Psych156A/ Ling150
Winter 2009
Review Questions: Structure

(1) Terms/concepts to know: Navajo Code Talker Paradox, Universal Grammar, parameters, Greenberg's generalizations, variational learning, unambiguous data

(2) Suppose a child encounters a sentence with the word order "Subject Verb Object". (For example: "Sarah likes Hoggle.") Why can't the child be certain about how this word order was produced?

(3) What did artificial intelligence researchers discover about the relative difficulty of playing chess compared to the relative difficulty of translating language? How did they do this?

(4) How does language learning work under Chomsky's Universal Grammar? Do children require input from the native language to learn it? Why or why not?

(5) If there are 3 language structure parameters with 2 values each, how many different languages could be represented?

(6) What kinds of generalizations can be made about the structure of languages which have "Subject Verb Object" as the basic word order, according to Greenberg? What about languages which have "Subject Object Verb" as the basic word order?

(7) According to Greenberg, do languages with the same structural patterns need to have a shared history?

(8) What is the value of parameters for learning language structure? That is, why are they useful?

(9) Which grammar is supposed to be the most successful in variational learning?

(10) If there are 8 grammars available, what probability will a variational learner initially assign each one?

(11) Which grammar(s) will be able to successfully analyze unambiguous data for a language? Why?

(12) What does the quantity of unambiguous data that a child encounters have to do with when a child learns a particular structural property (usually signaled by a parameter value) of the language?

(13) A brief Sigmund von Hacklestein adventure:
(a) Sigmund has gathered some Guin data, and found that Guin has the following structural properties: +wh-fronting, -verb-raising, -verb-second, -subject-drop, and

+intermediate-wh. He has also determined how much unambiguous data a Guin child would likely encounter for each of these structural properties:

+wh-fronting: 5% of input
-verb-raising: 7.5% of input
-verb-second: 2.5% of input
-subject-drop: 20% of input
+intermediate-wh: 0.5% of input

(i) Which structural property would Yang (2004) predict a variational learner would learn first? Why?
(ii) Which structural property would Yang (2004) predict a variational learner would learn last? Why?
(iii) Give the order in which Yang (2004)'s variational learner would learn these structural properties, starting from the one acquired earliest and ending with the one acquired latest.