Problem #1: Ilokano

due in class Thurs. Jan. 19

For advice on writing up phonology problems, please see the accompanying handout.

    Ilokano is an Austronesian language spoken in the Northern Philippines. The data in this problem were elicited by me in the 1980's from May Abad, a UCLA undergraduate, and by May from her mother and her aunt. Published version: *Lingua*, 1989.

    Ilokano has only two suffixes, *-an* and *-en*, which combine in some cases with prefixes to form circumfixes. For simplicity I have altered the data to include only the suffix part of a circumfix.

1.	[tulad]	'to mimic'	[tuladen]	'mimic-goal focus'[1]
	[gataŋ]	'to buy'	[gataŋen]	'buy-goal focus'
	[taɾaj]	'to run'	[taɾajan]	'place to run to'
	[saŋit]	'to cry'	[saŋiten]	'to cause to cry'
2.	[basa]	'to read'	[basaʔen]	'read-goal focus'
	[saka]	'foot, leg'	[sakaʔan]	'place where one walks barefoot'
	[pja]	'health'	[pjaʔen]	'to make healthy'
	[t͡ʃjenda]	'store'	[t͡ʃjendaʔan]	'marketplace'
3.	[babawi]	'to regret'	[babawjen]	'regret-goal focus'
	[masahe]	'massage'	[masahjen]	'massage-goal focus'
	[komadɾe]	'godmother of one's child'	[pagkomadɾjan]	'the reason why there are *komadre*s'
	[maneho]	'driver'	[manehwan]	'drive-goal focus'
	[saŋo]	'front'	[pagsaŋwen]	'to cause to face forwards'
	[santo]	'saint'	[pagsantwan]	'to make into a saint'

Notes: (1) the vowels of this dialect are /i, e, a, o, u/; (2) there are no stems ending in /u/.

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[1] Goal focus is a syntactic category roughly analogous to English passive.

1. Features

Provide a feature chart with the features for the following sounds: /i, e, a, o, u, j, w/ (remember that IPA [j] is "y".) For a feature chart that is fairly standard, see http://www.linguistics.ucla.edu/people/hayes/120a/features.xls.

If you look ahead, you'll see that you're asked to revise your chart below; you can submit just one chart for both questions, if your prefer.

2. *SPE*-style analysis

a. Write two phonological rules that can derive the observed results, using the features you adopted in (1).

b. Provide derivations in ordinary format (UR, labeled stages of rule application, SR) for [ba.baw.jen] and [ba.sa.ʔen].

3. OT analysis

a. Develop an Optimality-theoretic analysis of these forms, stating your constraints (with prose explication) and giving tableaux for representative forms. Be sure to include prose explanations for what is going on after each tableau, and to explain crucial constraint rankings. Include at least the candidate given in the list below. Be sure to include your grammar all Faithfulness constraints that get violated by winning candidates.

b. Draw a "Hasse diagram" of the rankings you found (i.e. a diagram in which an arrow links the members of each necessarily-ranked pair). For an example of a Hasse diagram see https://www.laits.utexas.edu/phonology/kinyarwanda/kin_pp_ot.html.

c. At least one of the candidates I provide below is *harmonically bounded*; i.e. can never win because it has a superset of the violations of another candidate (which is said to bound it). List a harmonically bounded candidate and a rival candidate that bounds it.

d. The surface form *[abut] would not be possible in Ilokano. Your analysis should guarantee this. Show how this works in your analysis by including an appropriate tableau.

4. Extending the analysis free variation

e. Let the phonetic symbols [a̯], [e̯], and [o̯] stand for *glides* that are homorganic with the vowels /a/, /e/, and /o/, respectively. They differ from their corresponding vowels only in the feature [syllabic]. Feel free to use funny symbols like A, E, O to represent them if you like. Amend your feature chart to include these symbols.

f. Occasionally May Abad would produce forms like [ma.sah.e̯an] instead of [ma.sah.jan], and similarly with other mid-vowel stems like [maneho̯an] (but forms like /basa-en/ always came out with a glottal stop; never *[basa̯en].) Sketch out a way that your grammar might be modified to generate this free variation. Bear in mind that the variation is entirely free: May would produce one, then the other, more or less at random.

h. This is a more open-ended question. There are no forms in Ilokano that have [ẹ], other than forms like [ma.sah.ẹan], which are suffixed forms of stems ending in [e]. How might one exclude [ẹ] in monomorphemic forms?

5.   List of forms to cover

As noted above, you can add more if you like.

Inputs:	/babawi-en/
Output:	[ba.baw.jen]
Rivals:	*[ba.ba.wi.en], *[ba.ba.wi.ʔen], , *[ba.ba.win]

Inputs:	/basa-en/
Output:	[ba.sa.ʔen]
Rivals:	*[ba.sa.en], *[bas.ạen],[2] *[ba.sen], *[ba.sa.ten], *[ba.sa.hen], *[baswen] (w derived from /a/)

Inputs:	/masahe-an/
Output:	[ma.sah.jan]
Rivals:	*[ma.sa.he.an], *[ma.sa.he.ʔan], *[ma.sah.ẹan], *[ma.sa.han]

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[2] There are no instances of *[ạ] anywhere in Ilokano.