

Biolinguistic Theories of Language Evolution

Unit 1, Class 4, Part 1

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Biolinguistical theories about the origin of language

- ① Ritual/speech coevolution theory
- ② Putting-down-the-baby theory
- ③ From where-to-what model
- ④ Self-domesticated ape theory
- ⑤ Chomsky's single step theory



- Language as a subsidiary component of human *symbolic culture*
- Language works only inside the trust-building institutions
 - No language of apes in the wild
 - Language evolved when humans upheld the level of trust necessary for linguistic communication to work
- Language works by building trustworthiness within a society



Putting-down-the-baby theory

- Language evolved from interaction between early hominid mother and offsprings
- Human mothers could not go hunting and foraging with the baby
- Baby could not easily cling on the back as the fur was declining
- So the mother had to use infant-directed means of communication system - *motherese* - together with caressing, laughter, facial expression, touching, patting, body language, and emotionally expressive contact calls to assure the baby that it was not abandoned
- This interaction led to human ancestors' earliest words and eventually to first human language



From where-to-what model

- Origin of speech to exchange contact call between mother and offspring in the event of their separation
- Contact calls with changing intonation as the first form of conversation
 - From single contact call to sequence of calls to multisyllabic words

auditory ventral stream: sound recognition (what); *auditory dorsal stream*: sound localisation (where)

Only in humans, dorsal stream in the left hemisphere associated with language processing, phonological memory, speech production, etc.



Self-domesticated ape theory

- Wild striated finch vs domesticated Bengali finch (within 1000 gen.)
 - Wild: selection pressure → song syntax subject to female preference; innate
 - Domesticated: natural selection replaced by breeding → variable song syntax (aesthetic song choices by human breeders)
- Humans similar to domesticated apes
- Cultural domestication relaxed selection pressure on several primate behaviors of human
 - Neural pathways dedifferentiated and reconfigured for language



Chomsky's single step theory

- Thousands of years ago, genetic mutation in the hominin brain (betwn. 200 and 60 thousand years)
- Mutation brought about sudden emergence of language when human brain was just ready for it
 - Change took 130 thousand years
 - or 5000 to 6000 generations

🗨️ No consideration for gradual change and evolutionary steps that led to language

🗨️ Data and analysis refute the claim

