Topics for Term Papers Found in Commonly Spoken Languages

This document is a supplement to the term paper assignment handed out in class. It is for students interested in doing the "replication" topic, which was described as:

Find a native speaker of a foreign language, a published description/analysis of *some aspect* of the phonology of the language, and see if the description can be **replicated** with data from your speaker. There are two possibilities. (a) Your speaker may behave *exactly* as predicted in your reference source material. In this case, concentrate on preparing a clear demonstration that the facts and analysis of your reference source are correct. (b) With luck, your speaker will be *different* in some ways from what your reference source describes. Provide a revised, or entirely new analysis that fits your speaker.

There are various reference sources listed below. Some of these are pretty obscure; if you get stuck finding them in the library ask me if I might own a copy you could Xerox.

You will find for many of these that the reference source goes into theories that we haven't had time to cover. Try not to get worried about this. The main function of the references is to provide a basic description of the data, along with lots of examples that you can check with your own consultant.

Akan. Speakers do live here, and the vowel harmony is quite interesting: http://www.ai.mit.edu/projects/dm/featgeom/Clements-76-80.pdf

Arabic. Almost any modern Arabic variety (Egyptian, Lebanese, etc.) has an interesting stress pattern; you can document it, analyze it and perhaps assess productivity with a wug test.

Armenian: Examine the pattern of reduplication exemplified in pairs like *sev* 'black' ~ *sep ʰsev* 'very black'. Try to determine whether the reduplicated form is predictable. Test the productivity of the system by examining borrowed or made-up adjectives. Reference: Bert Vaux, *The Phonology of Armenian*.

Cantonese: Look at what happens to tones in reduplicated constructions, like [hoŋ ˧] 'red' ~ [hoŋ ˧ hoŋ ˩ dɛi ˩] 'kind of red'. Collect a set of pairs, consisting of simple forms and their reduplicated forms, and determine the rules for tone change in reduplicated constructions. Nice source: http://home.uchicago.edu/~aclyu/papers/BLS35.pdf

English: (i) Examine the distribution of vowels before /l/ in English. For example, in my speech there are near-minimal pairs for a regular [i] and a velarized [iˠ], for example in *freely* [ˈfrili] vs. *mealy* [ˈmiˠli] The phonetic difference seems to depend on the division into morphemes (so, what would happen in monomorphemic words like *Healey*?).
(ii) Find a speaker of a dialect of English that has a distinction between two kinds of /æ/: a lower [æ] in *banner* 'flag' and a higher [æ̝] in *banner* 'one who bans'. Such speakers usually

grew up in Northeastern coastal cities, from Boston to Philadelphia. The speaker can be yourself, if you qualify. For most such speakers, it is possible to predict in most words which kind of [æ] will occur. Collect a large number of words containing /æ/, and try to write rules that correctly make this prediction. Where it is impossible to predict which /æ/ occurs, indicate why. Reference: Elaine Dunlap "æ Tensing in Lexical Phonology," *University of Massachusetts Occasional Papers in Linguistics* 14.

(iii) Same topic, but with the distinction between [aɪ] and [ʌɪ]. Here are good reference is Vance, Timothy (1987) "'Canadian Raising' in some dialects of the Northern United States," *American Speech* 62, 195-210.

(iv) Phonology of particular affixes. Collect a great number of forms with the suffix *-ly*, or *-ing* using a corpus (I can help). Figure out the phonological alternations.

Note that for English, there is an easily-searchable corpus you can use to find examples: go to http://www.linguistics.ucla.edu/people/hayes/EnglishPhonologySearch/.

French: (i) Liaison. For general background, see two books by Bernard Tranel, *The Sounds of French* and *Concreteness in Generative Phonology*. An area where new data can be gathered is to check what happens when adjectives are placed before masculine nouns.

(ii) Schwa Dropping. Is the result of deleting a schwa the same as what you would get if there is no schwa there in the first place? Current work suggests yes, but more needs to be done... References: See Tranel, above, and Annie Rialland (1986) "Schwa et syllabes en français," in Leo Wetzels and Engin Sezer, eds., *Studies in Compensatory Lengthening*.

Farsi. See Persian.

German: (i) The relationship of Final Devoicing with morphological structure. Reference: Jerzy Rubach (1990) "Final devoicing and cyclic syllabification in German," *Linguistic Inquiry* Vol. 21, pp. 79-94.

(ii) Allophones of /r/: look in initial position, in consonant clusters, after long and short vowels.   See e.g. William Moulton, *The Sounds of English and German.*

Hebrew (Modern): Examine the data in the problem set on p. 134-135 of the text *Generative Phonology: Description and Theory*, by Michael Kenstowicz and Charles Kisseberth. Focusing on either part b, part c, or part d of the problem, elicit the same data from a native speaker, as well as further paradigms that show the same phenomena.   Describe and analyze the phonological pattern of your own speaker.

Hindi: Syncope (vowel drop) alternations. See Manjari Ohala (1974) "The Abstractness Controversy: Experimental Input from Hindi", in *Language*, vol. 50, pp. 225-235.

Hungarian: There is a nice vowel harmony system with a very large scholarly literature. A couple wug test studies appear here: http://www.linguistics.ucla.edu/people/hayes/HungarianVH/index.htm

Indonesian: (a) Stress in suffixed and compound words. Reference: Cohn, Abigail (1989) "Stress in Indonesian and Bracketing Paradoxes," in *Natural Language & Linguistic Theory*, vol. 7, pp. 167-216. This will probably only work for speakers from Sumatra.

(b) The phonology of stem-final /h/ and /ʔ/. See the book by Hans Lapoliwa, URL.

(c) The phonology of prefixation, for -ŋ final prefixes.

Japanese: (i) Collect 100 verbs, and provide various inflected forms for them. A good starting point for this project is the problem set on p. 100 of Sanford Schane and Birgitte Bendixen, *Workbook in Generative Phonology*.

(ii) Behavior of **pitch accent** in compounds and other forms. Reference: [James McCawley (1977) "Accent in Japanese," in Larry M. Hyman (ed.). *Studies in Stress and Accent*, Southern California Occasional Papers in Linguistics no. 4, pp. 261-302.]

(iii) **Mimetic palatalization**, in forms like [pʲokopʲoko] 'jumping around imprudently' (compare: [pokopoko] 'up and down movement'). Reference: [R. Armin Mester and Junko Ito (1989) "Feature Predictability and Underspecification: Palatal Prosody in Japanese Mimetics" in *Language*, vol. 65, pp. 258-293.]   Try making up new words and testing whether the generalizations that Ito and Mester propose are productive.

(iv) **Nickname formation**, as in [taɾoː], nickname [taɾot͡ʃaŋ]. Reference: Poser, William J. (1990) "Evidence for Foot Structure in Japanese," in *Language*, vol. 66, pp. 78-105.

(v) **Rendaku**, as in [kami] 'paper' [oɾigami] 'paper folding'. For the basic data patterns, a good presentation is in [Phonology of Voicing in Japanese: theoretical consequences for morphological accenssibility by Ito Junko and Armin Mester. In *Linguistic Inquiry* 17 (1986) 49-73.] Test the productivity of rendaku with made-up forms. Test whether in productive usage the rule respects "Lyman's Law", described by Ito and Mester. See if Lyman's Law holds true even at a distance, when the crucial voiced obstruent is two or more syllables away.

(vi) Wug test novel verbal stems. See Vance, Chap. 12.6, for one test in this area.

(vii) Using software and corpus (not totally bug-free!) that I will provide you, figure out the phonotactic constraints of Japanese.

Korean: (i) Phrasal rules for consonants. See Sun-Ah Jun (1996) *The Phonetics and Phonology of Korean Prosody: Intonational Phonology and Prosodic Structure*. Don't try to do all of Jun's rules.

(ii) Collect 100 verbs and provide various inflected forms of the same stem, developing the phonology needed to handle the various alternations. A good starting point is the problem on pp. 98-99 of Schane and Bendixen, *Workbook in Phonological Analysis*

(iii). Reduplication of vowel-initial stems, like *ulak-pulak* 'wild'. What determines the choice of consonant that gets inserted? For hints: http://www.stanford.edu/dept/linguistics/linginst/nsf-workshop/An_abstract.pdf.

Mandarin: (i) The "Third Tone" rule and its relationship to syntactic structure. See [Cheng, Chin-Chuan (1973) *A Synchronic Phonology of Mandarin Chinese*.] You can also see if the rule is neutralizing; see text section 6.4.

(ii) The alternations triggered by the attachment of the diminutive suffix /-ɹ/. Many Mandarin speakers don't have this suffix; you probably need someone from Beijing. Collect

syllables of all types and see what happens when /-ɹ/ is added. Reference: [Jerry Norman (1988) *Chinese*, Cambridge University Press, pp. 141-145.]

(iii) Blending in Taiwanese Mandarin. This takes the first part of one syllable and add the second part of a following syllable, forming a blended monosyllabic word. Find a bunch of examples and figure out how it works.

Persian: (i) Determine the circumstances under which /j/ is inserted to break up a sequence of vowels, as in [ɾu-j-eʃ] 'his face' vs. [dɑneʃdʒu-æm] 'I am a student'. Reference: Wheeler Thackston, *An Introduction to Modern Persian.* (ii) It's pretty messy, but to some extent you can write a set of rules to relate present and past stems of verbs. See J. Ronayne Cowan and Lotfollah Yarmohammadi (1978) "The Persian verb reconsidered," in *Archiv Orientalni*, vol. 46, pp. 46-60. You could try doing a wug test (txt, section 9.8) to test the productivity of your rules.

Portuguese: (a) there are many alternations of vowel height in verbal paradigms. Try *The Sound Patterns of Brazilian Portuguese (Cariocan Dialect)* by Barbara Strodt López. (b) The "r" phoneme of Portuguese involves some quite complicated allophonic variation.

Russian: Russian has an amazing amount of phonology. Look up the Russian sections (using the index) of Kenstowicz and Kisseberth's *Generative Phonology* (multiple copies in Powell Library) for helpful introductory material. *The Phonetics of Russian* by Daniel Jones and Dennis Ward has very well-organized data, though no analysis at all.

Particular sub-topics: phonology of voicing in obstruents, vowel reduction in stressless syllables, assimilation of palatalization.

Swedish: The system of pitch accents: how the accents are realized in context, what happens to the accents in compounds. For both, *Swedish Pitch Accents in Sentence Perspective*, by Gösta Bruce (1977), is an excellent source (but only for Stockholm dialect).

Spanish: (i) Spirantization of voiced stops: /bdg/ → [βðɣ]. See James Harris, *Spanish Phonology*, pp. 38-40. Note: most speakers of Los Angeles Spanish have a contrast between /b/ and /v/, which to some extent follows spelling. If you can find such a speaker, document the existence of the contrast for him/her in a large number of words. Does the exist of /v/ tend to inhibit the spirantization of /b/? (One would think it might, since one wants to avoid confusion between the similar [v] and [β].)

(ii) Distribution of allophones of flap /ɾ/ and trill /r/ in various styles of speech. See James Harris, *Stress and Syllabification in Spanish*, pp. 62-71. The cases where a word ends in /ɾ/ and the next word begins in a vowel are particularly interesting.   The various dialects of Spanish differ a great deal in this phenomenon.

(iii) Distribution of the allophones of /j/ (transcribed /y/ by Hispanologists). See James Harris, *Stress and Syllabification in Spanish*, pp. 55-62. Alternations in forms like *ley ~ leyes* 'law-laws' often are interesting.

(iv) Productivity of stress patterns. See [Hochberg, Judith. 1988. Learning Spanish stress: Developmental and theoretical perspectives. *Language* 64.683-706.] for a nice presentation of the basic patterns. Make up new imaginary words, get evaluations from native speakers of the well-formedness of each pattern.

(v) Diminutives. Elicit diminutives from bases varying in (a) syllable count (1, 2, 3 syllables), final segment (a, o, e, stressed vowel, r, l, s, n, d), (b) /j/ before final vowel. Check if the suffix you get is [-ito/a], [-sito/a], or [-esito/a].   The reference [Crowhurst, Megan J. 1992. Diminutives and augmentatives in Mexican Spanish: A prosodic analysis. *Phonology* 9.221-253.] is hard for beginners but does lay out a number of very useful generalizations. There is a great deal of dialect variation, so working with a new speaker is likely to find something useful.

Tagalog: See pp. 938-939 of Bernard Comrie, *The World's Major Languages* for three topics that look pretty good: (i) deletion of /h/ and /ʔ/ in phrasal contexts; (i) stress shifts under affixation; (iii) the consonant changes induced by the prefix maN-. (iv) Reduplication in foreight loan words that begin in consonant clusters. A UCLA Ph.D. dissertation by Kie Zuraw (2000), available from http://www-rcf.usc.edu/~zuraw/diss.pdf, offers many interesting leads.

Taiwanese: (i) Tonal rules and their relationship with syntax. Reference: [Matthew Chen (1987) "The Syntax of Xiamen Tone Sandhi," in *Phonology Yearbook* vol. 4, pp. 109-149.]
   (ii) Attach the connective particle /-e/ to a large number of words, and see what happens to stem-final consonants. Try a range of different speaking rates. Reference: Chai-Shune Hsu (1996) "A Phonetically-based Optimality-Theoretic Account of Consonant Reduction in Taiwanese," in *UCLA Working Papers in Phonetics*, number 92, pp. 1-44.

See also under Mandarin, for the Mandarin dialect spoken in Taiwan.

Thai: (a) The rules deleting glottal stop and neutralizing High and Low tones as Mid. Reference: Jackson Gandour (1976) *Aspects of Thai Tone.* (b) The rules that reduce two-consonant clusters to one; a nice starting point is http://www.thai-language.com/resources/slayden-thai-phonology.pdf.

Turkish: The rules for voicing in stem-final obstruents.   See Geoffrey Lewis (1967) *Turkish Grammar* and Robert Lees (1961) *The Phonology of Modern Standard Turkish*.

Vietnamese: There's a nice rule that "bilabializes" velar consonants to bilabialized velars after /u/. See Thompson, Laurence C. A Vietnamese Grammar. University of Washington Press. (Seattle: 1965).

Yoruba: An interesting vowel harmony system. Bamgbose, Ayo. 1966. A Grammar of Yoruba. Cambridge: Cambridge University Press.