[gʊd]	→ [gʊəd] (vowel: In AE, short vowels followed by a short schwa) (see 1. f)
oral	['ɔ:ɹəl]	→ ['ɔ:ɹəl] (vowel, with r-coloring)
lateral	[læɾəl]	→ [læɹəl] (the [ə] after the /t/ is not omitted; the /t/ is between vowels ∴ it becomes a tap)
voiceless	['vɔɪslɛs]	→ ['vɔɪsləs] (vowel: [ɛ] is reduced in the suffix <i>-less</i>)
palate	['pælət]	→ ['pælət] (vowel)
trick	[tɹɪk]	→ [tɹɪk] (vowel) cf. Treak (a name) [tɹɪk] e.g. “Trick [ɹ] or treat [i]!”
fricative	['fɹɪkətɪv]	→ ['fɹɪkət ^h ɪv] (the /k/ is voiceless, /t/ is aspirated)
five	[faɪ_]	→ [faɪv] (the [v] was missing) cf. Fie! (a Shakespearean word)
stop	[stɒp] (BE)	→ [stap] (system: please stick to General American for this class)
alveolar	[æl'vɪlə]	→ [æl'vɪlə] (vowels)
voiced/voiceless	[vɔɪst]/[vɔɪsləs]	→ [vɔɪst]/[vɔɪsləs] (vowel: do not make it too long)
steak	[stɛk]	→ [steɪk] (vowel)
ton	[tʌn]	→ [tʌn] (vowel)
both	[bʊθ]	→ [bouθ] (vowel)
toes	[tʊz]	→ [tʊz] (consonant; plural <i>-s</i> : after voiced sounds → voiced [z])
fished	[fɪʃd]	→ [fɪʃt] (consonant; regular past tense <i>-ed</i> : after voiceless sounds except /t/ → voiceless [t])

- five [faɪf] → [faɪ:v] (vowel: longer when before voiced sounds; consonant) This one comes up very often! Please fix it!
- phonetician [fanə'tɪʃən] → [fanə'tɪʃən] (vowel)
- that phoneticians use no pause → pause before prepositions
- in...

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