

Lecture 5  
**The Biological Basis of Language**

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- Lenneberg's criteria for determining whether a communication system is based in the biology of a species or not.
- How language is based in the biology of humans?

**Lenneberg's criteria for determining whether a communication system is based in the biology of a species or not**

1. The communication system has to be species specific (e.g. lion roars are only understood by species of the same type).
2. The communication system has to be universal to all members of the species.
3. Certain aspects of behavior and cognitive function for the system emerge only during infancy
4. Adaptation of the behavior of the growing individual to the behavior of other individuals around him.

**Now let us see if Lenneberg's criteria apply for the human language**

**How language is based in the biology of humans?**

- **Language is species specific:**
  - Animals cannot talk and they cannot be taught a human communication system
- **Language is universal**
  - infants are genetically prepared to acquire language
  - all human languages have universal properties (e.g. all languages have phonology, morphology, and syntax)
- **There is an age restriction for acquiring the first language**
  - Critical period: linguistic competence of the first language can only be achieved if the language is learnt before puberty

**How language is based in the biology of humans?**

- **Language development is triggered by the environment**

**Children will not ACQUIRE language if:**

- It is not accessible in their environment
- There is nobody to interact with them

**Exercise**

**Language is based in the biology of humans, because:**

- A. Language is species specific
- B. There are universal aspects of language
- C. There is an age restriction for acquiring the first language
- D. All of the previous items are correct

**The answer is (D)**