

Psych56L/ Ling51

Winter 2012

Homework 1: Introduction & Biological Bases of Language Acquisition

Or “The Language Adventures of Sigmund von Hacklestein, part 1”

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.

(60 points total)

(1) Sigmund von Hacklestein hasn't been as good about attending class as you have, and he doesn't remember the difference between prescriptive and descriptive grammar. One thing he remembers his teacher told him was that he should use *good* as an adjective, not as an adverb (ex: *you did good* uses *good* as an adverb modifying *did*.) This is very confusing for Sigmund because he does this all the time in normal conversation.

Consider the interaction below:

Sigmund: “Why can't I write ‘he had clearly done good’ in my essay?”

Sigmund's Teacher: “You can't use *good* as an adverb. It's not proper.”

Sigmund: “But I hear people do this all the time – I've heard *you* say it!

Sigmund's Teacher (blushing): “I care about how you write, not how you speak.”

(a) *Briefly* define prescriptive grammar. [1 pt]

(b) *Briefly* define descriptive grammar. [1 pt]

(c) Is Sigmund's teacher advocating a descriptive or prescriptive rule of English? How do you know? [3 pts]

(2) Sigmund is trying to sort out the difference between **nativists**, **empiricists**, **constructionists**, and **generativists**. Help him out by answering the following questions. Note that for each question, there may be more than one group that qualifies. Alternatively, none of the four groups may qualify. Your answer should simply list the groups that apply for each question.

Ex: *nativists*, *generativists*

(a) Which of these four viewpoints, if any, would believe that children bring no prior knowledge or abilities to the language acquisition problem? [4 pts]

(b) Which of these four viewpoints, if any, would believe that children bring no prior knowledge or abilities to the language acquisition problem, and instead rely on innate domain-specific learning abilities? [4 pts]

(c) Which of these four viewpoints, if any, would believe that children bring domain-specific prior knowledge and/or abilities to the language acquisition problem? [4 pts]

(d) Which of these four viewpoints, if any, would believe that children solve the language-acquisition problem by using the language input available to them? [4 pts]

(e) Which of these four viewpoints, if any, would believe that children bring only domain-general prior knowledge and/or abilities to the language acquisition problem? [4 pts]

(3) Sigmund has been examining the CHILDES database for nouns. He has not found any child speech samples containing the noun “wizard”.

(a) Can he conclude that the children in the database do not know the word “wizard”? Why or why not? [3 pts]

(b) What might be a better way for him to test when children know (and understand) the word “wizard”? [2 pts]

(4) Sigmund found four second-language speakers of English with very similar backgrounds, who all spoke the same native language, and who have all now spoken English for 20 years. However, they all started learning English at different ages. Attia started learning when she was 2 years old. Circe started learning when she was 5 years old. Fizgig started learning when he was 8 years old. Marduk started learning when he was 11 years old.

(a) If a **critical or sensitive period** for language acquisition exists up to age 6, who should have the best language ability in English? Why? (Note: If there is more than one, list all speakers who would have the best language ability.) [4 pts]

(b) Suppose a **critical period** for language acquisition exists up to age 6.

- (i) Should Attia’s language usage be different from Circe’s? (Yes, No, Somewhat)
- (ii) What about Attia’s usage compared to Fizgig’s? (Yes, No, Somewhat)
- (iii) What about Attia’s compared to Marduk’s? (Yes, No, Somewhat)
- (iv) What about Circe’s compared to Fizgig’s? (Yes, No, Somewhat)
- (v) What about Circe’s compared to Marduk’s? (Yes, No, Somewhat)
- (vi) What about Fizgig’s compared to Marduk’s? (Yes, No, Somewhat)

[1 pt each, 6 pts total]

(c) Suppose a **critical period** for language acquisition exists up to age 9.

- (i) Should Attia’s language usage be different from Circe’s? (Yes, No, Somewhat)
- (ii) What about Attia’s usage compared to Fizgig’s? (Yes, No, Somewhat)
- (iii) What about Attia’s compared to Marduk’s? (Yes, No, Somewhat)
- (iv) What about Circe’s compared to Fizgig’s? (Yes, No, Somewhat)
- (v) What about Circe’s compared to Marduk’s? (Yes, No, Somewhat)
- (vi) What about Fizgig’s compared to Marduk’s? (Yes, No, Somewhat)

[1 pt each, 6 pts total]

(d) Suppose a **sensitive period** for language acquisition exists, with overall achievement identical if the person starts to learn the language before the age of 6, and overall achievement deteriorating steadily if person learns the language between the ages of 6 and 30.

- (i) Should Attia’s language usage be different from Circe’s? (Yes, No, Somewhat)
- (ii) What about Attia’s usage compared to Fizgig’s? (Yes, No, Somewhat)
- (iii) What about Attia’s compared to Marduk’s? (Yes, No, Somewhat)
- (iv) What about Circe’s compared to Fizgig’s? (Yes, No, Somewhat)
- (v) What about Circe’s compared to Marduk’s? (Yes, No, Somewhat)
- (vi) What about Fizgig’s compared to Marduk’s? (Yes, No, Somewhat)

[1 pt each, 6 pts total]

(5) Sigmund was amazed by split-brain patients, and wants to know more about what they can tell us about language in the brain.

(a) What is the defining feature of a split brain patient? (Hint: What brain part has been altered?)
[1 pt]

(b) Suppose a split brain patient sees a cat in her right visual field.

(i) Will she be able to say “cat” out loud to identify what she saw? (Yes or No)

(ii) Will she likely be able to pick up a stuffed cat from a set of objects on her righthand side? (Yes or No)

[1 pt each, 2 pts total]

(c) Suppose a split patient sees a cat in her left visual field.

(i) Will she be able to say “cat” out loud to identify what she saw? (Yes or No)

(ii) Will she likely be able to pick up a stuffed cat from a set of objects on her lefthand side? (Yes or No)

[1 pt each, 2 pts total]

(d) Given the test results from (b) and (c), what would we conclude about where language is located in the brain of most adult speakers? Why? (Hint: You’ll probably want to mention the brain part in your answer to (a).) [3 pts]