

ASSIGNMENT 6: LANGUAGE ACQUISITION

Do language learners rely on general-purpose strategies, or are important aspects of human language innately specified? The reading for this assignment argues for the second possibility:

- Gleitman and Newport (1995). The invention of language by children: environmental and biological influences on the acquisition of language.

You should also look at pp 343–357 of the textbook.

Each question will be graded by a different person. Please take this into account and make sure that your answers to each question stand alone.

You may discuss the assigned materials with other students, but should provide your own answers to each question. More precisely, your answers should represent your own ideas, and your own way of organizing and explaining these ideas. Please put your ideas in your own words— you may quote key phrases from the article if you like, but as a rule of thumb any direct quote should be at most a few words long.

A FAQ for this assignment will be maintained on Blackboard. Please check the FAQ before contacting us with questions.

SUBMISSION INSTRUCTIONS

Please remember the following things:

1. **Don't change the page structure of the original assignment** (e.g. make sure that you don't use two sides for a question that was originally restricted to one side, and make sure that you don't submit a single page that includes responses to two different questions). If you're using a program other than Microsoft Word, you'll need to be especially careful about preserving the page structure – please make sure that your submission is consistent with the structure of the online pdf version of this document.
2. Print out a copy of your answers and turn it in before the end of class on the due date. Make sure that you fill in and include the cover sheet that appears on the next page. If you decide not to answer one or two questions, submit the blank pages (with empty boxes) for these question. **Please put your name on top of each page and print out your answers single-sided.** We will separate your packet and distribute different pages to individual graders.
3. Upload the file to the course website on Blackboard. The file should be uploaded via the Assignments page. The uploaded file will give us a permanent copy of your assignment (in case of query or loss of the paper copy). If you're having trouble submitting your file, try using a different browser before contacting us. Note that submitting an electronic copy alone is not sufficient – **if you do not submit a hard copy, then you will not receive any credit for this assignment.**
4. Some questions may ask you to sketch graphs or draw diagrams. If you choose to submit hand-drawn diagrams for these questions, it's fine to leave the corresponding boxes on the electronic copy blank.

PLEASE FOLLOW THE ABOVE INSTRUCTIONS CAREFULLY. To encourage you to do so, 10 % of your assignment grade will depend on following the instructions correctly.

- If you do not print out your answers single-sided and write your name on each page, you will lose 5% of your grade.
- If you do not upload an electronic copy of your assignment to the Assignments page on Blackboard, you will lose 5% of your grade.

HW6

Name: Shashank Singh

- If your hard copy does not preserve the page structure of HW6.pdf (see Blackboard), you will lose 5% of your grade.

Turn in this homework in class on **Thurs Nov 21** or earlier to Rony's mailbox (BH 336D).

COVER SHEET

Honor code:

“My responses to these questions represent my own ideas and I have not received undue assistance from any source”

Your signature: _____

Please choose one of the following options:

☐ I would like to pick up my graded assignment at the end of class. The final grade will be written on the underside of the first page, but I understand that others may see my graded work.

☐ I prefer that my graded assignment not be distributed at the end of class, and understand that I will need to collect it during Rony's office hour .

Your signature: _____

1) (a) Goldin-Meadow and colleagues have studied deaf children who are not taught a sign language. Both these children and their parents, however, still use gestures to communicate. Describe two ways in which the gestures of the children differ from the gestures of their parents.

Difference 1:

Children tend to develop gestures with consistent meanings that they use as words, whereas parents typically resort to pointing and pantomiming actions as needed.

Difference 2:

As the children grow older, then begin to sequence their gestures much as words in a sentence, and, furthermore they develop grammar-like rules determining how, for example, the order of gestures affects the meaning of a sequence. The parents' rarely sequence their gestures, and, when they do, they do not display such "grammatical" structure.

(b) How do the findings you mentioned in (a) relate to the claim that language acquisition is "heavily constrained" by our biology (p 2)?.

The findings mentioned in (a) show that children develop (to some extent) words (Difference 1), sentences, and grammar (Difference 2), despite never being exposed to such structures by their parents. Thus, the development of these structures seems to be driven at least in part by internal biological structure. This suggests that the structure of language is somewhat governed by our biology, and hence our acquisition of language is constrained by our biology.

2) (a) Explain the concept of a “critical” or “sensitive” period in language learning. p 14 of the reading and p 350 of the textbook might be helpful, but please put your answer in your own words.

Humans experience a “critical” or “sensitive” period in their early-mid childhood during which language learning is most effective. In order to gain a native-level of expertise, in a language, a human must typically be exposed to the language extensively during that period, and exposure to a language before or after that time will generally result in reduced expertise, regardless of the duration of exposure.

(b) Describe the Newport (1990) study (p 14) and explain why it supports the idea of a critical period.

Newport (1990) studied American Sign Language (ASL) learners in three groups based on age of first exposure to ASL: birth (G1), 4 to 6 years (G2), and 12 or more years (G3). All subjects had been using ASL consistently for at least 30 years. When studied those in G2 displayed subtle defects in understanding complex sentences, and those in G3 displayed severe defects. Only those in G1 displaying native-level fluency.

This shows that, regardless of the duration of exposure to a language, exposure to that language during the critical period is crucial for ever attaining full fluency in that language.

3) (a) Explain the difference between a pidgin and a creole in your own words.

A pidgin is spoken only as an improvised secondary language between adults. A creole, on the other hand, is spoken natively by children as a primary language.

(b) Given a pidgin and a creole, which of the two is likely to be more complicated? (circle one)

Pidgin

Creole

Give one plausible reason for this difference in complexity.

Children using a creole as a primary language will need to use the language for a wide variety of diverse and elaborate expressions, as with any user of a primary language. On the other hand, pidgins are typically constructed for some domain specific purpose (e.g., trade), and hence need not have the diverse expressiveness of a primary language.

4) Consider sentence S: "The essay which is on the table is incomplete." Consider two possible rules for turning the sentence into a question:

- serial-order rule: move the first 'is' to the front
- structure-dependent rule: move the 'is' in the main clause to the front

(a) List the question formed when the serial order rule is applied to sentence S:

Is the essay which on the table is incomplete?

(b) List the question formed when the structure-dependent rule is applied to sentence S:

Is the essay which is on the table incomplete?

(c) Language learners never make errors similar to your response in part (a). How do Gleitman and Newport explain this finding?

Gleitman and Newport claim that language learners are inherently biased toward generalizing by means of structure-dependent rather than serial-order-dependent rules. That is, a learner's aversion to sentences like the response in part (a) is an innate biological constraint.

5) Gleitman and Newport focus on spoken language rather than writing and reading.

(a) Identify one of their key claims about language that is definitely false for the case of written language.

The claim that “every learner is an isolate” is not generally the case for written language. Any learner of written English, for example, must have some knowledge of spoken English in order to make any sense of the phonetic alphabet, and, presumably, this includes some knowledge of English grammar and sentence structure.

(b) Give one reason why it makes sense for Gleitman and Newport to focus on spoken rather than written language.

While normal humans naturally learn spoken language when immersed (at a sufficiently young age) in that language, it is quite natural for humans to neglect to learn reading and writing even when surrounded by a written language. There exist, for example, illiterate people in many urban areas full of signs, labels, and other written information. Thus, while spoken language may be constrained biologically so as to improve our learning, it is difficult to argue a similar point for written language.