Psych56L/ Ling51
Winter 2011
Homework 3: Syntactic & Morphological Development
Or "The Language Adventures of Sigmund von Hacklestein, part 3"

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

(57 points total)

(1) Sigmund has been studying the language of the Guins, and has discovered a few things about Guin morphology. For each of the affixes below, indicate whether the affix is (i) a bound or free morpheme and (ii) inflectional or derivational morphology, based on how Sigmund has observed the Guins using these affixes. Briefly explain why you think so for each distinction (bound vs. free, and inflectional vs. derivational). [4 pts each]

Sample format for answers to (a) and (b):
(i) *morpheme* is a *bound/free* morpheme, because [insert reason here: *probably something about whether it can appear on its own*]
(ii) *morpheme* is a(n) *inflectional/derivational* morpheme, because [insert reason here: *probably something about whether the grammatical category changes*].

(a) The syllable "pen" often follows nouns, and indicates that there are exactly three of the noun. It can occur separately from the noun.

Ex: "merkol" = goblin
"merkol pen" = three goblins

(b) The syllable "wut" seems to precede verbs, and indicates someone who doesn't like doing the action indicated by the verb . It does not seem to ever appear on its own.

Ex: "margon" = dance
"wutmargon" ≈ someone who doesn't like to dance

(2) Here are some rules Sigmund has discovered about the syntactic structure of Guin:

S → NP VP	NP → Det N	NP → N
VP → V NP	VP → V S	VP → V

Here are some words Sigmund has also discovered:

plong = "the", Det(erminer)	*bant* = "dog", N(oun)
nerket = "cat", N(oun)	*vinder* = "saw", V(erb)
fleptur = "chased", V(erb)	*flept* = "chase", V(erb)
vind = "see", V(erb)	*margon* = "goblin", N(oun)
	margoni = "goblins", N(oun)

(a) Do these rules show recursion? [1 pt]

(b) For each of the sentences below, decide if the sentence can be generated by these rules. If so, show the derivation (that is, show the sequence of rule expansions that leads to the sentence). If not, show where the derivation fails and explain what sequence has no rule to match it. [4 pts each]

Example 1: plong nerket vinder plong bant.
Yes.
plong nerket vinder plong bant → Det N V Det N → NP V NP → NP VP → S

Example 2: plong nerket
No.
plong nerket → Det N → NP → ?
There is no rule S → NP which can account for *plong nerket* by itself.

(i) plong margon fleptur plong nerket.
(ii) margoni vinder.
(iii) plong margon vinder fleptur.
(iv) margoni vinder plong nerket flept plong bant.
(v) plong nerket vinder margoni plong bant flept.

(3) Sigmund has heard that sometimes children may use different strategies to help them understand sentences even before they know many grammatical morphemes.

(a) One strategy is to use world knowledge to help interpret sentences. Would this strategy work for the sentence, "The little fish was eaten by the penguin"? Why or why not?
[3 pts]

(b) Another strategy is to use the order of words they know to help interpret sentences. Would this strategy work for the sentence, "The little fish was eaten by the penguin?" Why or why not?
[3 pts]

(4) Sigmund was surprised to learn that some sentences may have silent subjects or silent objects that are understood, but not explicitly mentioned. He wanted to try his hand out at identifying some of these in actual sentences. Help Sigmund out by identifying whether each of the examples below has a silent subject, a silent object, both, or neither. Make sure to indicate what the silent subject and/or silent object is if the example has one. Note that there may be more than one instance of a silent subject or silent object in each utterance.

Example: “The king decided to ignore the goblins.”
Answer:
Silent subject = “the king” for the sub-sentence “to ignore the goblins”

Example: “The king is tough to convince.”
Answer:
Silent subject = *someone unspecified* for the sub-sentence “to convince”.
Silent object = “the king” for the sub-sentence “to convince”.

(a) “Sarah asked Hoggle to help her escape.” [2 pts]
(b) “Hoggle promised that he would help her escape.” [2 pts]
(c) “Hoggle promised to help her escape.” [2 pts]
(e) “The goblin is difficult.” [2 pts]
(f) “The goblin is difficult to find.” [3 pts]
(g) “The knight was happy to help Sarah cross the bog.” [2 pts]
(h) “The knight was happy to promise to help Sarah cross the bog.” [3 pts]

(5) Sigmund was amazed to learn about how quantifiers can interact in utterances. Help him figure out the answers to the questions below, which involve quantifier interaction.

(a) A girl, Sarah, is helping three goblins, Stinkwort, Grappler, and Fungmunger, out of the Bog of Eternal Stench. Indicate whether the following statements (and their specific interpretations) are compatible with this situation (**yes or no**). [1 pt each]

(i) “*Some*one is helping *every* goblin out of the Bog of Eternal Stench.”
where *some* >> *every*

(ii) “*Some*one is helping *every* goblin out of the Bog of Eternal Stench.”
where *every* >> *some*

(b) Three girls, Sarah, Attia, and Circe, are helping three goblins, Stinkwort, Grappler, and Fungmunger, out of the Bog of Eternal Stench, with each girl helping one goblin (Sarah helping Stinkwort, Attia helping Grappler, and Circe helping FungMunger). Indicate whether the following statements are compatible with this situation (**yes or no**). [1 pt each]

(i) “*Some*one is helping *every* goblin out of the Bog of Eternal Stench.”
where *some* >> *every*

(ii) “*Some*one is helping *every* goblin out of the Bog of Eternal Stench.”
where *every* >> *some*

(c) Three goblins, Stinkwort, Grappler, and Fungmunger, decided to jump over a puddle. However, at the last minute, Grappler chickened out and didn’t actually jump over it,

while the other two goblins did. Indicate whether the following statements are compatible with this situation (**yes or no**). [1 pt each]

(i) "*Every* goblin did*n't* jump over the puddle."
where *every >> n't (short for not)*

(ii) "*Every* goblin did*n't* jump over the puddle."
where *n't (short for not) >> every*