



# THE SPEED OF LANGUAGE

Ever wondered why some languages sound like they're spoken much faster than others? Japanese sounds faster than German, Spanish certainly sounds faster than English. Yet, if you watch a dubbed foreign movie, the translated dialogue matches with the original exactly—even seemingly to the actors' mouth movement. **WHAT'S UP WITH THAT?**

That's pretty much what three researchers at **UNIVERSITÉ DE LYON**



were wondering,

WHEN THEY SET OUT TO COMPLETE A STUDY ON THE SPEED OF LANGUAGE.

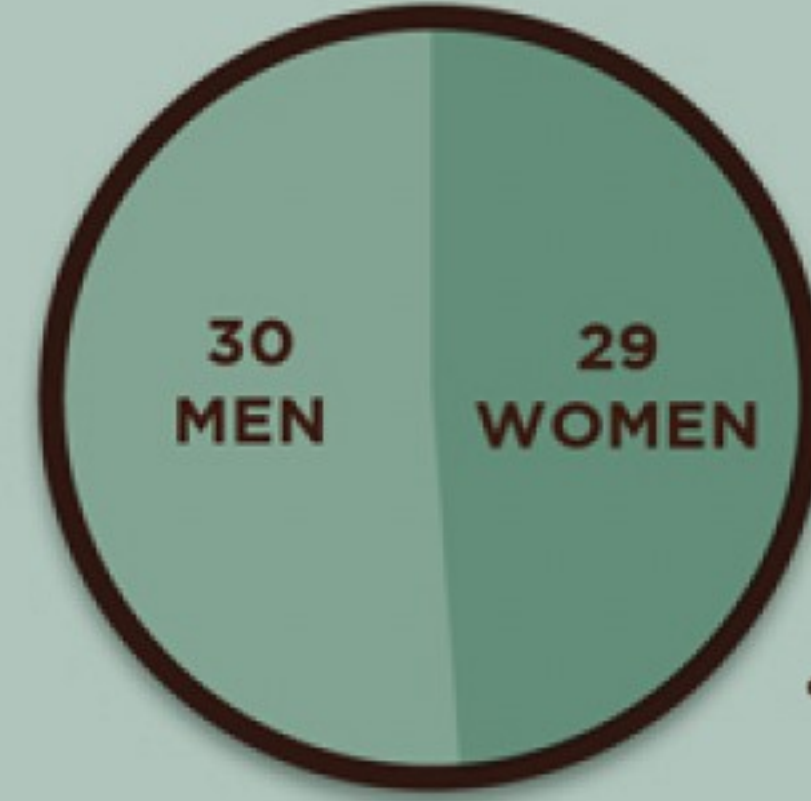
**So,**

They gathered up

**59**

OF

volunteers



Each of whom spoke one of

**7**

languages:

ENGLISH  
FRENCH  
GERMAN  
ITALIAN  
JAPANESE  
MANDARIN  
SPANISH

And made

**585**

recordings

with an overall duration of:



Every volunteer recorded the following phrase in his or her language:

Last night I opened the front door to let the cat out.

**IT WAS SUCH A BEAUTIFUL EVENING**

THAT I WANDERED DOWN THE GARDEN FOR A BREATH OF FRESH AIR.

THEN I HEARD A CLICK AS THE DOOR CLOSED BEHIND ME. I REALIZED I'D LOCKED MYSELF OUT.

**TO CAP IT ALL, I WAS ARRESTED**

WHILE I WAS TRYING TO FORCE THE DOOR OPEN!

**SO** WHAT DID THEY FIND?

The researchers counted all the syllables in each of the recordings and analyzed how much meaning each syllable conveyed—called the "density" of a syllable, and, it turns out:

You can compare the *speed* of the languages:

**SPANISH**  
**7.82**  
SYLLABLES/SEC

is indeed faster than

**ENGLISH**  
**6.19**  
SYLLABLES/SEC

The

**CHINESE**  
**5.18**  
SYLLABLES/SEC

take it easy...

While the

**JAPANESE**  
**7.84**  
SYLLABLES/SEC

"outspeak" us all.

**But** take a look at their information density\*

\*Vietnamese is set as the base density of 1.

**JAPANESE**  
**0.49**

(least dense)

**SPANISH**  
**0.63**

**ENGLISH**  
**0.91**

**CHINESE**  
**0.94**

(most dense)

**AND IT TURNS OUT...**



LESS DENSE  
LANGUAGES  
SOUND

*FASTER*

AND MORE DENSE LANGUAGES  
SOUND

**SLOWER.**



**IN OTHER WORDS**

WE MAY SPEAK LANGUAGES THAT SOUND VASTLY DIFFERENT, BUT IN THE END WE'RE ALL SAYING THE SAME THING.