

Theories of Language Evolution

Unit 1, Class 2, Part 2

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What is language?

- A system of communication
- A set of symbols/signs combined to form meanings
- Primary means of communication among humans
 - Written and spoken forms, and with signs and gestures
 - Across time and space

Language: Discuss

- How/where do you use language?
- Does thought require language? (*Language of thought*)
 - Can you think without language?
 - Does your language (e.g., Maithili, Newari, Russian) affect your thought and sensory perception?



Section 1

Origin and evolution: Where did language come from?

Theories

- ① Sound imitation theory
- ② Sound-symbolic theory
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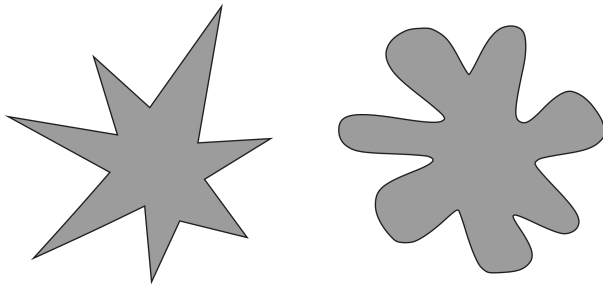
Sound imitation theory (Woof-woof theory)

- From imitation of natural sounds like animal cries (e.g., moo, bark-bark), water noises (e.g., splash), and impacts (e.g., bang) that supposedly formed the basis of vocabulary development
- Proposed by Plato and Democritus and later by William Whitney (as referenced in Crystal, 2007)

🗨️ Largely dismissed by linguists

- no. of onomatopoeic words is relatively small and varies significantly across languages
- e.g., dog barks: *au au*-Brazil, *ham ham*-Albania, *wang wang*-China, *bhau bhau*-Nepal

Bouba/kiki effect(Usnadze, 1923)



Sound-symbolic theory

- Suggests a direct connection between human feelings/emotions and sounds
- Certain sounds inherently convey specific impressions (e.g., “mel” – “honey”: pleasant, “acer” – “sharp”: unpleasant, as noted by Aurelius Augustine)
- Leibniz linked the sound [l] to softness and speed (Panchenko & Bilous, 2022)

- German *leben*-“to live”, *lieben*-“to love”, *Lauf*-“run”, *Lowe*-“lion”

🗣️ Language specific and may decrease with language development

🗣️ Similar sounds express different or unpleasant concepts in other languages (e.g., Leibniz’s [l] vs *lai*-bark in Ukrainian)



Exclamatory hypothesis (Emotional exclamations)

- Words from involuntary emotional sounds or exclamations in response to the surrounding world
- “Passions caused the first sounds of the voice” (Rousseau, 1782)
- Language emergence based solely on individual emotional states is unlikely
- Language acquisition typically requires social interaction

🗣️ Exclamations vary across languages (e.g., English “Oh”, German “Ach so”)

🗣️ Language serves more than just an expressive function

Hypothesis of the social contract

- Attributed to Diodorus of Sicily
- Language emerged out of necessity as early humans began to interact, defend themselves, and explain their surroundings through agreed-upon symbols and words
- Builds upon the idea of the conventionality of names
(Democritus and Aristotle, as cited in Crystal (2007))

🗣️ The prerequisite for this theory is language itself!

🗣️ To establish a “social contract” and agree on symbols, a form of communication would already need to exist

Logos Theory of the Origin of Language

- Early theory, with Vedic, Biblical, and Confucian variations
- Posits a divine or spiritual origin of language
 - A gift from God (Vedas, Bible)
 - Attributed its creation to wise ancestors or rulers (ancient Chinese philosophy, J.M. Degerando [1772–1842], J. Grimm [1785–1863], as referenced in Panchenko & Bilous, 2022)
- Language as an activity of the spirit by Wilhelm von Humboldt (Panchenko & Bilous, 2022)

🗨️ Lacks empirical evidence and falls outside the realm of scientific inquiry



Section 2

Neurobiological theories

How is it possible for language to evolve?

- ❗ Problems of reliability and deception (see *Signalling theory*)
 - Organisms have conflicting interests
 - Language offers a cheap mean to lie and deceive
 - The best way to not be deceived is to ignore linguistic signals
 - It should have been an obstacle in *human-language* evolution

Some theories address it, some don't.

Mother-tongue hypothesis

- Inspired from Darwinian *kin selection* principle
- Language as a tool of communication between mother and offspring
- Later extended across adult relatives
- Shared genetic interests in relatives → trustworthiness of unreliable signal, i.e., language

🗣️ Kin selection not unique to human (but intergenerational dependency in humans)



Obligatory reciprocal altruism hypothesis

- If you scratch my back, I'll scratch yours
 - *If you speak truthfully to me, I'll speak truthfully to you*
(Ulbæk, 1998)
 - Between frequently speaking individuals
- Society, not just individual organism, subjected to moral regulation to be reciprocally honest
- No enforcer of altruism and regulations
- Language doesn't work on the basis of altruism
 - Humans regularly withhold info
 - No expectation of reciprocity
 - Advertise socially relevant info they have to those who listen





Gossip and grooming hypothesis



- Gossip among humans same as manual grooming among other primates [dunbar1996]
- Manual grooming costly in group → replaced by efficient vocal grooming in the form of language

🗨️ Cheap words → not efficient in conveying commitment like manual grooming

🗨️ Transition from pleasing but meaningless sounds to cognitively complex language unexplained

Gestural theory

- Language evolved from gestures  used for simple communication
- Cortical areas  for gestures and speech border each other
- Addresses the sender-receiver parity problem (Arbib & Rizzolatti, 1996)

 What is this parity problem? 

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