

24.900: Fieldwork Component of Homework 7
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Task 1

I compiled a list of 50 words from Urdu to build up some knowledge of what it sounds like. My main difficulty was in identifying sounds that I had never heard before, in particular the retroflex stop /ʈ/ and the retroflex liquid /ɻ/. As I speak Arabic, I was on attentive to spot familiar sounds such as the voiced velar fricative /ɣ/ and the voiceless pharyngeal fricative /ħ/. However, I was surprised that many sounds from Arabic were missing, in particular some emphatic consonants. In addition, some words sounded close to their Arabic counterpart, though I was surprised that sometimes a sound was systematically pronounced differently: for example, in the word /hava/ ‘air’, the Arabic voiced labial glide /w/ is replaced by the Urdu voiced labiodental /v/ which doesn’t exist in Arabic. This made me suspect that the voiced labiodental /v/ and the voiced labial glide /w/ are allophones of each other in Urdu.

1. /ejk/	‘one’	26. /mez/	‘table’
2. /ðo/	‘two’	27. /kursi/	‘chair’
3. /tin/	‘three’	28. /qʌlam/	‘pencil’
4. /ʈʃar/	‘four’	29. /gʰʌʈʃi/	‘clock’
5. /paŋʈʃ/	‘five’	30. /bɪstər/	‘bed’
6. /ʈʃeh/	‘six’	31. /namak/	‘salt’
7. /sat/	‘seven’	32. /mɪɾʈʃ/	‘pepper’
8. /aʈʰ/	‘eight’	33. /ʃadi/	‘wedding’
9. /nə/	‘nine’	34. /ʃohər/	‘husband’
10. /ðʌs/	‘ten’	35. /bivi/	‘wife’
11. /mã/	‘mother’	36. /mʌza/	‘fun’
12. /bap/	‘father’	37. /basta/	‘bag’
13. /bejʈa/	‘son’	38. /hava/	‘air’
14. /bejʈi/	‘daughter’	39. /kanʈa/	‘fork’
15. /behen/	‘sister’	40. /ʈʃuri/	‘knife’
16. /bʰaji/	‘brother’	41. /ʈʃamʈʃa/	‘spoon’
17. /billi/	‘cat’	42. /piala/	‘bowl’
18. /kuta/	‘dog’	43. /piali/	‘cup’
19. /muryi/	‘chicken’	44. /lal/	‘red’
20. /gaj/	‘cow’	45. /nila/	‘blue’
21. /gʰoʃa/	‘horse’	46. /sabz/	‘green’
22. /ʈʃiʃia/	‘bird’	47. /pila/	‘yellow’
23. /mor/	‘peacock’	48. /gʌrmi/	‘heat’
24. /bʰalu/	‘bear’	49. /sʌrdi/	‘cold’
25. /ʰatʰi/	‘elephant’	50. /barɪʃ/	‘rain’

Task 2

I determined, as best as I could, the vowels of Urdu, based on my experience gathering the word list. I made sure with my speaker that I wasn't missing any vowels. My speaker then gave me an example using the low back tense vowel /ɑ/. I must say it first escaped my attention that Urdu had nasalized vowels because my word list only had one such example in /mã/ 'mother', and I couldn't quite hear the difference between the nasalized central low tense vowel /ã/ and its un-nasalized counterpart /a/. In order to complete my list of vowels, I questioned my speaker to get more examples of nasalized vowels, systematically asking whether each vowel had a nasalized counterpart.

/i/	unround front high tense	/tin/ 'three'
/ɪ/	unround front high lax	/bɪlli/ 'cat'
/e/	unround front mid tense	/mez/ 'table'
/ɛ/	unround front mid lax	/bɛhɛn/ 'sister'
/ə/	unround central mid lax	/bɪstər/ 'bed'
/ʌ/	unround central mid lax	/ðʌs/ 'ten'
/a/	unround central low tense	/tʃar/ 'four'
/u/	round back high tense	/b ^h alu/ 'bear'
/ʊ/	round back high lax	/kʊrsi/ 'chair'
/o/	round back mid tense	/ðo/ 'two'
/ɔ/	round back mid lax	/no/ 'nine'
/ɑ/	unround back low tense	/ɣɑr/ 'concentration'
/ĩ/	nasalized unround front high tense	/kʌhĩ/ 'somewhere'
/ẽ/	nasalized unround front mid tense	/mẽ/ 'in'
/ã/	nasalized unround central low tense	/mã/ 'mother'
/ũ/	nasalized round back high tense	/kʌhũ/ 'to say'
/õ/	nasalized round back mid tense	/bʌrsõ/ 'years'

Task 3

As I gathered the consonants based on my word list, I suspected many missing consonants by comparing with Arabic and by looking for obvious counterparts. I was surprised that even though Urdu has an emphatic voiceless alveolar stop /T/, it doesn't have the voiceless counterpart. Lacking evidence despite pressing my speaker, I am assuming the voiceless glottal stop /ʔ/ doesn't exist in Urdu. I didn't include the voiced labial glide /w/ in my list, because it seems to be an infrequently occurring allophone of the voiced labiodental fricative /v/ (more on this in Task 4). Though many consonants have distinct aspirated and unaspirated phonemes, I collapse them in my list for brevity.

/p/	voiceless bilabial stop	/bap/ 'father'
/b/	voiced bilabial stop	/bap/ 'father'
/t/	voiceless alveolar stop	/tin/ 'three'
/d/	voiced alveolar stop	/ʃadi/ 'wedding'
/T/	emphatic voiceless alveolar stop	/ToTa/ 'parrot'
/ʈ/	voiceless retroflex stop	/atʰ/ 'eight'
/ɖ/	voiced retroflex stop	/dʱʌkkʌn/ 'bottle cap'
/k/	voiceless velar stop	/kuta/ 'dog'
/g/	voiced velar stop	/qaj/ 'cow'
/q/	voiceless uvular stop	/qʌlam/ 'pencil'
/f/	voiceless labiodental fricative	/fajda/ 'benefit'
/v/	voiced labiodental fricative	/bivi/ 'wife'
/θ/	voiceless interdental fricative	/θʰʌk/ 'to tire'
/ð/	voiced interdental fricative	/ðo/ 'two'
/s/	voiceless alveolar fricative	/sat/ 'seven'
/z/	voiced alveolar fricative	/mez/ 'table'
/ʃ/	voiceless alveopalatal fricative	/ʃadi/ 'wedding'
/ʒ/	voiced alveopalatal fricative	/ʒala/ 'rainstorm'
/x/	voiceless velar fricative	/xala/ 'maternal aunt'
/ɣ/	voiced velar fricative	/moryi/ 'chicken'
/ħ/	voiceless pharyngeal fricative	/ħatʰi/ 'elephant'
/ʕ/	voiced pharyngeal fricative	/ʕenok/ 'glasses'
/h/	voiceless glottal fricative	/behen/ 'sister'
/m/	bilabial nasal	/mã/ 'mother'
/n/	alveolar nasal	/tin/ 'three'
/ŋ/	velar nasal	/bʰaŋg/ 'cocaine'
/r/	trill	/mor/ 'peacock'
/ɽ/	retroflex trill	/gʰoɽa/ 'horse'
/j/	voiced palatal approximant	/je/ 'this'
/l/	voiced lateral approximant	/piala/ 'bowl'

Task 4

- a. In Urdu, /l/ and /r/ are distinct phonemes, as demonstrated by the minimal pair /log/ ‘people’ vs. /rog/ ‘melancholy’.
- b. Urdu distinguishes voiced and unvoiced stops. For example, here is a minimal pair for /p/ and /b/: /pal/ ‘to raise up’ vs. /bal/ ‘hair’.

Urdu distinguishes aspirated from unaspirated consonants. For example, here is a minimal pair for /t/ and /tʰ/: /sat/ ‘seven’ vs. /satʰ/ ‘togetherness’.

- c. Urdu has both /s/ and /ʃ/. /s/ and /ʃ/ are clearly separate phonemes. For example, here is a minimal pair for /s/ and /ʃ/: /sal/ ‘year’ vs. /ʃal/ ‘scarf’.

Extra credit

I guess that [v] and [w] are allophones of each other. The underlying form of the phoneme is /v/ and the rule is: $v \rightarrow w: u_$ (/v/ becomes [w] when preceded by /u/). Because /u/ and [w] are so close, another way to look at it is that /v/ is deleted when preceded by /u/. The revealing examples are [huwa] or [hua] ‘he’ vs. [hava] ‘air’. The examples [vo] ‘that’ and [mehev] ‘to be consumed by’ tend to confirm that /v/ is the underlying form.

I suspected that /o/ and /a/ were allophones in Urdu, but my speaker found near-minimal pairs that convinced me of the contrary. The near-minimal pair /mor/ ‘peacock’ vs. /yar/ ‘concentration’ shows that a complementary distribution could not involve the following consonant only, while the near-minimal pair /ʃori/ ‘theft’ vs. /ʃari/ ‘wide’ shows that it could not involve the preceding consonant only.