

Linguistic World

A look at language and languages

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Hello, my name is Andrew Currie, and I lecture on the University's programmes in Celtic Studies and Bilingualism and Multilingualism. I also manage the Translation Unit.

Welcome to this talk on the Linguistic World, which forms part of the module on Language and Culture. It will be divided into three parts:

The first will look at language in general as a specifically human communication system, and the academic subject which studies it.

The second will look at how individual languages are related to each other and how they change over time.

The third and final part will examine linguistic diversity within the wider context of biocultural biodiversity.

I hope you enjoy the presentation.

A look at language



- ▶ A form of animal communication
- ▶ Uniquely human
- ▶ Used by ALL human communities
- ▶ Developed without conscious planning

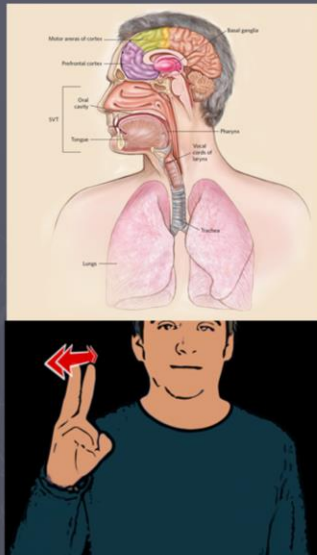
Language is, ultimately, a form of animal communication. All living things will communicate with others in some way, from simple motions such as moving nearer or further away from each other, to more complex auditory or visual symbols. There can be little doubt, though, that the specific features of human language make it unique. That said, it is not unique in being unique.

There is, for instance, no equivalent anywhere in the animal kingdom to the honeybee waggle dance, where bees *inside* a hive perform a “dance” to let others know where they can find resources such as nectar or water *outside* of the hive. Many other species also have communication capabilities which humans lack, such as echolocation in bats or the chameleon’s ability to change colour to blend in with its environment, so we should resist any temptation to feel arrogant about our linguistic abilities.

Despite this, language is still a pretty remarkable phenomenon, and there are no human communities *anywhere* which do not use a *natural* language as their regular system of communication. Natural languages are defined as those which have evolved over time by repetitive use and *without conscious planning* (a point which we will return to later). This distinguishes them from *constructed* languages such as Esperanto or computer programming languages, which have been intentionally planned.

Image: Speech bubbles representing a conversation

Natural language



- Produced by using the human body
- For hundreds of thousands of years
- Sounds (or signs) combined to convey messages
- Comes in many different varieties

Language is not the only way in which humans communicate. We also use various forms of nonverbal communication such as facial expressions, gestures or posture, often referred to as “body language”. Although this is not language as such, it can sometimes be used to complement it.

Natural language is produced by combining smaller units into larger patterns to convey messages to others. These units can be *signs*, usually used by communities who have difficulties with the physical aspects of speaking. Sign languages are full languages and should not be confused with body language.

In the vast majority of cases, though, *sounds* are combined to produce what we call spoken language, or, more simply, speech. We don’t know exactly how old speech is, and estimates vary at between 50,000 and two million years old. 200,000 years has been suggested as a compromise. What we do know is that the physiology of the human body has evolved to accommodate it. Much of the body, from the lungs to the brain, is used in the production of language, and so it’s important to remember that speech production is in essence a *physical* activity, which needs no “outside help”.

Equally important to remember is that there is no one language spoken by the entire human species, but many different varieties, as represented by the world’s languages.

Images: Parts of the body used in speech (top) and an example of signing (bottom)

Written language



- ▶ Writing is a form of *technology*
- ▶ Originating about 5,000 years ago
- ▶ An inability to speak is VERY rare, but:
- ▶ Illiteracy stands at about 750,000,000
- ▶ Many languages never written down

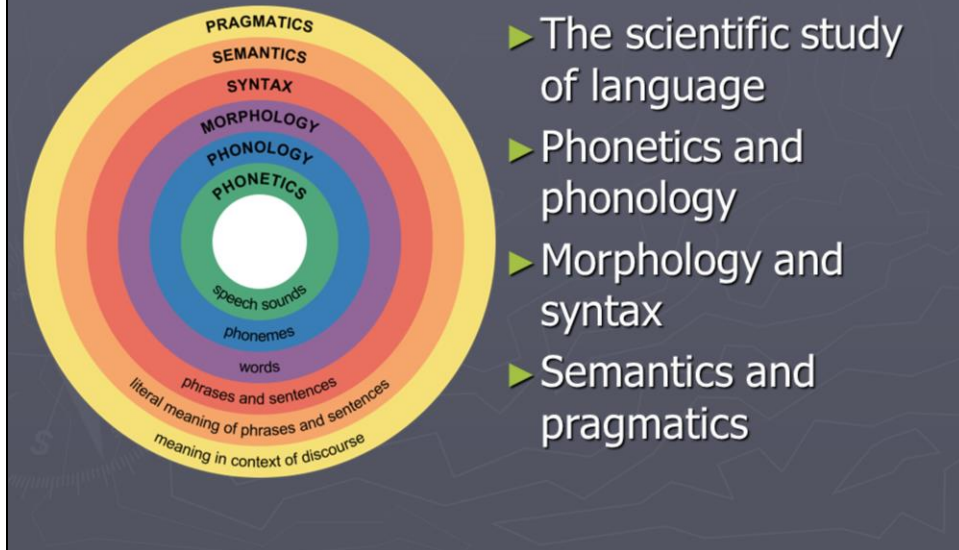
Compared to spoken language, written language is very recent. The earliest symbolic marks representing ideas or concepts may be as much as 10,000 years old, but the oldest true writing systems, those which note a particular spoken language in written form, are only about half that age. As a standard routine activity, writing is even more recent, having grown gradually as a requirement only over the last 200 years or so.

Unlike spoken languages, written scripts or alphabets *are* consciously planned in advance. Learning to speak (with the exception of those having to sign) is so common that we take it for granted. A maximum 0.01% of us fail to acquire this skill, usually as a result of extreme circumstances. Writing, on the other hand, has to be learned through formal instruction, and the vast majority of us *are* able to speak, but *not* able to write, by the time we first go to school. According to UNESCO there are still about 750,000,000 people worldwide without literacy skills.

There are no written languages without a spoken counterpart (i.e., no languages which solely exist in written form), but plenty of spoken languages with no written form (roughly half of the world's languages). Writing systems are more conservative than speech, and sometimes fossilise sounds which have long since disappeared in speech (for instance, the silent letter *k* at the start of some English words, e.g., *knight*, *knot*).

Image: Examples of six writing systems – Sumerian, Egyptian, Chinese, Old Persian, Roman and Indian Devanagari (courtesy of Vorziblix).

A look at linguistics



The academic subject devoted to human language is called *linguistics*, very often labelled as “the scientific study of language”. In practice it is highly interdisciplinary, using methods from a combination of *natural sciences*, especially biology, *formal sciences* such as mathematics and logic, *social sciences* like psychology and sociology as well as *humanities* subjects such as philosophy.

The core of the discipline, sometimes called “general linguistics”, and applicable to any language, contains six subfields, which can be divided into three pairs:

Phonetics and phonology: these involve the study of speech sounds and phonemes. The simplest way to distinguish between the two is to think of phonetics as studying speech sounds in general (i.e., of all languages) while phonology examines the sound systems of particular languages, such as English, Welsh, Arabic or any other language.

Morphology and syntax: these study the structure and order of words; morphology studies their elements, such as roots, prefixes, suffixes and plural forms, whereas syntax looks at how we combine words into larger units such as phrases or sentences.

Semantics and pragmatics: these study meaning; semantics looks at the literal meaning of utterances whereas pragmatics looks at the context. Words such as *bitch*, *bank*, *cool*, *gay*, *wicked*, *chicken* and *shoot*, for instance, may have widely different meanings depending upon the context in which they are used.

The next three slides look at aspects of each of these pairs.

International Phonetic Alphabet

THE INTERNATIONAL PHONETIC ALPHABET (revised in 2020)

CONSONANTS (IPA SYMBOLS)

Class	Labial	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Glottal	Pharyngeal	Uvular
Plosive	p b		t d			ç ʝ	k ɡ			q
Nasal	m		n			ɲ	ŋ			
Fricative		f v	s z	ʃ ʒ		x ɣ				
Tap or Flap			ɾ							
Liquids			l							
Glottal								h		
Approximant						j				
Glottal								ʔ		

Source: <https://www.phonetic-international.org/>

OTHER SYMBOLS

Class	Labial	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Glottal	Pharyngeal	Uvular
Plosive	p b		t d			ç ʝ	k ɡ			q
Nasal	m		n			ɲ	ŋ			
Fricative		f v	s z	ʃ ʒ		x ɣ				
Tap or Flap			ɾ							
Liquids			l							
Glottal						j				
Approximant										
Glottal								ʔ		

Source: <https://www.phonetic-international.org/>

In the beginning, God
created the heaven
and the Earth

ɪn ðə bɪˈɡɪnɪŋ, ɡɒd
kri(ɪ)ˈeɪtɪd ðə ˈheɪvən
ænd ði ɜθ

The International Phonetic Alphabet (IPA) was devised in 1888. Based predominantly on symbols from the Roman script used for the languages of western Europe (as opposed to other alternatives such as Cyrillic or Arabic), it could in theory be used as the basis of a script for every language in the world. In practice, this has not happened, and some of the reasons why this might be the case are discussed in this article:

<https://thelanguagenerds.com/what-if-we-decided-to-write-english-in-ipa-instead-of-the-current-alphabet/>

Regardless of this, the IPA still has many uses. Apart from being a resource for those who study speech sounds by summarising the sounds of the world's languages, it can also be used to help pronounce words in unfamiliar languages. In other words, once the full content of the IPA has been mastered, it should be possible for the user to pronounce any word in any language.

The left-hand column of this slide, shows the most recent IPA chart, revised in 2020.

The right-hand column shows the opening words from the Book of Genesis in modern English, with a transcription below it containing those same English words as they would be written in the International Phonetic Alphabet. It's worth noting that this is based on English spoken in a particular standardised accent, and would be written differently if based upon other regional or social pronunciations.

Grammar

subject	object	verb	subject	verb	object
⊙	○	→	⊙	→	○
I	bread	eat	I	eat	bread
verb	subject	object	verb	object	subject
→	⊙	○	→	○	⊙
eat	I	bread	eat	bread	I
object	verb	subject	object	subject	verb
○	→	⊙	○	⊙	→
bread	eat	I	bread	I	eat

- Phonemes
- Morphemes
- Parts of Speech
- Word Order
- Clauses
- Sentences

The grammar of a language consists of its rules and structures. Morphology looks at how we *build* words (e.g. *mis-understand-ing-s*), while syntax looks at how we *combine* them. Some linguists, but not all, include the sounds of a language as part of its grammar.

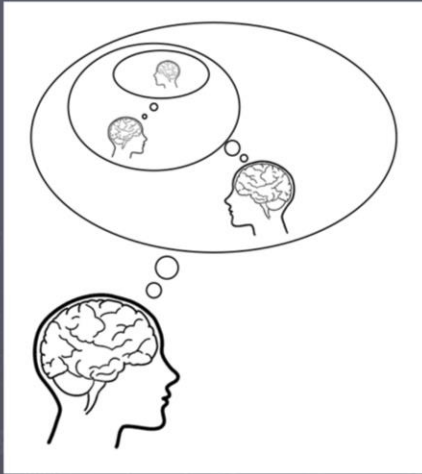
It's thought that all of the world's languages contain *nouns*, *verbs* and *adjectives*. What they do with them, on the other hand, can vary enormously. Some languages, like English, usually place adjectives before nouns (e.g. *fresh cheese*) whereas others, like French, normally place them after (*fromage frais*).

The world's languages all fall into one of six types, depending upon what they do with subjects (S), objects (O) and verbs (V) in their sentences. This slide shows all six in order of frequency, according to research by Hammarström, H. (2016). "Linguistic diversity and language evolution". *Journal of Language Evolution*. 1 (1): 19–29:

SOV languages, like Japanese, Turkish and Hindi, account for 43%. SVO ones, which include English, Mandarin and Swahili, make up 40% of the total. Some 10%, including the Celtic branch, are VSO, and about 3%, including Fijian, are VOS. The remaining two, OVS and OSV, only account for about 1% between them.

Some linguists (principally Noam Chomsky) believe that, despite this diversity, the human brain contains an innate "universal grammar" which only allows for a certain amount of variation between languages. Others, including Daniel Everett, dispute this.

Meaning and Context



- Colorless green ideas sleep furiously
- Furiously green ideas sleep colorless
- A man-eating shark
A man eating shark
- She was right, so I was left

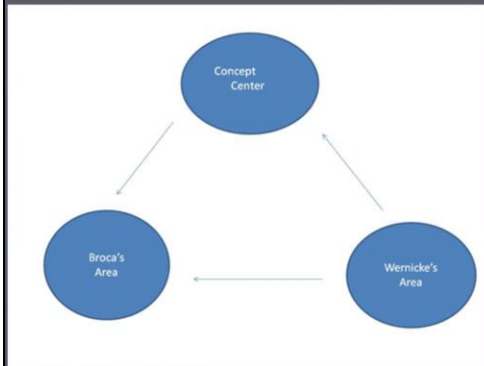
Semantics and pragmatics study meaning and context. The fact that a sentence is grammatically correct does not necessarily mean that it makes any sense, as illustrated in the now famous “*Colorless green ideas sleep furiously*” offering from Noam Chomsky’s 1957 book *Syntactic Structures*. In this sentence, all the parts of speech are placed in the correct order in terms of the grammatical rules of English, but as far as meaning is concerned, it’s nonsense. The second sentence, “*Furiously green ideas sleep colorless*”, is both nonsense and grammatically incorrect. The point being made was that, in any statistical analysis of grammatical sentences, the first one would be accepted as correct, despite its nonsensical nature.

Ambiguity is another topic of interest. In the next example, although the dash (or not) between “*man*” and “*eating*” clarifies the situation in writing, in speech, it would be very difficult to establish who was being eaten by what after hearing the words “*Look! A man-eating shark!*” and “*Look! A man eating shark!*”.

Context helps to iron out ambiguity, so in the example “*She was right, so I was left*”, the context might tell us whether we are listening to two people describing where they were standing, or a relationship coming to an end after an argument. This is of course due to the different meanings of *right* and *left* in English, but it’s worth noting here that a case of ambiguity in one language may not translate to another.

Image by Jingxue24.

Psycholinguistics



- The psychology of language
- First language acquisition
- Second language acquisition
- Production and comprehension

Outside of the core subfields of general linguistics which we have just seen, there are a number of others which stand at the intersection between linguistics and another discipline. One of these is psycholinguistics, or the psychology of language, which looks at how humans acquire, produce and understand language (usually at between 1 and 4 years of age).

As far as first language acquisition is concerned, the idea that children must *learn all aspects* of their mother tongue has been challenged by those who believe that humans possess a “language faculty”, which kicks into action when exposed to whatever language we are subjected to first. This is a kind of linguistic nature/nurture debate. The difficulties faced by those of us who attempt to learn a second language via formal tuition later in life have been used to support both sides of this debate.

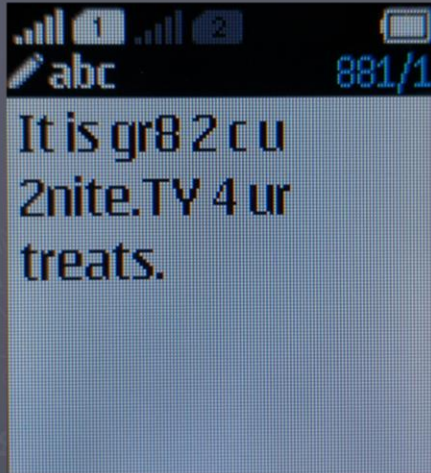
Two parts of the brain linked to speech are Broca’s area and Wernicke’s area.

Broca’s area is a part of the dominant (usually left) hemisphere of the brain which is associated with language processing, mostly, but not exclusively, *production*.

Wernicke’s area, is more closely associated with language *comprehension*. Disorders such as stuttering are thought to be linked to underactivity or damage to Broca’s area, whereas aphasia (an inability to produce or comprehend language) may be linked to either Broca’s or Wernicke’s area depending on the type of aphasia in question.

Image by Qualisk

Sociolinguistics



- The sociology of language
- Accent
- Register
- Prestige
- How's tricks your majesty?

Another subfield on the intersection between linguistics and an outside discipline is sociolinguistics, or the sociology of language. Sociolinguists study language variation based upon social, rather than geographical, differences, so where the dialectologist will study *dialects* from a *regional* perspective, the sociolinguist will examine *sociolects* from the point of view of class, gender, age or other *social* variables.

All of the core subfields of general linguistics may be influenced by a social setting, and so a particular group may have its own specific pronunciation, vocabulary, grammar and meanings. For example, the way that presenters spoke on radio and television in the UK between the 1920s and 1950s, so-called “BBC English”, was not a regional accent but “received pronunciation” (RP), i.e., a social accent representing a particular class (and arguably implying that this was the “correct” way to speak). This may, in some cases, encourage a reaction in others to overemphasise their working-class roots by stressing their “incorrect” ways of speaking such as dropping aitches or using *-in* as opposed to *-ing*, e.g. pronouncing *hanging* as ‘*angin*’. Slang and jargon are also indicators of group membership.

Expectations vary between formal and informal circumstances. We do not communicate with everyone in the same way, and so “*How's tricks your majesty?*” may not be the best way to address a head of state.

Image: An old 160 character limit SMS message (courtesy of Miss Puzzle)

Applied Linguistics



- Language policy
- Language planning
- Language teaching
- Language pathology
- Lexicography
- Literacy
- Multilingualism
- Translation

Applied linguistics looks at ways of dealing with practical language-related issues in the real world. These may include matters of political policy, like deciding which languages will have “official” status in a country or organisation, or the best way to promote and encourage the use of endangered languages. Equally, it may concern itself with educational issues, including how to teach second or foreign languages in schools, and the best way to teach children to read and write. Speech and language pathology issues, such as how to treat language disorders like stammering, are also included, as are aspects related to how to cater for the fact that people do not all speak the same language. We live in a multilingual world, and therefore translation, and the production of dictionaries (known as lexicography) fall within the discipline’s scope.

Applied linguistics may draw upon knowledge originating from virtually any aspect of the previous slides, or use its own methods where necessary. General or “theoretical” linguistics, like most theoretical disciplines, does not see solving real-world problems as part of its remit, and so applied linguistics, which established itself as a discipline just after the Second World War, has assumed this role, and increasingly followed its own path since the 1960s. It is a wide-ranging interdisciplinary field with its own series of academic journals, and practitioners or researchers may come from diverse backgrounds such as linguistics itself, education, psychology or health.

Image: A multilingual sign at Haifa, Israel, in Hebrew, Arabic, English and Russian (courtesy of Technion).

Historical Linguistics

- ▶ Family Trees
- ▶ Proto-languages
- ▶ Sound changes
- ▶ Etymology
- ▶ Cognates
- ▶ Loanwords
- ▶ Reconstruction

- # Historical Linguistics
- ▶ Family Trees
 - ▶ Proto-languages
 - ▶ Sound changes
 - ▶ Etymology
 - ▶ Cognates
 - ▶ Loanwords
 - ▶ Reconstruction

Historical linguistics looks at how languages change over time, and so seeks to understand the relationships between them. *Etymology* studies the history and origins of words to establish when they entered a particular language. Certain languages may share similar words with each other either because they are “genetically related”, i.e., they share the same “parent”, or alternatively, because the one language has borrowed from the other. An example of this is the English word *information*, which is identical in spelling to the French word *information* and similar to the Spanish *información* and the Italian *informazione*. The French word is genetically related to the Spanish and Italian (i.e., they are *cognates*, all descended from Latin) but the English word is *not*, it is a *loanword* which has been borrowed directly from the French. The differences today between the French, Spanish and Italian words are the result of gradual *sound changes* caused by geographical separation and divergence.

By studying such changes, historical linguists try to reproduce *proto-languages* (the ancestral parent of a particular group) by means of linguistic *reconstruction* and using the tree model to produce *family trees* which show how languages are related to each other. In some cases, lack of evidence can make filling in the gaps difficult, but much of historical linguistics helps record the birth, contact and death of languages which forms a large part of the subject matter of Part 2.

Image: A simplified version of the Proto-Indo-European Family Tree