

Feedback: users of the system are aware of what they are transmitting 3. Specialization: the communicative system serves no other function but to communicate 4. Semantic nature: the system conveys meaning through a set of fixed relationships among signifiers, referents and meaning. 5.

Arbitrariness: there is no natural or inherent connection between a token and its referent 6.

Discreteness: the communication system consists of isolatable, repeatable units 7. Displacement: users of the system are able to refer to events remote in space and time 8. Productivity: new messages on any topic can be produced at any time 9. Tradition, cultural transmission: certain aspects of the system must

be transmitted from an experienced user to a learner 10. Duality: meaningless units (phonemes) are combined to form arbitrary signs. Signs can be recombined to form new larger meaningful units (s-p-o-t a tops, pots) 11. Prevarication: the system enables users to talk nonsense or to lie 12. Learnability: the user of the system can learn other variants. Humans can learn different languages; bees are limited to their genetically specified dialect 13. Reflexiveness: the ability to use the communication system to

discuss the system itself. Lesson Three: The Origins of Language Overview How did language emerge?

Did it appear in its complete form the beginning? Did it develop through time from a primitive form to its complex human form? These are the basic questions touched upon in every discussion about the origins

of language. According to Charles Darwin, language originated from musical signs our first ancestors used "to charm each other". Larynx and Pharynx The human larynx or "voice box" (containing the vocal folds) differs significantly in position from the larynx of other primates such as monkeys. In the course of

human physical development, the assumption of an upright posture moved the head more directly above the spinal column and the larynx dropped to a lower position. This created a longer cavity called the

pharynx, above the vocal folds, which acts as a resonator for increased range and clarity of the sounds produced via the larynx. Other primates have almost no pharynx. One unfortunate consequence of this

development is that the lower position of the human larynx makes it much more possible for the human to choke on pieces of food. Monkeys may not be able to use their larynx to produce speech sounds, but

they do not suffer from the problem of getting food stuck in their windpipe. In evolutionary terms, there must have been a big advantage in getting this extra vocal power (i.e. a larger range of sounds) to

outweigh the potential disadvantage from an increased risk of choking to death. 5. Tool-Making Source In the physical adaptation view, one function (producing speech sounds) must have been superimposed

on existing anatomical features (teeth, lips) previously used for other purposes (chewing, sucking). A similar development is believed to have taken place with human hands and some believe that manual

gestures may have been a precursor of language. By about two million years ago, there is evidence that humans had developed preferential right-handedness and had become capable of making stone tools.

Tool making, or the outcome of manipulating objects and changing them using both hands, is evidence of a brain at work. The Human Brain The human brain is not only large relative to human body size, it is

also lateralized, that is, it has specialized functions in each of the two hemispheres. Those functions that control the motor movements involved in complex vocalization (speaking) and object manipulation

(making or using tools) are very close to each other in the left hemisphere of the brain. That is, the area of the motor cortex that controls the muscles of the arms and hands is next to the articulatory muscles of

the face, jaw and tongue. It may be that there was an evolutionary connection between the language-

using and tool-using abilities of humans and that both were involved in the development of the speaking brain. A recent study kept track of specific activity in the brains of experienced stonecutters as they crafted a stone tool, using a technique known to have existed for 500,000 years. The researchers also measured the brain activity of the same individuals when they were asked to think (silently) of particular words. The patterns of blood flow to specific parts of the brain were very similar, suggesting that aspects of the structure of language may have developed through the same brain circuits established earlier for two-handed stone tool creation. If we think in terms of the most basic process involved in primitive toolmaking, it is not enough to be able to grasp one rock (make one sound); the human must also bring another rock (other sounds) into contact with the first in order to develop a tool. In terms of language structure, the human may have first developed a naming ability by consistently using one type of noise (e.g. bE E r). The crucial additional step was to bring another specific noise (e.g. gO O d) into combination with the first to build a complex message (bE E r gO O d). Several thousand years of development later, humans have honed this message-building capacity to a point where, on Saturdays, watching a football game, they can drink a sustaining beverage and proclaim 'This beer is good'. As far as we know, other primates are not doing this.

6. The Genetic Source We can think of the human baby in its first few years as a living example of some of these physical changes taking place. At birth, the baby's brain is only a quarter of its eventual weight and the larynx is much higher in the throat, allowing babies, like chimpanzees, to breathe and drink at the same time. In a relatively short period of time, the larynx descends, the brain develops, the child assumes an upright posture and starts walking and talking. This almost automatic set of developments and the complexity of the young child's language have led some scholars to look for something more powerful than small physical adaptations over time as the source of language. Even children who are born deaf (and do not develop speech) become fluent sign language users, given appropriate circumstances, very early in life. This seems to indicate that human offspring are born with a special capacity for language. It is innate, no other creature seems to have it and it is not tied to a specific variety of language. Is it possible that this language capacity is genetically hard-wired in the newborn human?

The Innateness Hypothesis As a solution to the puzzle of the origins of language, the innateness hypothesis would seem to point to something in human genetics, possibly a crucial mutation or two, as the source. In the study of human development, a number of gene mutations have been identified that relate to changes in the human diet, especially those resulting in an increase in calorie intake, possibly tied to the ability to digest starch in food and a substantial increase in glucose production. These changes are believed to have enhanced blood flow in the brain, creating the conditions for a bigger and more complex brain to develop. We are not sure when these genetic changes might have taken place or how they might relate to the physical adaptations described earlier. However, as we consider this hypothesis, we find our speculations about the origins of language moving away from fossil evidence or the physical source of basic human sounds toward analogies with how computers work (e.g. being pre-programmed or hard-wired) and concepts taken from the study of biology and genetics. The investigation of the origins of language then turns into a search for the special "language gene" that only humans possess.

The Social Interaction Source Another proposal involving natural sounds was nicknamed the "yo-he-ho" theory. The idea is that the sounds of a person involved

in physical effort could be the source of our language, especially when that physical effort involved several people and the interaction had to be coordinated. So, a group of early humans might develop a set of hums, grunts, groans and curses that were used when they were lifting and carrying large bits of trees or lifeless hairy mammoths. The appeal of this proposal is that it places the development of human language in a social context. Early people must have lived in groups, if only because larger groups offered better protection from attack. Groups are necessarily social organizations and, to maintain those organizations, some form of communication is required, even if it is just grunts and curses. Sounds, then, would have some principled use in the social interaction of early human groups. This is an important idea involving the uses of humanly produced sounds. It does not, however, reveal the origins of the sounds produced. Apes and other primates live in social groups and use grunts and social calls, but they have not developed the capacity for speech.

4. The Physical Adaptation Source Instead of looking at types of sounds as the source of human speech, we can look at the types of physical features humans possess, especially those that may have supported speech production. We can start with the observation that, at an early stage, our ancestors made a major transition to an upright posture, with bi-pedal (on two feet) locomotion. This really changed how we breathe. Among fourlegged creatures, the rhythm of breathing is closely linked to the rhythm of walking, resulting in a one pace – one breath relationship. Among two-legged creatures, the rhythm of breathing is not tied to the rhythm of walking, allowing long articulations on outgoing breath, with short in-breaths. It has been calculated that "human breathing while speaking is about 90% exhalation with only about 10% of time saved for quick in-breaths" (Hurford, 2014: 83).

A concise Introduction to Linguistics Bruce Rowe et al. (2015) Lecture One

What is Language? Language sets people apart from all other creatures. Every known human society has had a language and though some nonhumans may be able to communicate with one another in fairly complex ways, none of their communication systems begins to approach language in its ability to convey information. Nor is the transmission of complex and varied information such an integral part of the everyday lives of other creatures. Nor do other communication systems share many of the design features of human language, such as the ability to communicate about events other than in the here and now. But it is difficult to conceive of a human society without a language. Language, like culture, that other most human attribute, is notable for its unity in diversity: there are many languages and many cultures, all different but all fundamentally the same, because there is one human nature and because a fundamental property of this human nature is the way in which it allows such diversity in both language and culture. Though the word "language" seems very common and simple, it is not easy to give an exhaustive, accurate definition to it. This resulted in a variety of definitions by scholars and linguists who provided explanations based on different perspectives and approaches.

The Divine Source In the biblical tradition, as described in the book of Genesis, God created Adam and "whatsoever Adam called every living creature, that was the name thereof." Alternatively, following a Hindu tradition, it is Sarasvati, wife of Brahma, who is credited with bringing language to humanity. In most religions, there appears to be a divine source who provides humans with language. In an attempt to rediscover this original divine language, a few experiments have been carried out, with rather conflicting results. The basic hypothesis seems to have been that, if human infants were allowed to grow up without hearing any language

around them, then they would spontaneously begin using the original God-given language. The Greek writer Herodotus reported the story of an Egyptian pharaoh named Psammetichus (or Psamtik) who tried the experiment with two newborn babies more than 2,500 years ago. After two years of isolation except for the company of goats and a mute shepherd, the children were reported to have spontaneously uttered, not an Egyptian word, but something that was identified as the Phrygian word bekos, meaning "bread."

Phonologists are concerned with questions such as:

- o What sounds contrast in one language but not another (answers to such questions explain why Spanish speakers have trouble with the difference between English sh and ch, or why English speakers have trouble with the different "u" sounds in French words like rue 'street' and roue 'wheel').
- o What sounds of a language can or cannot occur one after the other (for example, why can words begin in st- in English but not in Spanish)?
- o How do poets or writers or song lyrics intuitively know how to match the rhythm of speech to the abstract rhythmic pattern of a poetic or musical meter?

3. Morphology Morphology is the study of word structure. Morphologists examine such questions as:

- o To what extent are ways of forming words "productive" or not (e.g. why do English speakers say arrival and amusement but not *arrivement and *amusal)?

The children may not have picked up this "word" from any human source, but as several commentators have pointed out, they must have heard what the goats were saying. (First remove the -kos ending, which was added in the Greek version of the story, then pronounce be- as you would the English word bed without -d at the end. Can you hear a goat?)

King James the Fourth of Scotland carried out a similar experiment around the year 1500 and the children were reported to have spontaneously started speaking Hebrew, confirming the King's belief that Hebrew had indeed been the language of the Garden of Eden. About a century later, the Mogul emperor Akbar the Great also arranged for newborn babies to be raised in silence, only to find that the children produced no speech at all. It is unfortunate that Akbar's result is more in line with the real-world outcome for children who have been discovered living in isolation, without coming into contact with human speech. Very young children living without access to human language in their early years grow up with no language at all. This was true of Victor, the wild boy of Aveyron in France, discovered near the end of the eighteenth century, and also of Genie, an American child whose special life circumstances came to light in the 1970s. From this type of evidence, there is no "spontaneous" language.

The "Bow-Wow" Theory In this scenario, when different objects flew by, making a C AW- C AW or C O O - C O O sound, the early human tried to imitate the sounds and then used them to refer to those objects even when they weren't present. The fact that all modern languages have some words with pronunciations that seem to echo naturally occurring sounds could be used to support this theory. In English, in addition to cuckoo, we have splash, bang, boom, rattle, buzz, hiss, screech and of course bow-wow. Words that sound similar to the noises they describe are examples of onomatopoeia. While a number of words in any language are onomatopoeic, it is hard to see how most of the soundless things (e.g. "low branch") as well as abstract concepts (e.g. "truth") could have been referred to in a language that simply echoed natural sounds. If human language did emanate from a divine source, we have no way of reconstructing that original language, especially given the events in a place called Babel, "because the Lord did there confound the language of all the earth," as described in Genesis (11: 9).

2. The Natural Sound Source A quite different view of the beginnings of language is based on the concept

of natural sounds. The human auditory system is already functioning before birth (at around seven months). That early processing capacity develops into an ability to identify sounds in the environment, allowing humans to make a connection between a sound and the thing producing that sound. This leads to the idea that primitive words derive from imitations of the natural sounds that early men and women heard around them. Among several nicknames that he invented to talk about the origins of speech, Jespersen (1922) called this idea the "bow-wow" theory. o What is the basis of metaphors (e.g. Why is my car is a lemon a "good" metaphor but my car is a cabbage is not)? o What makes sentences like I'm looking for a tall student or the student I am looking for must be tall have more than one meaning? o In a sentence like I regret that he lied, how do we know that, in fact, he did lie? o How many meanings can be found in a sentence like three students read three books and why do just those meanings exist?

Pragmatics Like semantics, pragmatics is also concerned with meaning. However, it studies the speaker's meaning as used in context. It analyses how much is communicated than said, how utterances function in different situations, and how things are done through words. In addition to these sub-fields, there are a number of other sub-fields that cross-cut them: Historical linguistics The study of how languages change over time, addressing such questions as why modern English is different from Old English and Middle English or what it means to say that English and German are "more closely related" to each other than English and French. He observes the phenomena of nature and forms a hypothesis about their occurrence, and so does a linguist, who aims at describing and analyzing the structure of a given language using the scientific method: (a) controlled observation (b) analysis, generalization and prediction, i.e., formation of hypothesis (c) testing by further observation, i.e., experiment and (d) confirmation, modification or rejection of the generalization, yielding theory. Sources: The Oxford

Handbook of the History of Linguistics, edited by Keith Allan

<https://www.uni-due.de/ELE/HistoryOfLinguistics.htm> Lecture Six The Branches and Sub-Fields of Linguistics Language is a phenomenon with many layers, from the sounds that speakers produce to the meanings that those sounds express. More precisely, it investigates the nature, structure, and variation of language, including phonetics, phonology, morphology, semantics, pragmatics, sociolinguistics, psycholinguistics, philosophy of language, language and thought, discourse analysis, theory of intercultural communication, translation theories, and the second language acquisition theory. Presence : Optional Compulsory Course Syllabus Weeks Main Tracks 1 Introduction to Language and Linguistics 2 Human Language: Definition 3 Human Language: Design Features 4 Origins of Human Language 5 Language History and Families 6 Linguistics: Definition 7 History of Linguistics 8 Modern Linguistics 9 De Saussure's Principles of Linguistics 10 Branches of Linguistics 11 Phonetics: Definition and Branches 12 The Articulatory System 13 Vowels 14 Consonants Description and objectives of the course ?Orientation Period 0) non-theoretical studies before the 19th century 1) historical linguistics 19th century 2) structuralism first half of 20th century 3) generative grammar second half of 20th century The origins of linguistics go back to the Indian grammarian Panini (600 BC), who provided the first well-grounded analysis of the structure of language in his Sanskrit grammar known as the 'Astadhyayi' (eight books). The English word "language" derives ultimately from Proto-Indo-European *dn ghweh2s "tongue, speech, language", through Latin 'lingua', "language; tongue", and Old French 'language'. The

following are examples of definitions by different scholars: – Henry Sweet, an English phonetician and language scholar, stated: "Language is the expression of ideas by means of speech-sounds combined into words.Sources: The study of language, by George Yule (2006)

<https://linguistics.ucla.edu/undergraduate/what-is-linguistics/> Lecture Seven: Phonology Introduction

Linguistics was defined earlier in this course as the scientific study of language through the analysis of its linguistic

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