
Week 2: Language as an instinct

Practice Problems

- (1) Read the following description of a feral child named Victor and answer the questions below:

Victor was found in France in 1797 when he was twelve or thirteen years old. He had no speech when he was found. However, his hearing was normal and he made some noises. A man named Jean Marc Gaspard-Itard spent five years trying to teach Victor language. When Victor was sixteen, he could name objects. However, he would never use the words to request the objects. He also applied each word to only one object. That is, he would call only a certain shoe a shoe, but not other shoes. Victor developed no grammar.

- i. Does Victor's case support the critical period hypothesis? Why or why not?
 - ii. What factors other than a critical period could be responsible for Victor's not acquiring normal language skills?
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- (2) In class we discussed Lenneberg's characteristics of biologically-determined behavior. Here is a summary adapted from next week's reading:

- (a) The behavior emerges before it is necessary
- (b) Its appearance is not the result of a conscious decision
- (c) Its emergence is not triggered by external events (though the surrounding environment must be sufficiently "rich" for it to develop adequately).
- (d) Direct teaching and intensive practice have relatively little effect.
- (e) There is a regular sequence of "milestones" as the behavior develops, and these can usually be correlated with age and other aspects of development.
- (f) There is likely to be a "critical period" for the acquisition of the behavior.

Choose 5 of the 6 characteristics above and use them to compare walking to bike-riding.

- (3) Many behaviors in humans and other animals result from a combination of instinct and learning/culture. Choose one human and one animal behavior to describe in these terms: which aspects of the behaviors are instinct and which parts are learned?
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- (4) The following data is from a study that asked children to mark tense by completing sentences like "*Everyday I walk to school. Just like everyday, yesterday I _____*". Children in the study were either impaired or controls, and spoke one of five languages.

% correct	English (England)	English (Canada)	French (Canada)	Japanese	Greek
Impaired	38.3	52.3	46.7	48.1	20.0
Controls	91.7	93.5	96.4	97.9	87.1

Subjects were given items like: Everyday I walk to school. Just like everyday, yesterday I.... This task requires the subject to recognize that the temporal context specified in the second sentence requires a particular verb form.


Based on this data, what type of impairment do you think the researchers are studying? Do you think the impaired group of children had a hemispherectomy, Williams Syndrome, or SLI? Explain why.

(5) The following data (from Reilly, Klima & Bellugi, 1990) show responses from four children asked to describe a scene in the book *Frog Where are You?* All of the children have an IQ score of between 48-64. Just by looking at the data and without referring to the paper:

- (a) Write group 1 next to the answer that best describes the group 1 children (1 & 3) and group 2 next to the answer that best describes the group 2 children (2 & 4)?
- (i) Williams Syndrome
 - (ii) SLI
 - (iii) Hemispherectomy
 - (iv) Down Syndrome
 - (v) Control Group
- (b) Explain your answer choices.

Group 1

Group 2

 <p>(M. Mayer, "Frog Where are You")</p>	<p>1 age 13</p> <p>And he was looking for the frog. What do you know? The frog family! Two lovers. And they were looking. And then he was happy 'cause they had a big family. And said "good bye" and so did the frog. "Ribbit."</p>	<p>2 age 13</p> <p>There you are. Little frog. There another little frog. They in that... water thing. That's it. Frog right there.</p>
	<p>3 age 17</p> <p>Suddenly when they found the frogs... There was a whole family of frogs... And ah he was amazed! He looked... and he said "Wow, look at these... a female and a male frog and also lots of baby frogs". Then he take one of the little frogs home. So when the frog grow up, it will be his frog... The boy said "Good bye, Mrs. Frog... good bye many frogs. I might see you again if I come arounmd again". "Thank you Mr. Frog and Mrs. Frog for letting me have one of your baby frogs to remember him".</p>	<p>4 age 18</p> <p>Thy're hiding; see the frogs... the baby frogs. Uh, the boy, and, and the dog saw the frogs. The frog's got babies. The boy saw the... no, the boy say good bye.</p>
	(Reilly, Klima & Bellugi, 1990)	