Psych56L/ Ling51
Fall 2008
Homework 2: Phonological and Lexical Development
Or "The Language Adventures of Sigmund von Hacklestein, part 2"

Remember to write your full name and University ID number on your assignment. If you collaborate with other students in the class, please make sure to indicate who you worked with.

(46 points total)

(1) Decoding
Sigmund was very impressed with the International Phonetic Alphabet as a means of recording the sounds that make up the words of a language. Can you help him translate the following messages from IPA into English? You will find the IPA sound conversion chart posted on the class webpage to be helpful.

(From a 1980s movie with muppets and David Bowie)
(a) θɹu dendʒɚɪz ʌntold ænd haɹdʃɪps ʌnnʌmbɚd, aj hæv fɔt maj wej hiɹ tu ðə kæsəl bijand ðə gablɪn sɪti.
[2 pts]

(From the "Top 100 Things I'd Do If I Ever Became An Evil Overlord")
(b) ɪf æn ədvajzɚ sɛz tu mi, "maj lidʒ, hi ɪz bʌt wʌn mæn. wʌt kæn wʌn mæn pasɪbli du?", aj wɪl ɹəplaj, "ðɪs," ænd kɪl ðə ədvajzɚ.
[2 pts]

(c) ɪf maj ədvajzɚz æsk, "waj aɹ yu ɹɪskɪŋ ɛvɹiθɪŋ an sʌtʃ ə mæd skim?", aj wɪl nat pɹosid ʌntɪl aj hæv ə ɹəspans ðæt sætɪsfajz ðem.
[2 pts]

Now can you help Sigmund translate these English phrases into IPA?
(Again from the "Top 100 Things I'd Do If I Ever Became An Evil Overlord"):
(d) Shooting is not too good for my enemies. [3 pts]
(e) I will not turn into a snake. It never helps. [3 pts]

(2) Help Sigmund decide if the following statement is true or false. To make sure Sigmund understands why you think this way, make sure to explain your answer.
"All languages use a common set of contrastive sounds." [3 pts]

(3) Sigmund is skeptical that there's any real difference between babies' babbling from one language to the next. Provide Sigmund with some evidence from research in infant phonological development that shows there really *is* some difference in babbling across languages. Make sure to explain why the evidence you present shows this. [2 pts]

(4) Sigmund has been testing the perception of the Guins. He presented subjects ten stimuli (S1-S10) that vary continuously and recorded what the subjects reported they perceived.

(a) If the Guins showed categorical perception on this set of stimuli, what would you expect them to report? [2 pts]

(b) What about if they didn't show categorical perception on this set of stimuli? [2 pts]

(c) When looking over his results, Sigmund discovered that the Guins reported the following:

       (1) S1-S3 sounded identical to each other

       (2) S4-S10 sounded identical to each other

       (3) S2 sounded different from S5

       (4) S5 sounded identical to S8

Based on your answers in (a) and (b), do the Guins have categorical perception for this set of stimuli? [1 pt]

(5) Sigmund has been playing with some young Guin children who are just learning to pronounce the words of the Guin language. Here are some words they know:

Word	stress contour (stressed syllables in CAPITALS)	IPA
prengo	PRENgo	/pɹɛŋgo/
pentula	PENtula	/pɛntələ/
pode	PODE	/pod/
penova	peNOva	/pənovə/

(a) Attia, an 18-month-old Guin child, once pronounced penova as "nova". What phonological process was she using? Show how it works on this example to get this pronunciation. [2 pts]

(b) Attia has also pronounced pode as either "po", "tode", and "pote". What phonological process is she using for each pronunciation? Make sure to show how the process works in each case. [6 pts]

(c) Attia also pronounced "prengo" as "pengo". What phonological process is she using? Show how it works on this example to get this pronunciation. [2 pts]

(d) Attia also once pronounced "penova" as "noba". What phonological process(es) was she using? Show how the process(es) work(s) on this example to get this pronunciation. [3 pts]

(6) Sigmund has been examining the language of the Guins, and has discovered that the Guin language does not distinguish between /m/ and /n/ (unlike English). He knows that the Native Language Magnet Theory can make predictions about the neural networks Guin speakers ought to have, but can't quite remember the details. Is it true that the Native Language Magnet Theory predicts that Guin speakers should have dedicated neural networks that can process both /m/ and /n/? Why or why not? [3 pts]

(7) Sigmund has heard that English children have a noun bias in their early vocabularies, but can't remember what that means and whether all children show it. Explain to

Sigmund what a noun bias is, and whether all children of the world have a noun bias. [2 pts]

(8) Sigmund has been examining the lexical development of some English children, and wants to figure out in each case whether the child is using overextension, underextension, both, or neither. Help Sigmund identify the right process in the following cases, making sure to explain why you think so: [2 pts each, 6 pts total]
(a) Situation: A child uses the word "ball" to refer to a rubber ball and a tennis ball, but not a baseball or an apple.
(b) Situation: A child uses the word "ball" to refer to a rubber ball, the moon, his favorite teddy's bright blue button eye, and a circular wedge of cheese, but not an apple.
(c) Situation: A child uses the word "ball" to refer to a rubber ball, a circular wedge of cheese, and the moon, but not a tennis ball.

(9) Sigmund thought that the mutual-exclusivity assumption that children use to identify word meaning seemed like a good strategy. But, the mutual-exclusivity assumption is not foolproof. Explain to Sigmund one problem a child might run into when using the mutual-exclusivity assumption to guess word meaning. Make sure to give an explicit example. [2 pts]