

What is Linguistics?

An Introduction to the Study of Language

LINGUISTICS TOPICS

Every human knows at least one language, spoken or signed. Linguistics is the science of language, including the sounds, words, and grammar rules. Words in languages are finite, but sentences are not. It is this creative aspect of human language that sets it apart from animal languages, which are essentially responses to stimuli.

The rules of a language, also called grammar, are learned as one acquires a language. These rules include **phonology**, the sound system, **morphology**, the structure of words, **syntax**, the combination of words into sentences, **semantics**, the ways in which sounds and meanings are related, and the **lexicon**, or mental dictionary of words. When you know a language, you know words in that language, i.e. sound units that are related to specific meanings. However, the sounds and meanings of words are arbitrary. For the most part, there is no relationship between the way a word is pronounced (or signed) and its meaning.

Knowing a language encompasses this entire system, but this knowledge (called **competence**) is different from behavior (called **performance**.) You may know a language, but you may also choose to not speak it. Although you are not speaking the language, you still have the knowledge of it. However, if you don't know a language, you cannot speak it at all.

There are two types of grammars: descriptive and prescriptive. **Descriptive grammars** represent the unconscious knowledge of a language. English speakers, for example, know that "me likes apples" is incorrect and "I like apples" is correct, although the speaker may not be able to explain why. Descriptive grammars do not teach the rules of a language, but rather describe rules that are already known. In contrast, **prescriptive grammars** dictate what a speaker's grammar should be and they include teaching grammars, which are written to help teach a foreign language.

There are about 7,000 languages in the world right now (a rough estimate), and linguists have discovered that these languages are more alike than different from each other. There are universal concepts and properties that are shared by all languages, and these principles are contained in the **Universal Grammar**, which forms the basis of all possible human languages.

The origin of language

by Charles V. Taylor

Theories of the origin of language are first discussed from a linguistic point of view in secular writing. Evolution had less effect on linguistics than on other social sciences, yet history shows that secondary effects were felt. No true link has ever been found with animal communication. The work of Noam Chomsky brought linguists back to uniquely human origins for language, but the question is so complex that little headway can be made without investigation of mental factors. This survey concludes that the creative, miraculous element must be

invoked, and the Bible itself gives hints of important features in the understanding of linguistic processes.

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In discussing linguistic origins, people with some biblical background will often confuse language and languages. In such a discussion, thoughts often settle first on the Tower of Babel. However, the Bible indicates that there were two distinct miraculous events: the original creation of Adam as a talking and understanding being; and the subsequent division of humanity into language groups as a judgment on the rebellion of the descendants of Noah. This article is concerned with the former.

But first, the question of pre-programming for language, as against a learning process, is not strictly relevant to the question of the creation of a linguistic ability. However, the Lockean assumption of a "clean slate" before learning went to extremes with behaviourists like B.F. Skinner, who dominated language learning in mid-century. The arrival of the linguist Chomsky on the scene restored a balance, in that it favoured a pre-programming prior to learning.

This pre-programming represented the universal human linguistic gift, quite distinct from whether someone is a "good linguist", meaning that they are good at learning foreign languages. All humans have a "linguistic gift", given, I believe, at creation, but only some can operate in more than one specific language easily. Our English language is deficient in that we cannot in argument terminology distinguish between these two uses of the term "linguistic gift". In this article I deal with the ability to speak a "mothertongue", which is all I am referring to, and not to the additional gift of being what popular jargon calls a "linguist".

It was Noam Chomsky who restored interest in human universal ability to speak coherently, and he restored the balance by criticising the "empty slate" stance of Skinner and others, saying that this was insufficient to account for all the facts. It is significant that Chomsky, though an agnostic, still regarded human language as "miraculous", distinguishing humans from animals. To that extent he departed from some evolutionist assumptions. Naturally, a human exposed to a specific language would not speak coherently, so there must be an environmental catalyst. It is not true that feral children have no programmed ability to understand any future language to which they would become exposed, as will be seen by reference to evidence later in this article. It may be, of course, that if a feral child managed to reach adulthood without ever contacting a language environment, such an ability might have atrophied by the time of post-puberty, as hypothesised by some of the Chomsky school.

But my chief aim in this article is to exult in the wonder of the signs of God's creative gift, as witnessed in the human mind.

Most secular writers have avoided the question during most of the twentieth century. This attitude can be traced to the changed interests of linguists consequent on the seminal work of Ferdinand de Saussure, especially the proposition that "states of language" are far more significant to linguists than the history of language.¹ His terms were "synchronic" (non-historical) as opposed to "diachronic" (historical) studies.

This was a reaction against the nineteenth century preoccupation with what used to be called "philology", in which etymology and the establishment of boundaries between language families were key ingredients. The pendulum is slowly swinging back to the study of language in history, partly through interest in the way pidgins and Creoles come about, and in language change.

From animals to humans?

As regards the origin of language *per se*, it should be noted that when evolution was first applied to linguistics, early attempts at linking human language to animal communication were the chief subjects of debate. How could chattering ape-folk transform a needs-motivated set of habits into the phonological complexity we now call language? The animals can on their own terms communicate, but not in the positive sense of reading the communicator's mind or intentions, though in those days "mind" was itself a taboo word. Most animal cries relate to distress, belonging to the pack, mating approaches or antagonism.

After Darwin, most evolutionist linguists made the assumption that the Babel event recorded in Scripture never really took place, or if it did, not in a miraculous manner.

² One might say that, while evolutionists reject a literal Genesis anyway, in terms of emphasis:

- evolutionist linguists reject the Babel account
- evolutionist geologists reject the Noahic Flood account
- evolutionist biologists reject the account up to the creation of humans
- evolutionist astronomers reject Genesis 1:1-16

For example, Gamkrelidze and Ivanov claim that linguists can work backwards in the way that microbiologists try to go back to understand the evolution of life. Linguists have, they say, "reconstructed the vocabulary and syntax of the postulated Indo-European protolanguage with increasing confidence and insight".³ I would agree about the confidence, but I'm not so sure about the insight! Study of the phonology, grammar and lexis of ancient languages can do no more than associate diverse languages, or very broadly identify language families. Study of vocabulary usually

includes semantics, through which it is hoped to understand non-linguistic features of ancient societies and so assist anthropologists.

Shevoroshkin argued that language reflects a people's social and practical concerns and that this would be an improvement on conventional archaeology, which cannot "speak" to us.⁴ In trying to reduce the number of distinct language families (and so avoid the miracle of Babel), Shevoroshkin introduced the label "Nostratic" for the "reconstruction" of a protolanguage linking five or six major language families. He focused on pronouns, body parts and major features of the environment. But this is extremely speculative, and depends on the researcher's individual semantic interpretations.

However, the problem is that we have no absolute information to tell us how word meanings had changed before the arrival of dictionaries, and even when lexicons are available

1. they have to be dated from extra-linguistic artefacts and
2. other than obvious labelling, which is rare in ancient times, the exact meanings of words and expressions are still relatively inaccessible.

Lewin argued that

"unlike biological species, languages change at an astonishing rate, as anyone who has struggled with Chaucer will attest. As a result, most historical linguists agree that going back more than 5,000 to 7,000 years is a futile enterprise."⁵

Even during the evolution-dominated years, leading linguists, wishing to move away from nineteenth century naiveté, have steadfastly refused to investigate possible links with animal communication. The best-known linguist of the twentieth century, Noam Chomsky, though an evolutionist, has consistently maintained that there is no connection;⁶ and that, as Descartes (not surprisingly) insisted long before him, language is "species-specific",⁸ and must have originated in humanity through some genetic input. To this extent, trans-speciate evolution seldom came into the picture in linguistics.

In fact, Chomsky insists that mid-century studies based on the evolution of language from apes to humans only "bring out more clearly the extent to which human language appears to be a unique phenomenon, without significant analogue in the animal world."⁹

Karl Popper proposed "stages" from vocal gestures used to express emotion and onwards, but Chomsky sees no continuity in this,¹⁰ and certainly no mechanism is even suggested. W.H. Thorpe even pointed out that from physical characteristics one

might regard birds as a more likely source for language than mammals! Nevertheless, he regarded human language and animal communication as having three features in common: both are “purposive”, aiming to change another’s behaviour; “syntactic”, that is, having internal structure; and “propositional”, transmitting information.¹¹ To a creationist, even if such terms are appropriate, this merely indicates a common Creator. As for Chomsky, he commented by pointing out that walking could also be said to have these three characteristics, so that Thorpe’s propositions seem to lead nowhere.¹²

Strange labels were given to nineteenth century attempts to formulate some credible basis for language arising from primitive communication in social contexts. Some such were:

1. the “bow-wow” theory, suggesting that ejaculatory noises began to acquire specific meanings, much in the way that dogs may radiate pleasure, aggression, etc. through different barking styles;
2. the “ding-dong” theory, with calls for help, as in today’s world of sirens, triggering off messages with specific content; and
3. the “yo-heave-ho” theory, suggesting that combined labour encouraged comments and directions to emerge.

Still others have exhaustively examined child language in the hope of finding a progression which might in some recapitulatory framework mirror the first human attempts at communication.^{13,14} But this theory has the same drawbacks as those of Haeckel’s embryonic recapitulation theories, except perhaps that we can trace no deliberate forgery in its presentation.

Chomsky stated that ‘saying apes can acquire language because they can learn some simple signs ... is like saying humans can fly because they can jump’.

Chomsky insists that grammar is not learnt in the child by trial and error, or else children could not make new grammatical sentences which they have never heard before.¹⁵ That this takes place is shown by experiments using nonsense words and asking the child to respond to questions which they must process.¹⁶ In connection with Columbia University’s experiments with apes, Chomsky stated that “saying apes can acquire language because they can learn some simple signs ... is like saying humans can fly because they can jump”.¹⁷

Lenneberg studied language impairment in the 1960s and said this shows that when recoveries occur they can be sudden, indicating a species-specific ability.¹⁸ Such recovery also depends on having acquired language during a critical period of development in childhood. Children unconsciously process their parents’ language in order to work out the grammar. But “hearing is an essential part of language, because by its very nature language has to be a shared code”.¹⁹

Linguists are agreed that a distinction must be preserved between conditioning through learning by imitation and learning by rules applied to incoming signals. The second of these theories of language development points strongly to a divinely bestowed genetic gift to humans.

In this connection, Carroll was one of the first to distinguish "language acquisition" (learning the mothertongue) from foreign or second language learning.²⁰ He asks whether first language learning is learning at all, or whether perhaps it is rather a biological process of growth, or as Chomsky would say, "genetic maturation" or "linguistic competence".²¹ Most today would say that first language learning is a mixture of genetic maturation and social learning.

What is remarkable (and miraculous) is that it begins spontaneously in the normal child, and that adults do not in any formal sense "teach" language. When they correct children it is usually on matters of truth or appropriateness. Only a minority with interest in language will bother to correct the language itself. Despite this, children stubbornly learn to communicate. They also react differentially to different voices and, in bilingual societies, to different languages.

Chomsky often uses the term "creative" when referring to the ability of the child to acquire a grammar.^{22,23} He also insists that "a description of what an organism does and a description of what it knows can be very different things".²⁴ Menyuk concluded that the average child gets its grammar by age three, though Chomsky is more cautious and merely regards it as very early acquisition.²⁵

Thought and language

In addition to interests in child language, philosophers have often written articles on the relationship between thought and language, in an attempt to unravel the mechanisms of language production. Language is, mysteriously, at the same time both physical and mental, and the two modes must meet somewhere. Yet in a sense, the establishment of this relationship is both pointless and obscure. Pointless, because mere humans cannot fathom the true depths of such a relationship, and obscure, because "thought" is impossible to measure scientifically or even to illustrate by any adequate metaphor or model.

Many scientists who are Christians rightly sing the praises of God when describing the human body. Indeed, much can be said scientifically about the wonders of the human ear. Yet this knowledge is overtly describable, whereas the link between brain-thought and mouth-speech is much more ineffable and recondite.

What is the use of humans having a wonderful and most delicate aural system, if you cannot link it to a brain that can understand language? Many animals, doubtless, can

be shown to have remarkable hearing, but animals cannot talk, neither can they, in the accepted linguistic sense, understand speech. They may respond to noise and even voice-tone, but, so far as we can discover, they do not act in any non-programmed way, such as is characteristic of human use of language. We therefore assume that language is unique to humans.

 **Figure 1.** A representation of the two stages we might call communicating and understanding.

Some thirty years ago Chomsky referred to “the particular branch of cognitive psychology known as linguistics”,²⁶ thus placing thought squarely in the centre of linguistic capacity. Indeed, the use of language cannot begin to be understood until some connection is made between processes of thought and processes of speech. That’s why language is so miraculous. It just has to be a gift from God. The study of language is really the study of mind, as shown in Figure 1.

Figure 1 is a crude representation of what happens in the two stages we might call communicating and understanding. It will be seen that this representation includes:

1. mental events,
2. physiological events, and
3. physical events,

and so incorporates the non-living world, the biological world and the world of the invisible within the functions of the brain. In that sense, one might say “language is everything”. Who is able to investigate such an amalgam?

Granted that early behaviourist psychologists like Watson tried to show parallels between physical and mental phenomena, no experiment they produced was able to establish true correlates with the processes of thought through mechanical measurements. According to Chomsky:

“What is involved is not a matter of degree of complexity but rather of quality of complexity. Correspondingly, there is no reason to expect that the available technology can provide significant insight or understanding of useful achievements [or] any significant advance in our understanding of the use or nature of language.”²⁷

Indeed, he insists that this was known in principle in the seventeenth century:

“The Cartesians tried to show that when the theory of corporeal body is sharpened and clarified and extended to its limits, it is still incapable of accounting for facts that are obvious to

introspection and that are also confirmed by our observation of the actions of other humans.”²⁸

There is more to it, then, than the physical, and we are hard put to it to find anything equivalent in the animal world. This is what Chomsky calls “the creative aspect of language use”.²⁹ Descartes wrote that normal language use is a certain sign that there is a reality we know as “mind”, and that linguistic ability “cannot be detected in an animal”.³⁰ In the late sixteenth century a Spanish doctor, Juan Huarte, wrote a study of human intelligence, stating that its best evidence is language use, imparting a creative capacity.³¹

In a trivial sense it may be argued that there is a creative element in understanding as well as in speaking, if indeed the “matching” theories are correct. Some linguists have argued for an internal generation of speech to match incoming signals as part of the process of understanding. This would explain why Lashley, as far back as 1951, performed a linguistic experiment on his audience at a conference. To make this experiment work for the reader I have had to misspell the second word, to give something like the effect of “hearing” the following sentence read out, roughly as Lashley read it out from a novel:³²

“Rapid riting with his left hand proved difficult, but successful in saving from further damage the fixtures in the capsized canoe.”³³

Lashley’s audience wrote it down as “writing”, and then by the end of the sentence something “clicked” and they had to delete this and substitute “righting”. This, according to Chomsky, showed that the understanding of language is not merely a mechanical linear process but has a re-creative element sometimes brought into play even when the language has been fully “learnt”.

If creativity is involved in understanding as much as in the production of language, this helps us to accept the fact that we understand more than we can produce. In both first and second language learning it is clear that in exchanges we understand more than we produce, even in the matter of learning new sounds.

Berko and Brown record an interview with a toddler who had not yet managed to produce the English sound represented by the letters “sh”. The interview went something like this:

Adult: Is that your fish?

Child: Yes, my fis.

Adult: Oh, I see It’s your fis?

Child: No, not my fis. My fis.³⁴

It is obvious that the child recognised the distinction of consonants, but could not produce the actual distinction physically.

The creative aspect of language use itself involves:

1. innovation, which is beyond mere analogy and embraces concordant analogy;
2. freedom from detectable stimulus; and
3. positive suitability to the situation in which it is used.³⁵

The famous Port-Royal *Grammar* summarised this threefold description by stating:

“[human language is a] marvellous invention by which we construct from twenty-five or thirty sounds an infinity of expressions which, having no resemblance in themselves to what takes place in our minds, still enable us to let others know the secret of what we conceive and of all the various mental activities that we carry out.”³⁶

Chomsky’s most common description of language is that it is “rule-governed behaviour”. This reminds us of God’s command to humans in Genesis 1:28 to “have dominion” over the animals and over the entire physical world. Without becoming irreverent we could say that it is part of the “image of God” placed in humans, even though most Christians would relate that only to what is “spiritual”. Yet it seems that, without a conscious mind, spiritual abilities cannot properly be exercised.

George Miller claimed that

“talking and understanding language do not depend on being intelligent or having a large brain. They depend on ‘being human’ ... [a child] acquires [language] from parents who have no idea how to explain it to him. No careful schedule of rewards for correct or punishments for incorrect utterances is necessary.”³⁷

J.L. Austin further investigated what might be called the “power of words”. This must not be confused with some of today’s heretical views on so-called “faith” speaking. But it is true that we do perform mental assurance through words.³⁸ One example of this is the way we use ceremonies to make marriage valid, using set wordings. Another is the way a prominent figure launches a ship saying: “*I hereby name this ship ...*”

The biblical perspective

Can we learn something about the origin of language from a direct approach to Scripture? The first example of language used in Genesis 1:3 is significant. God “says” (Hebrew *'amar*). At this stage there is no human present to hear it, though we shall

argue that its appearance in the written record means that we “hear” it in a sense today in our own language, so it certainly has a message for us.

One spiritual message is that in God’s mouth speech is powerful and creative. After all, God “made man’s mouth”.³⁹ Such a passage assures us that there is power in “the Word”, the name Scripture gives to the Bible itself, and to messages based on Scripture given by God’s true messengers. There is a whole theology here, somewhat beyond our current concerns.

For example, why does this word ‘said’ occur so early in the piece, before the creation of humans? Is it that, for humans to have meaning as creatures, it was necessary for the concept of language to exist even in the Godhead? In what sense is the Lord Jesus Christ called “the Word of God” through the Apostle John and others?

Coming now to physical creation, the first occurrence of language where humans are recorded as already created is in Genesis 1:28: “Then God blessed them, and God said ... “. In Scripture “blessing” is always connected with words, so here we have one of Austin’s “performatives”. But this also takes us out of the mystic use the word has been acquiring in some churches at this time, a usage which is of very doubtful validity, since “blessing” has no necessary connection with feelings, but with an understanding of God’s love.

God gives commands to Adam and Eve (for Eve’s creation is assumed here through the plural “them”, even though the manner of creation is not specified until Genesis 2:22 in the recapitulation of this one and only creation of woman). Thus we see that God expresses His love in blessing them even before giving them the laws for their life on the perfect Earth He has created for them.

From Genesis 1:28 we have to assume that Adam and Eve could understand language, for God never uses any methods purposelessly. This human pair were equipped with a highly complex aural system, behind which was an even more complex brain and thought system. By now we are into one of the greatest and most controversial arguments of linguistically inclined academics. Some say with Locke that the mind is a *tabula rasa* (empty tablet) on to which language impinges in childhood.⁴⁰ Others say there is a genetic ability to understand before any meaningful language is addressed to the young child. The Bible appears to support the latter, since

1. God’s words must not be fruitless, and
2. shortly after this we find Adam engaging in dialogue with God.⁴¹

Note that the programming is only concerned with the ability to understand and not with any automatic responses to what is understood.

But before that we find Adam speaking unprompted before God in Genesis 2:23. He speaks poetically. And here we come up against the nineteenth century idea that poetry is more "primitive" than prose, for which there is surely no evidence linguistically. In fact, rhythmic or semantically parallel utterances are obviously more advanced than plain speech. However, we know that the idea of the "primitive savage" came from minds like that of the unbeliever Rousseau, later to be taken up by the evolutionists.

We are not saying that Adam was pre-programmed with God's language, because we do not understand such things, not having been present. Adam as a functioning adult must have had some special programming, but we cannot say to what extent this directed his speech. He would presumably thereafter learn from his linguistic environment, just as we do.

Scripture nowhere condemns talking to oneself. In fact, most people understand David to be doing just that in Psalm 103:1-5. Of course, Adam's poem could have been addressed to Eve, and "this" may have been his original word for "you", in the manner of an I-not I relationship, since he had never before seen a human being. Thus it's not clear in Genesis 2:23 for whom Adam is speaking. Most likely it was in thanks to God anyway, since anything the sinless Adam did in this perfect world must have been to God's glory. I doubt if it was mere soliloquy.

Returning to the physical, we see that practically all the known functions of language are in evidence right from the creation.

From the above we note that the Bible gives evidence of "receptive" communication, followed by what linguists call "productive" communication. Although this is the agreed order of things in child language development, the case with Adam is an adult situation and should not be compared, in case we are led into theories of physical recapitulation of events. God had, with the miracle of bodily creation, also given Adam a miraculous gift, which we call "language". Thus the Bible describes no age-long practice prior to the establishment of normal adult linguistic ability.

To complete the picture, Scripture shows a discussion between God on the one hand and Adam and Eve on the other, indicating that by this time certain quasi-logical elements were present in human language. We have to remember that this element, though undoubtedly within God's power to bestow, was not necessarily in His perfect will at that time. After all, another voice, that of a fallen angel, had intervened in Genesis 3:1. This intervention introduced the question form into human thought and language.

Now the question itself is not a sinful form. God Himself is recorded as using it on numerous occasions. But this is a far different matter from the mental and indeed

spiritual act of questioning the integrity of God's character. Here we have gone beyond language into morality and Divine-human relationships.

Conclusion

Returning to the physical, we see that practically all the known functions of language are in evidence right from the creation. We can therefore say with confidence that God created language and that language is a perfect gift, powerful but therefore dangerous in a sinful world. Yet the wonder of the gift remains, and I am continually amazed as I ponder the remarkable way in which such an apparently unrelated set of events as we have in our bodies becomes a vehicle for complex and, if we allow the Holy Spirit to teach us, uplifting thoughts.

The Origin of Language (by Edward Vajda)

Yesterday we discussed the gulf that separates the creative use of language by humans from the inborn signals of animals. Bees returning from their first flight out of the hive know perfectly how to perform their complex nectar dances. With humans, the precise form of language must be acquired through exposure to a speech community. Words are definitely not inborn, but the capacity to acquire and language and use it creatively seems to be inborn. Noam Chomsky calls this ability the LAD (Language Acquisition Device). Today we will ask two questions: how did this language instinct in humans originate? And how did the first language come into being?

Concerning the origin of the first language, there are two main hypotheses, or beliefs. Neither can be proven or disproved given present knowledge.

1) Belief in divine creation. Many societies throughout history believed that language is the gift of the gods to humans. The most familiar is found in Genesis 2:20, which tells us that Adam gave names to all living creatures. This belief predicates that humans were created from the start with an innate capacity to use language.

It can't be proven that language is as old as humans, but it is definitely true that language and human society are inseparable. Wherever humans exist language exists. Every stone age tribe ever encountered has a language equal to English, Latin, or Greek in terms of its expressive potential and grammatical complexity. Technologies may be

complex or simple, but language is always complex. Charles Darwin noted this fact when he stated that as far as concerns language, "Shakespeare walks with the Macedonian swineherd, and Plato with the wild savage of Assam." In fact, it sometimes seems that languages spoken by preindustrial societies are much more complex grammatically than languages such as English (example: English has about seven tense forms and three noun genders; Kivunjo, a Bantu language spoken on the slopes of Mount Kilimanjaro, has 14 tenses and about 20 noun classes.) There are no primitive languages, nor are any known to have existed in the past--even among the most remote tribes of stone age hunter-gatherers.

Nevertheless, it is impossible to prove that the first anatomically modern humans possessed creative language. It is also impossible to disprove the hypothesis that primitive languages might have existed at some point in the distant past of *Homo sapiens* development.

2) Natural evolution hypothesis. At some point in their evolutionary development humans acquired a more sophisticated brain which made language invention and learning possible. In other words, at some point in time humans evolved a **language acquisition device**, whatever this may be in real physical terms. The simple vocalizations and gestures inherited from our primate ancestors then quickly gave way to a creative system of language--perhaps within a single generation or two. /Mention the hypothesis about rewiring the visual cortex of the brain into a language area./ According to the natural evolution hypothesis, as soon as humans developed the biological, or neurological, capacity for creative language, the cultural development of some specific system of forms with meanings would have been an inevitable next step.

This hypothesis cannot be proven either. Archeological evidence unearthed thus far, seems to indicate that modern humans, *Homo sapiens*, emerged within the last 150,000 years. By 30,000, BC all other species of humanoids seem to have been supplanted by *Homo sapiens*. Could the success of our species vis-a-vis other hominids be explained by its possession of superior communicative skills? Speaking people could teach, plan, organize, and convey

more sophisticated information. This would have given them unparalleled advantage over hominid groups without creative language. Of course, no one knows whether other species of humanoids--*Homo erectus* and *Homo neanderthalis* -- used creative language. Perhaps they also did. In any case, *Homo sapiens*, "the wise human," should perhaps really be called *Homo loquens*, "the speaking human" because language and humans are everywhere found together, whereas wisdom among humans is much more selectively distributed.

Invention hypotheses. Moving on to our second question, if humans acquired the capacity for language either by divine gift or by evolution, then exactly how might humans have devised the first language? There are several hypotheses as to how language might have been consciously invented by humans based on a more primitive system of hominid communication. Each hypothesis is predicated on the idea that the invention of language and its gradual refinement served as a continuous impetus to additional human mental development. None of the invention hypotheses I will mention is convincing and most sane linguists agree that the origin of language is still a mystery. But the inventive, sarcastic names given these hypotheses by their critics prove that even linguists can at times be creative.

First, there are four imitation hypotheses that hold that language began through some sort of human mimicry of naturally occurring sounds or movements:

1) The "ding-dong" hypothesis. Language began when humans started naming objects, actions and phenomena after a recognizable sound associated with it in real life. This hypothesis holds that the first human words were a type of verbal **icon**, a sign whose form is an exact image of its meaning: *crash* became the word for thunder, *boom* for explosion. Some words in language obviously did derive from imitation of natural sounds associated with some object: Chinook Indian word for heart--*tun-tun*, Basque word for knife: *ai-ai* (literally *ouch-ouch*). Each of these iconic words would derive from an **index**, a sign whose form is naturally associated with its meaning in real space and time.

The problem with this hypothesis is that **onomatopoeia** (imitation of sound, auditory iconicity) is a very limited part of the vocabulary of any language; imitative sounds differ from language to language: Russian: *ba-bakh*=bang, *bukh*= thud. Even if onomatopoeia provided the first dozen or so words, then where did names for the thousands of naturally noiseless concepts such as *rock, sun, sky* or *love* come from?

2) The "**pooh-pooh**" hypothesis holds that the first words came from involuntary exclamations of dislike, hunger, pain, or pleasure, eventually leading to the expression of more developed ideas and emotions. In this case the first word would have been an involuntary *ha-ha-ha, wa-wa-wa* These began to be used to name the actions which caused these sounds.

The problem with this hypothesis is that, once again, emotional exclamations are a very small part of any language. They are also highly language specific. For instance, to express sudden pain or discomfort: Eng. *ouch*; Russ. *oi.*; Cherokee *eee*. Thus, exclamations are more like other words in that they reflect the phonology of each separate language. Unlike sneezes, tears, hiccoughs or laughter, which are innate human responses to stimuli, the form of exclamations depends on language rather than precedes language. Also, exclamations, like most other words are symbols, showing at least a partially arbitrary relationship between sound and meaning.

3) The "**bow-wow**" hypothesis (the most famous and therefore the most ridiculed hypothesis) holds that vocabulary developed from imitations of animal noises, such as: *Moo, bark, hiss, meow, quack-quack*. In other words, the first human words were a type of index, a sign whose form is naturally connected with its meaning in time and space.

But, once again, **onomatopoeia** is a limited part of the vocabulary of any language. The linguistic renditions of animal sounds differ considerably from language to language, although each species of animal everywhere makes essentially the same sound:

a) Dog: *bow-wow*; Chinese: *wu-wu*; Jap. *wan-wan* Russ *gaf-gaf, tyaff-tyaff*;

b) Cat-meow, Russ.*myaoo*, Chin--*mao*, Jap.*nya-nya* purr in French is *ron ron*.

c) Pig: *oink-oink*; Russ. *hryu-hryu*; Chin.--*oh-ee-oh-ee*; Jap. *bu-bu*.

d) Russian rooster: *kukareiku*.

Japanese *kokekoko*

e) Russian owl:*ukh*; Cherokee *goo-ku* Spanish, Japanese-- *no special word*

Thus, the human interpretation of animal sounds is dependent upon the individual language, and it seems unlikely than entire vocabularies derived from them.

4) A somewhat different hypothesis is the "**ta-ta**" **hypothesis**. Charles Darwin hypothesized (though he himself was sceptical about his own hypothesis) that speech may have developed as a sort of mouth pantomime: the organs of speech were used to imitate the gestures of the hand. In other words, language developed from gestures that began to be imitated by the organs of speech--the first words were lip icons of hand gestures.

It is very possible that human language, which today is mostly verbal, had its origin in some system of gestures; other primates rely on gesture as an integral part of communication, so it is plausible that human communication began in the same way. Human gestures, however, just like onomatopoeic words, differ from culture to culture. Cf. English crossing the finger for good luck vs. Russian "fig" gesture; nodding for yes vs. for no in Turkish and Bulgarian; knocking on wood vs. spitting over the left shoulder three times.

A second set of hypotheses on language origin holds that language began as a response to some acute necessity in the community. Here are several necessity hypotheses of the invention of language:

1) Warning hypothesis. Language may have evolved from warning signals such as those used by animals. Perhaps language started with a warning to others, such as *Look out, Run,* or *Help* to alert members of the tribe when some lumbering beast was approaching. Other first words could have been hunting instructions or instructions connected with other work. In other

words, the first words were **indexes** used during everyday activities and situations.

2) The "yo-he-ho" hypothesis. Language developed on the basis of human cooperative efforts.

The earliest language was chanting to simulate collective effort, whether moving great stones to block off cave entrances from roving carnivores or repeating warlike phrases to inflame the fighting spirit.

It is fairly certain that the first poetry and song came from this aspect of beginning speech. Songs of this type are still with us: Volga boatmen, military marching chants, seven dwarfs working song.

Plato also believed that language developed out of sheer practical necessity. And Modern English has the saying: *Necessity is the mother of invention.* Speech and right hand coordination are both controlled in the left hemisphere of the brain. Could this be a possible clue that manual dexterity and the need to communicate developed in unison?

3) A more colorful idea is the lying hypothesis. E. H. Sturtevant argued that, since all real intentions or emotions get involuntarily expressed by gesture, look or sound, voluntary communication must have been invented for the purpose of lying or deceiving. He proposed that the need to deceive and lie--to use language in contrast to reality for selfish ends-- was the social prompting that got language started.

There are no scientific tests to evaluate between these competing hypotheses. All of them seem equally far-fetched. This is why in the late 19th century the Royal Linguistic Society in London actually banned discussion and debate on the origin of language out of fear that none of the arguments had any scientific basis at all and that time would be needlessly wasted on this fruitless enquiry. Attempts to explain the origin of language are usually taken no more seriously today either. Recently, comedian Lily Tomlin

came up with her own language invention hypothesis: she claimed that men invented language so that they could complain.

Each of the imitation hypotheses might explain how certain isolated words of language developed. Very few words in human language are verbal **icons**. Most are **symbols**, displaying an arbitrary relationship of sound and meaning. (Example: the word *tree* in several languages: Spanish árbol; French arbre; Slovak strom; Georgian he; Ket oks; Estonian puu; German Baum; Russian derevo; Latvian koks; Hawaiian lä'au)

And each of the necessity hypotheses might explain how involuntary sounds made out of need in certain contexts might have come to be manipulated as words for an object even out of context. However, the extended use of natural **indexes** still leaves unexplained the development of grammar--the patterns in language which have definite structural functions but no specific meaning. The creative, generative aspect of human language that we call grammar is language's most unique feature. Where did grammar come from? There is nothing like grammar (patterns with definite functions yet no set meaning) in animal systems of communication.

In isolated instances it can be shown that a grammatical pattern developed from chance lexical combinations:

- a) suffix -hood from OE word *haeda* = *state*.
childhood, boyhood, puppyhood.
- b) Continuous action: form of verb to be + main verb comes from a locative phrase *I am working*
> *I am at working*-- cf. the song *I'm a working on the railroad.*

But these are isolated instances. How language developed a complex grammar remains a complete mystery. This means that how language developed is equally a mystery. We simply don't know how language may have actually evolved from simple animal systems of sounds and gestures.

Hypotheses regarding Language Diversity

Regardless of whether language was a special gift from the gods, a natural evolutionary acquisition, or an ingenious, conscious human invention made at some specific moment in our species' distant past, the fact remains that language

does exist. And since so many languages exist today, a second question arises: **Was there one or more than one original language? Was there one or more than one invention of language?** There are about 5,000 languages spoken on Earth today. We know that there were even more spoken in the past, when most people lived in small bands or tribes rather than in large states.

There are two age-old beliefs regarding the origin or the world's present linguistic diversity.

1) The oldest belief is that there was a single, original language. The idea of a single ancestor tongue is known today as **monogenesis**. In Judeo-Christian tradition, the original language was confused by divine intervention, as described in the story of the Tower of Babel in Genesis. There is a similar story from the Toltecs of pre-Columbian Mexico, who tell of the building of the great pyramid at Cholula, and the dispersal of the builders by an angry god. And similar stories are found in other parts of the world.

It may be interesting to note here that people who believe in a single origin for language have different hypotheses as to what that first language may have been.

a) A Basque scholar claimed that the first language was Basque.

b) A German philologist of the last century maintained that German was the first language and that all other languages are inferior corruptions of it. Other European linguists conferred the same exalted status on Greek or Sanskrit.

c) One Swedish philologist claimed that in the Garden of Eden God spoke Swedish, Adam spoke Danish and the serpent spoke French.

2) There is a second hypothesis of human origin and, consequently, of the origin of human language: the hypothesis of parallel evolution. This hypothesis holds that, as humans evolved parallel in more than one location; each group developed its own unique language. The hypothesis of the multiple origin of humankind is sometimes called the **Candelabra theory**. The candelabra hypothesis tends to be favored in East Asia and by a smaller number of scientists in the West. The hypothesis of multiple linguistic origins that often goes along with this hypothesis is known

as **polygenesis**. Each of the original languages then would then have diverged into numerous forms. The major language families of today would be descended from these separate mother tongues.

3) Scientific monogenesis: The Mother Tongue theory.

Theories of monogenesis do not necessarily derive from religious belief. Many modern scholars believe in a theory of monogenesis that has come to be called the **Mother Tongue Theory**. This theory holds that one original language spoken by a single group of *Homo sapiens* perhaps as early as 150 thousand years ago gave rise to all human languages spoken on the Earth today. As humans colonized various continents, this original mother tongue diverged through time to form the numerous languages spoken today. Since many scientists believe that the first fully modern humans appeared in Africa, the mother tongue theory is connected with a more general theory of human origin known as the **Out of Africa theory**. Currently, the theory of evolutionary monogenesis tends to be favored by a group of linguists working in the United States.

Regardless of the origin of language, the fact remains that there are over 5,000 mutually unintelligible forms of human speech used on Earth today. And, although many are radically different from one another in structure--the differences are superficial since each and every one of these languages can be used creatively.

Languages do not differ in terms of their creative potential but rather in terms of the level upon which particular distinctions are realized in each particular language. What is expressed concisely in one language requires a phrase in another language. (Examples of aspect and evidentiality; also words like Swahili mumagamagama "a person who habitually loses things" and Russian zajchik "the rainbow reflection from glass." Linguists study how each particular language structures the expression of concepts. Such cross-language comparisons fall under a branch of linguistics called **language typology**.

If the structural diversity of human languages is superficial, then why is language typology important? Why

do so many linguists spend so much time studying language diversity?

1) First, to try to trace the original mother tongue (or mother tongues). Linguists who compare modern languages try to reconstruct ancient languages are called **comparative linguists**.

2) Second, because languages change more slowly than the environment in which they are spoken, languages contain all sorts of indications of bygone culture. For historians and anthropologists, language provides a special window into the past: *ursus/bear/ medved; time/tide/ vremya*. Study a language--any language--and you will learn much about the history of the people who speak that language. You will also be taking a crucial step toward understanding the contemporary culture of the speakers. Linguists who study language from this cultural standpoint are called **anthropological linguists**.

Remember that--contrary to the hypothesis of linguistic determinism--studying a language will not help you predict the future for the people who speak that language. The future will happen with little regard for language structure, and language will be shaped by that future, not the other way around.

And this is why will we spend the next four weeks studying the morphology, syntax and phonology of diverse languages. And during the second half of the course we will return to questions of language in society and the connection between language and the brain.

Bad & Better Thesis Statements This is not an exhaustive list of bad thesis statements, but here're five kinds of problems I've seen most often. Notice that the last two, #4 and #5, are not necessarily incorrect or illegitimate thesis statements, but, rather, inappropriate for the purposes of this course. They may be useful forms for papers on different topics in other courses. 1. The non-thesis thesis. A thesis takes a position on an issue. It is different from a topic sentence in that a thesis statement is not neutral. It announces, in addition to the topic, the argument you want to make or the point you want to prove. This is your own opinion that you intend to back up. This is your reason and motivation for writing. Bad Thesis 1: In his article Stanley Fish shows that we don't really have the right to free speech. Bad Thesis 2: This paper will consider the advantages and disadvantages of certain restrictions on free speech. Better Thesis 1: Stanley Fish's argument that free speech exists more as a political prize than as a legal reality ignores the fact that even as a political prize it still serves the social end of creating a general cultural atmosphere of tolerance that may ultimately promote

free speech in our nation just as effectively as any binding law. Better Thesis 2: Even though there may be considerable advantages to restricting hate speech, the possibility of chilling open dialogue on crucial racial issues is too great and too high a price to pay.

2. The overly broad thesis. A thesis should be as specific as possible, and it should be tailored to reflect the scope of the paper. It is not possible, for instance, to write about the history of English literature in a 5 page paper. In addition to choosing simply a smaller topic, strategies to narrow a thesis include specifying a method or perspective or delineating certain limits.

Bad Thesis 1: There should be no restrictions on the 1st amendment. Bad Thesis 2: The government has the right to limit free speech. Better Thesis 1: There should be no restrictions on the 1st amendment if those restrictions are intended merely to protect individuals from unspecified or otherwise unquantifiable or unverifiable "emotional distress." Better Thesis 2: The government has the right to limit free speech in cases of overtly racist or sexist language because our failure to address such abuses would effectively suggest that our society condones such ignorant and hateful views. Page 2 of 4 Bad & Better Thesis Statements (con't)

3. The uncontestable thesis. A thesis must be arguable. And in order for it to be arguable, it must present a view that someone might reasonably contest. Sometimes a thesis ultimately says, "we should be good," or "bad things are bad." Such thesis statements are tautological or so universally accepted that there is no need to prove the point.

Bad Thesis 1: Although we have the right to say what we want, we should avoid hurting other people's feelings. Bad Thesis 2: There are always alternatives to using racist speech. Better Thesis 1: If we can accept that emotional injuries can be just as painful as physical ones we should limit speech that may hurt people's feelings in ways similar to the way we limit speech that may lead directly to bodily harm. Better Thesis 2: The "fighting words" exception to free speech is not legitimate because it wrongly considers speech as an action.

4. The "list essay" thesis. A good argumentative thesis provides not only a position on an issue, but also suggests the structure of the paper. The thesis should allow the reader to imagine and anticipate the flow of the paper, in which a sequence of points logically prove the essay's main assertion. A list essay provides no such structure, so that different points and paragraphs appear arbitrary with no logical connection to one another.

Bad Thesis 1: There are many reasons we need to limit hate speech. Bad Thesis 2: None of the arguments in favor of regulating pornography are persuasive. Better Thesis 1: Among the many reasons we need to limit hate speech the most compelling ones all refer to our history of discrimination and prejudice, and it is, ultimately, for the purpose of trying to repair our troubled racial society that we need hate speech legislation. Better Thesis 2: None of the arguments in favor of regulating pornography are persuasive because they all base their points on the unverifiable and questionable assumption that the producers of pornography necessarily harbor ill will specifically to women. Page 3 of 4 Bad & Better Thesis Statements (con't)

5. The research paper thesis. In another course this would not be at all unacceptable, and, in fact, possibly even desirable. But in this kind of course, a thesis statement that makes a factual claim that can be verified only with scientific, sociological, psychological or other kind of experimental evidence is not appropriate. You need to construct a thesis that you are prepared to prove using the tools you have available, without having to consult the world's leading expert on the issue to provide you with a definitive judgment.

Bad Thesis 1: Americans today are not prepared to give up on the concept of free speech. Bad Thesis 2: Hate speech can cause emotional pain and suffering in victims just as intense as physical battery. Better Thesis 1: Whether or not the cultural concept of free

speech bears any relation to the reality of 1st amendment legislation and jurisprudence, its continuing social function as a promoter of tolerance and intellectual exchange trumps the call for politicization (according to Fish's agenda) of the term. Better Thesis 2: The various arguments against the regulation of hate speech depend on the unspoken and unexamined assumption that emotional pain is either trivial. The Thesis Tests 1. Is this a complete sentence (and not a question)? 2. Does it have an opposing argument? 2. Is every word clear and unambiguous in meaning? 3. Is the sentence a dead end, or does it call for additional information and explanation? 4. Does the statement make such a large claim that you believe the writer has no hope of proving it to be true in the space of 4 to 6 pages? 5. What evidence will you need to see before you will believe that the thesis is true? Page 4 of 4 Bad & Better Thesis Statements (con't) In 6 groups of 4, evaluate the following thesis statements based on these criteria: Does the thesis: Take a stand Propose a solution Evaluate something State its position clearly and exactly Is the thesis: Arguable Stated positively, i.e. is it a statement rather than a question Sufficiently limited for a 4-6 page paper After you have evaluated and improved the thesis (if necessary), please rewrite it as a(n): Simple thesis Expanded thesis Thesis statement with an although clause 1) Teachers have influenced my life. 2) Cutting classes is like a disease. 3) Going to college prepares a person for the future and it is increasingly expensive. 4) Older people often imitate teenagers. 5) Violence on television can be harmful to children. 6) In today's society, child abuse is an awful thing. 7) Teenagers should not get married. 8) Smoking damages the body. 9) The music business is pretty complicated. 10) I don't know how to change the oil in my car. 11) There are many different types of students in college today. 12) Students have developed a variety of techniques to conceal inadequate study from their instructors and they often get away with it. Are You a Good Thesis or a Bad Thesis? Group 1 Group2 Group 3 Group 4 Group 5 Group 6 1& 2 3&4 5&6 7&8 9&10 11&12 Dillon Alex Antuan Joe Danielle Angie Ilse Arsalan Ricky Mina Gabby Clifton Kimberly Brittney Sarah C Sara L Kenny Leah Nancy Stephanie Shannon Vicki Ruby Richa