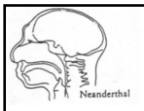
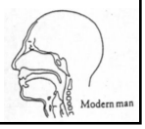


APPROACHES TO LANGUAGE

The Origin of Language & the Human Communication System



Focus

- How did language originate?
  - theoretical propositions
- Evolution of linguistic ability in humans
- 'Design features' of the human language communication system Compared to animal languages.

LANGUAGE ORIGIN

- Early theories arose as a result of curiosity in man's origins
- Origin of man variously dated – anthropologists/archeologists - man has existed for at least 1-5/6 million years.
  - 500K years ago – late homo erectus (fire, tools)
  - 250K years ago – early homo sapiens
  - 70K-35K years ago – homo sapiens (Neanderthal) – underdeveloped vocal tract Because of different face shape.
  - 35K-now – current homo sapiens – most likely to possess speech
  - written records are only 6,000 years old (Sumerians of 4,000 B.C.)

3

Theories of language origin

- divine origin of language
- proto-language
- natural invention versus convention
- innate ability
- species specificity

DIVINE ORIGIN

(see Fromkin & Rodman)

- - Judeo-Christians - Adam named all things
  - Babylonians - language giver- god NabÛ
  - Egyptians - god Thoth Greek mythologies too.
- Belief in divine origin of language is connected to the 'magical' properties man has given to language.
- Specific language use for religious and spiritual events/rituals.

Catholics use Latin. Orthodox use Ancient Greek.

- Language without thought? A divine gift?

If it were a gift, would it be given to everyone? Most people can speak, and everyone has the ability to from birth.

'PROTO-LANGUAGE'

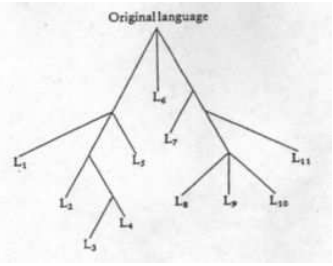
Theory of the first language.

People have been asking these questions for many many years.

- Primitive natural language:
  - Egyptian Pharaoh Psammetichus (664-610 B.C.)
  - James IV of Scotland (1473-1513)
  - Becanus (1518-1572) The simplest language is the one with the shortest words.
  - Webster

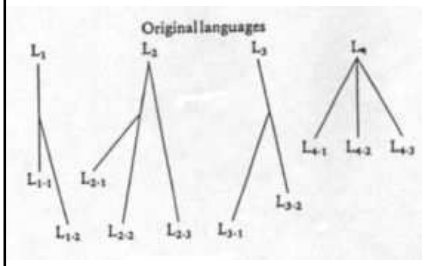
Proto-language
Mono-genetic theory

Genesis 'the whole earth was of one language, and of one speech.'



One language which everything descends from.

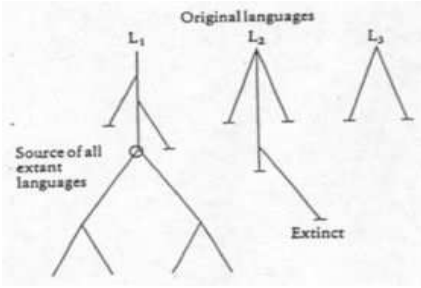
Multi-origin



Are words natural or conventional?

NATURAL: A bird is named a cuckoo because of the sound it makes.
CONVENTIONAL: Man-made, such as desk or chair, no relation to its meaning or function from its name.

Multi-origin + extinction



NATURALISTS *versus* CONVENTIONALISTS

Earliest manifestations of language are cries of nature, therefore naturalist. ROUSSEAU.

Anger, happiness, sorrow.

- Plato's 'Cratylus'
- Naturalists versus conventionalists
- Rousseau (18th C)
- 'Oral-gestural theory' (Paget)
  Rhythmic grunts of men at work (Luria)
- 'Motor theory of speech perception'

Piaget says that science seeks to measure and construct models of a natural world.

Unconscious reproduction of the sounds and gestures in our mind.

Imitation of a bird - cuckoo - origin of language.

INNATE ABILITY

Genetically predisposed to language.

Johann Herder (1769)

- language is not invented nor given as a gift

- innateness theory

- universality of language

Captive Children

1920s - 2 feral children - Amala & Kamala were found in India - reared with wolves

1970 - Genie – 18 months-14 years in isolation

Managed to acquire basic speech.

2008 – children held captive in Austria

What do these cases suggest about language acquisition?

Critical period hypothesis. Is there a specific age at which it is optimal to learn a language? Plasticity of the brain?

Review of theories

- divine origin of language
- proto-language
- natural invention versus convention
- innate ability
- species specificity

Hockett's Design Features

- **Interchangeability** - ability to send and receive messages.
- **Feedback** – this means that the speaker/signer can monitor their own language performance.

Characteristics that set human language apart from animal language.

Hockett's Design Features

- **Specialisation** – the organs responsible for communication are specially adapted, e.g. in speech – lips/tongue/throat. Articulators.
- **Semanticity** – specific signals (words) can be matched to meanings and these meanings are shared by a speech community.

Hockett's Design Features II

- **Arbitrariness:** there is no necessary connection between the form of the signal and the thing being referred to.
- **Discreteness:** basic units of speech/sound can be isolated, identified and categorised, e.g. phonemes, morphemes; syllables; words; phrases etc
- **Displacement:** can communicate about events/things not present (spatially or temporally)

Hockett's Design Features III

- **Productivity –** ability to produce novel utterances.
- **Duality of patterning** – discrete parts of a language (e.g. sounds) can be recombined in a systematic way to make new forms (e.g. words).
  e.g. /s//p//o//t/

Hockett's Design Features III

- **Tradition** - certain aspects of the system must be passed from one experienced user to a learner.
- **Prevarication** - allows user to talk nonsense or lie

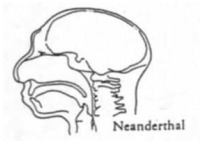
Hockett's Design Features III

- **Learnability**: a user of the system can learn other variants e.g. humans can learn other languages.
- **Reflexiveness** - ability to use the communication system to discuss the system itself .

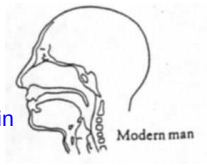
LANGUAGE & EVOLUTION: Biological specialisation

Organ	*Survival role*	*Speech role*
Lungs	Exchange CO_2 O_2	Air for speech
Vocal cords	Create seal over passage to lungs	Voice for speech sounds
Tongue	Move food to rear of throat	Articulate consonants/ vowels
Teeth	Break down food	Place of articulation for consonants
Lips	Seal oral cavity	" "
Nasal cavities	Breathing	Nasal resonance

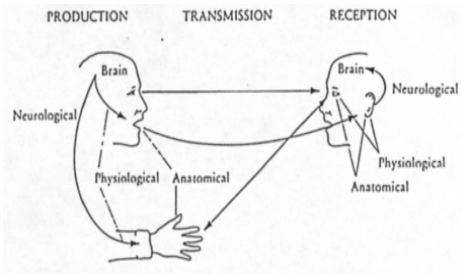
Descent of Larynx & tongue root & hyoid bone



Enlargement of phonetic repertoire. There is more space in the mouth following this development.



The Communication Chain: neurological, physiological & anatomical structures



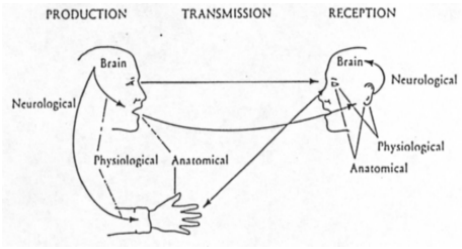
The Communication Chain: Encoding & transmission

1. *Neurological encoding* – the message is encoded in signals which are sent through the nervous system.
2. These are translated into *physiological* signals, controlling the movement of muscles involved in the communication process (in hands/arms/vocal organs).
3. *Anatomical* movement of the articulators.

The Communication Chain: Decoding - reception

1. *Anatomically* – reception via ear/eye;
2. *Physiologically* – translation of these signals into mechanical movements controlled by the muscles underlying these organs;
3. *Neurologically* – movement are turned into nerve impulses which ultimately reach the brain.

The Communication Chain: A Representation



SUMMARY

- Many theories have been proposed concerning the origin of language – some more plausible than others.
- Language ability has been argued throughout time to be part of an innate cognitive faculty.
- Hockett has identified 13 characteristics which set human communication apart from other forms.
- Researchers have argued for an evolutionary biological basis for the development of neurological/anatomical & physiological mechanisms responsible for linguistic expression and understanding.

ACTIVITY

- Review Hockett's design features.
- Consider the animal kingdom and consider specific species, e.g. dogs/birds. Which of these design features may be said to characterise animal communication and which appear to be specific to humans?

Concepts introduced

- Theories of language origin: divine origin of language; proto-language; natural invention versus convention; innate ability; species specificity.
- Proto-language/mono-genesis theory.
- Multi-origin.
- Hockett's Design Features.

References & post-class readings

- Fromkin, Rodman & Hyams, Chapter 2
- Trask, Chapters 1 & 7
- Crystal encyclopaedia, Sections 45-46 and 49
- For Hockett (1963), see Aitchison's *The Articulate Mammal* (various editions), Chapter 2.