

Psych56L/ Ling51

Winter 2010

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.

(59 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.

(a) ðə wɑːzmæn sɛd ðæt ðə weɪ fɔːwəɪd ɪz sʌmtajmz ðə weɪ bæk.

[2 pts]

(From the “Top 100 Things I’d Do If I Ever Became An Evil Overlord”)

(b) mɑːj fɑːv jɪ owld tʃɑːld ədvɑːzəɪ wɪl biː æskt tuw dɪsɑːfəɪ ɛnɪj kowd əj æm θɪŋkɪŋ əv juwzɪŋ. ɪf hiː bɹeɪks ðə kowd ɪn ʌndə θɪri sɛkəndz, ɪt wɪl nɑt biː juwzd. ðɪs əlsow əplɑːz tuw pæswoːɪdz.

[4 pts]

(A brief dialogue between characters from Buffy the Vampire Slayer)

(c)

spɑːk: kʌm ʌp əɡɛnst ðɪs sleɪə jɛt?

ɛjndʒəl: ʃɪz kjuːw. nɑt tuw brɑːjt, ðow. ɡeɪv həɪ ðə pʌrɪj dɑːɡ “ɑːjɪm əl tɔːtʃəɪd” ækt. kiːps həɪ əf məj bæk wɛn əj fiːd.

spɑːk: piːpəl stɪl fəl fɔː ðæt æn rɑːs ruːwtɪjɪn? wʌt ə wəɪld!

zændəɪ: əj nuw juw wəɪ lɑːjɪn. ʌndəd lɑːjə ɡɑːj.

[6 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) When arresting prisoners, my guards will not allow them to stop and grab a useless trinket of purely sentimental value. [4 pts]

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

(a) If the Guins showed categorical perception on this set of stimuli, should they report hearing each stimulus as sounding different (that is, hearing ten distinct sounds)? Why or why not? [3 pts]

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

- (1) S1-S5 sounded identical to each other
- (2) S6-S10 sounded identical to each other
- (3) S2 sounded identical to S4
- (4) S5 sounded different from S7

Do Guins appear to have categorical perception for this set of stimuli? Why or why not? [3 pts]

(3) 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
guin	GUIN	/gwin/
guintel	GUINtel	/gwintəl/
guinetta	guiNETta	/gwinetə/

Example phonological process & explanation:

Original word pronunciation: “guin”

Observed pronunciation: /dwin/

Phonological process: consonant harmony

Derivation: /gwin/ → /dwin/ when /g/ picks up [+alveolar] feature from /n/.

Attia is an 18-month-old Guin child who sometimes uses various phonological processes when she is pronouncing Guin words. For each pronunciation below, indicate which phonological process(es) is (are) responsible for the observed pronunciation, and show the derivation from original pronunciation to observed pronunciation.

- (a) “guin” pronounced as /gin/. [2 pts]
- (b) “guinetta” pronounced as /netə/. [2 pts]
- (c) “guintel” pronounced as /gwintə/. [2 pts]
- (d) “guin” pronounced as /din/. [3 pts]
- (e) “guintel” pronounced as /dintə/. [4 pts]

(4) 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). That is, for Guin speakers, “map” is the same word as “nap”.

(a) What is the sound feature that distinguishes /m/ from /n/? That is, what feature does /m/ have that /n/ does not, and what feature does /n/ have that /m/ does not? [2 pts]

(b) Would the Native Language Magnet theory predict that Guin speakers have separate neural networks to process /m/ and /n/, or would it predict that /m/ and /n/ are processed by the same neural network? [2 pts]

(5) 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: [4 pts each]

(a) Situation: A child uses the word “birdie” to refer to a stuffed penguin toy, a teddy bear, a bluebird cartoon character on television, the television, and a canary on a sticker, but not to other stickers with animals on them.

(b) Situation: A child uses the word “birdie” to refer to a stuffed penguin toy, a bluebird cartoon character on television, and a canary on a sticker, but not to other stickers with animals on them, a teddy bear, or the television.

(c) Situation: A child uses the word “birdie” to refer to a stuffed penguin toy and a bluebird cartoon character on television, but not to a canary on a sticker, other stickers with animals on them, a teddy bear, or the television.

(6) Sigmund remembers hearing about different strategies children use to help them learn words, such as the whole-object assumption and the mutual-exclusivity assumption.

(a) Sigmund then observed a child named Remus trying to learn the word “beak”. His mother picked up a stuffed penguin toy and said, “Look at the beak!” Remus subsequently started calling all his stuffed toys “beak”. What assumption does Remus seem to have used to map the word “beak” to a meaning? Explain why you think so. [4 pts]

(b) Remus’s mother realized what had happened and so picked up the stuffed penguin toy again to try to correct Remus’s understanding. She said, “No, honey, this is your toy. This is your penguin.” When she later asked him to pick up his penguin, Remus didn’t seem to know what the word “penguin” referred to. Why might Remus have had trouble learning what the word “penguin” meant given what his mother said? That is, what assumption does he seem to have used and why did that lead to him not learning what penguin referred to in this situation? [4 pts]