

USA SCIENCE AND ENGINEERING FESTIVAL 2016

THAT'S SO LINGUISTICS

**LINGUISTIC SOCIETY
OF AMERICA**



WHAT IS LINGUISTICS?

Linguistics is the scientific study of language.

WHAT ISN'T LINGUISTICS?

Linguistics is not about
correcting your grammar.
In fact, some linguists study
“bad” grammar.

WHAT ISN'T LINGUISTICS?

Linguistics is not about trying to learn every language. Some linguists can only speak one language fluently.

DID YOU KNOW?

Language is innately human. No other species in the animal kingdom have language quite like ours.

SUBFIELDS OF LINGUISTICS

PHONETICS: what are the sounds of a language?

SYNTAX: how are sentences put together?

SEMANTICS: what is the meaning of words?

LANGUAGE ACQUISITION: how are languages learned?

AND MANY, MANY MORE...

DID YOU KNOW?

There are over 7,000
languages in the world.

DID YOU KNOW?

More than half of the world's languages may disappear by 2100.

DID YOU KNOW?

Languages can disappear if people no longer speak them in their daily lives, or if people don't teach the language to their children.



DID YOU KNOW?

Hebrew used to be an extinct language, which means that at one point, no one could speak the language at all.

DID YOU KNOW?

The language with the most speakers is Mandarin Chinese, which is mainly spoken in China.

DID YOU KNOW?

Siri, Cortana, and other voice assistants on some of your phones are part of a field called *Computational Linguistics*.

DID YOU KNOW?

Computational linguistics is
the combination of
computer science and
linguistics.

DID YOU KNOW?

Some computational linguists
do research in Machine
Translation. It's what makes
Google Translate possible!

Word of the Year 2015

The Word of the Year in 2015 was gender-neutral, singular **“they”**.

Ex. Someone called. *They* said that *they* were looking for Justin Bieber.

In the example, *he* or *she* could be used instead of *they*, but in cases where you don't know the person's gender, what do you do?

EVER HEARD OF VOCAL FRYYYYY?

Vocal fry (or creaky voice) sounds like this . . .



EVER HEARD OF VOCAL FRYYYY?

Both men and women use vocal fry, and it's completely normal! It is the result of language changing, which is constantly happening.

DID YOU KNOW?

The average woman in Sweden speaks in a lower pitch than the average woman in America, and the average woman in Japan speaks in a higher pitch.

DID YOU KNOW?

Many people who are born deaf 'talk' with their hands using sign languages.

DID YOU KNOW?

There are around 130
known different sign
languages.

DID YOU KNOW?

American Sign Language is more similar to French Sign Language than to British Sign Language.



DID YOU KNOW?

There are cases where people never got a chance to learn a language. How do you think they talk to other people?

DID YOU KNOW?

There are many benefits to your brain of knowing more than one language.

DID YOU KNOW?

The Broca's and Wernicke's areas are parts of the brain involved in producing and understanding language.

DID YOU KNOW?

Damage to the Broca's and Wernicke's areas can cause aphasia. Aphasia is a language disorder that affects the way you produce or understand language.

DID YOU KNOW?

Language is often ambiguous. This means that much of what you say can have more than one meaning. Take a look at these real newspaper headlines:

- Stolen Painting Found By Tree •
 - Hershey Bars Protest •
- Hospitals Are Sued By 7 Foot Doctors •
 - Squad Helps Dog Bite Victim •
 - Red Tape Holds Up New Bridge •

DID YOU KNOW?

Garden path sentences are sentences that can be difficult to understand at first.

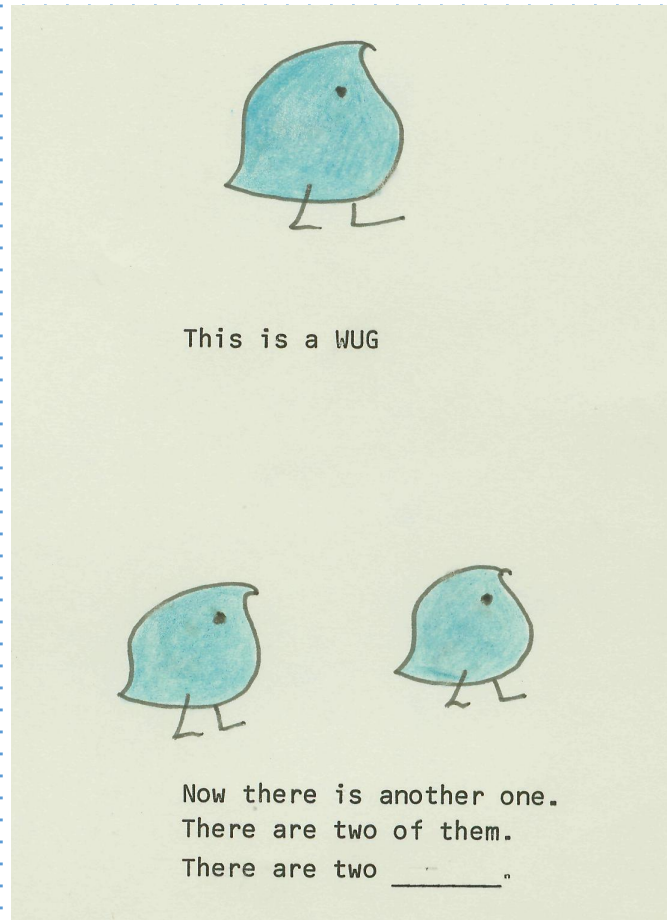
Ex. The old man the boat.

Ex. The complex houses families.

Did you have to read the examples again to figure out what they meant?



WUG TEST



The test on the left was used to show that children learn about the rules of their language and can use them on new words.

DID YOU KNOW?

English has word (or lexical) stress. This means that certain syllables in English words sound louder, longer, and have higher pitch.

Can you hear the differences in these two words?
The stressed syllable is underlined.

Produce: fruits and vegetables.
Produce: to make or manufacture.

DID YOU KNOW?

Even though English is written using five vowels (a, e, i, o, u), in spoken English, we actually produce much more than just five vowels.

DID YOU KNOW?

Some languages like Chinese have tone. This means that one sound like 'ma' can have many different meanings depending on the pitch.

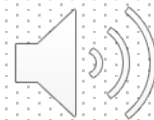
DID YOU KNOW?

Around 60-70% of the world's languages have tone, and most people in the world speak a tone language.

SO YOU THINK YOU CAN WHISTLE?

- Some people in the world can communicate with each other by whistling.
- These people usually live in very thick forests or tall mountains where it can be difficult to talk to each other from far away.
- The whistles can be heard from over half a mile away!

The following audio clip in whistled Turkish, spoken in Turkey, means “*one kilogram of tomatoes, please.*”



Think you can repeat it? 😊

DID YOU KNOW?

French, Spanish, Portuguese, and Italian are among the languages that came from Latin, which was spoken many, many years ago.

DID YOU KNOW?

English did not actually descend from Latin even though many words appear to be from Latin.

DID YOU KNOW?

Cognates are words in two or more different languages that sound and mean similar things.

Ex.	English	French	Spanish	Portuguese	Italian
	Fire	Feu	Fuego	Fogo	Fuoco

DID YOU KNOW?

By studying cognates, historical linguists can recreate (or reconstruct) older languages, which are also known as protolanguages.

DID YOU KNOW?

The word 'huh?' (or its equivalent) seems to exist in almost every language.

SOURCES

Video 1: The Last Speakers (National Geographic)
<https://www.youtube.com/watch?v=O89PkSNTtbg>

Video 2: Inside Google Translate
<https://www.youtube.com/watch?v=GdSC1Z1Kzs>

Video 3: Vocal Fry
<https://www.youtube.com/watch?v=YEgVgtLQ7qM>

Video 4: Sign Language Differences
<https://www.youtube.com/watch?v=5kqhrLAz2n8>

Video 5: The Whistled Language of Northern Turkey
<http://www.newyorker.com/tech/elements/the-whistled-language-of-northern-turkey>

Image 1: Wug Test – Jean Berko Gleason
<http://www.onbeing.org/blog/sunday-morning-exercise-take-wug-test/2510>

Image 2: Language Families -- Minna Sundberg
<http://mentalfloss.com/article/59665/feast-your-eyes-beautiful-linguistic-family-tree>

SLIDES DESIGNED BY EDWIN KO