# 13. Hearing

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# Problem to be invented

Each speaker can pronounce a vowel on several pitches, yet a listener is likely to recognize the phoneme (e.g. /o:/ or /u:/). Astonishing auditory illusions (e.g. Yanny and Laurel), so called mondegreens, and experiences of persons with poor hearing demonstrate nevertheless that listeners perceive sounds, words and phrases differently. Propose a problem concerning speech perception, mishearing, or physical differences between sounds of spoken language.

# Problem to be investigated

Different people may hear certain phrases differently. Propose which people are more likely to mishear words or phrases.

# Mondegreens

A mondegreen is a mishearing or misinterpretation of a phrase in a way that gives it a new meaning. Mondegreens are most often created by a person listening to a poem or a song; the listener, being unable to clearly hear a lyric, substitutes words that sound similar and make some kind of sense

American writer Sylvia Wright coined the term in 1954, writing that as a girl, when her mother read to her from Percy's Reliques, she had misheard the lyric "layd him on the green" in the fourth line of the Scottish ballad "The Bonny Earl of Murray" as "Lady Mondegreen".

# Why mondegreens happen

People are more likely to notice what they expect than things not part of their everyday experiences. Similarly, one may mistake an unfamiliar stimulus for a familiar and more plausible version. Also, expecting to hear something will likely make you hear it

There are also letters and letters compinations that may be confused with each other because of the frequency that we use for these letters

p/b, f/v, t/d, m/n, o/ou…

# Hypothesis

- Older people will make the most mistakes
- People closer to the age of 19 will have better hearing
- Males will make more mistakes on consonants
- Female will make more mistakes on vowels

# Experiment

Materials : mobile device with an application for recording

# Experiment

Constants : People who were tested
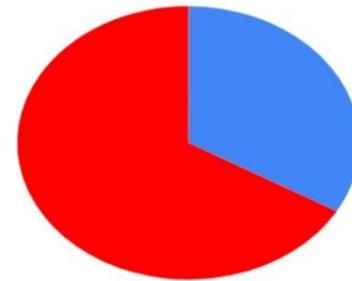
Place

Time

Variables: Different letters

# Participants

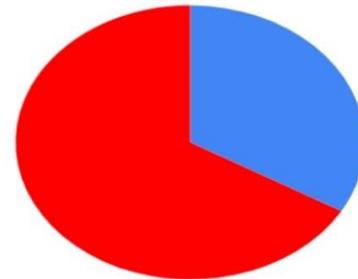6 people of age:s 10(female) , 14(male) , 18(female) ,43(female) ,45(male),67(male)

# Results of the Yanny/Laurel experiment

| Age | Word |
|-----|------|
| 10 | Yanny |
| 14 | Laurel |
| 18 | Laurel |
| 43 | Yanny |
| 45 | Yanny |
| 67 | Yanny |



Males



Females

# o/ou experiment

| Age | Letter |
|-----|--------|
| 10 | O/ou |
| 14 | O/ou |
| 18 | A/ou |
| 43 | A/ou |
| 45 | O/ou |
| 67 | O/ou |

Males

Females

- O/ou
- A/ou
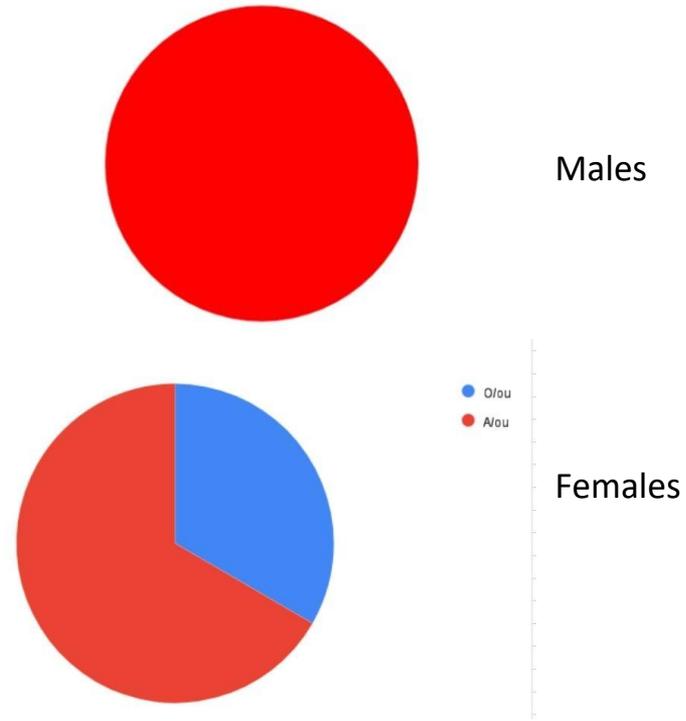
# M/N experiment

| Age | Letter |
| --- | --- |
| 10 | M/n |
| 14 | M/n |
| 18 | M/n |
| 43 | M/n |
| 45 | N/n |
| 67 | M/m |



Males

Females
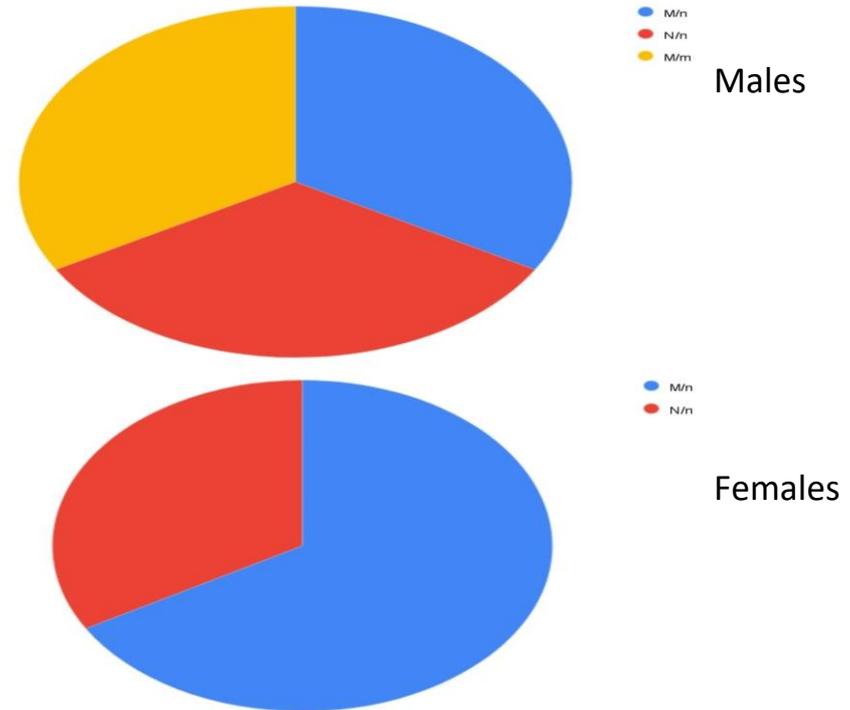
# U/O experiment

| Age | Letter |
|-----|--------|
| 10  | U/o    |
| 14  | U/o    |
| 18  | U/u    |
| 43  | U/u    |
| 45  | U/o    |
| 67  | O/o    |

Males

Females
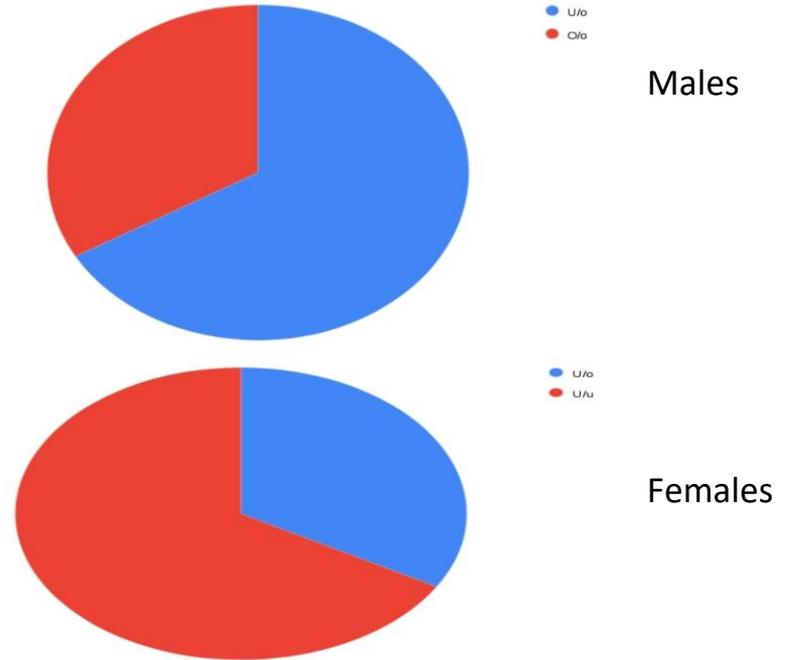
# T/D experiment

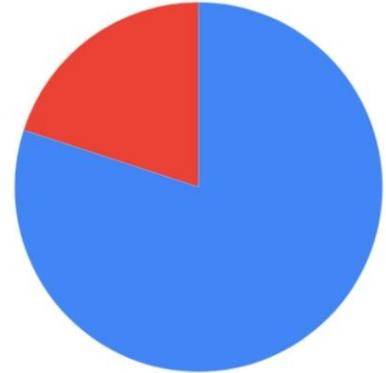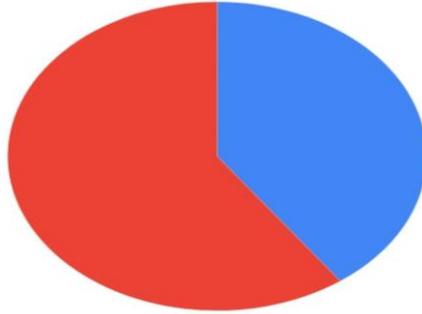| Age | Letter |
|-----|--------|
| 10 | T/d |
| 14 | T/d |
| 18 | T/d |
| 43 | T/t |
| 45 | T/d |
| 67 | T/t |
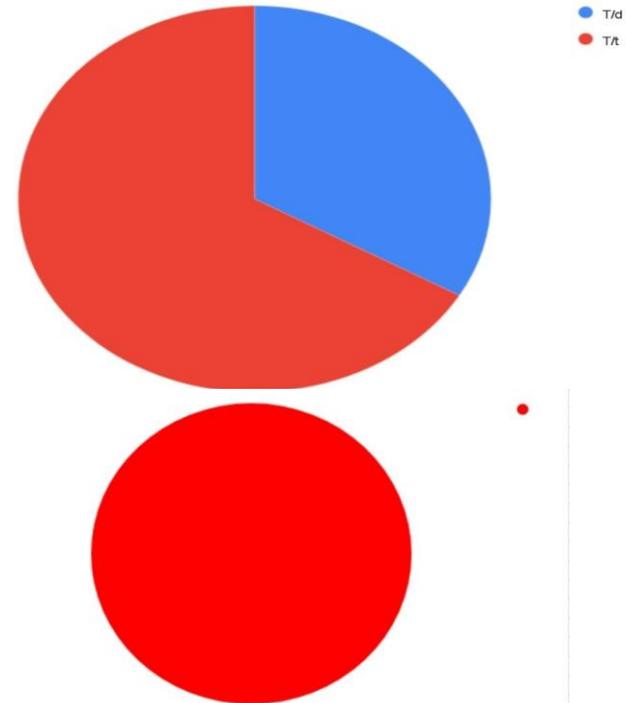
# Individual results(1)

10

14

18
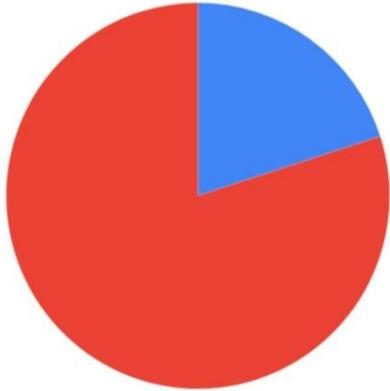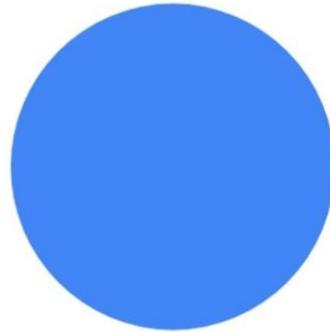
# Individual results(2)

43
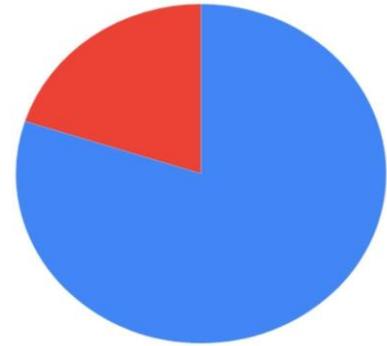
45

67

# Errors

Since I used the same recordings, done by me, for everyone, I already knew what the recording was supposed to say.

Another potential error: Some people might had guessed the second letter in each test
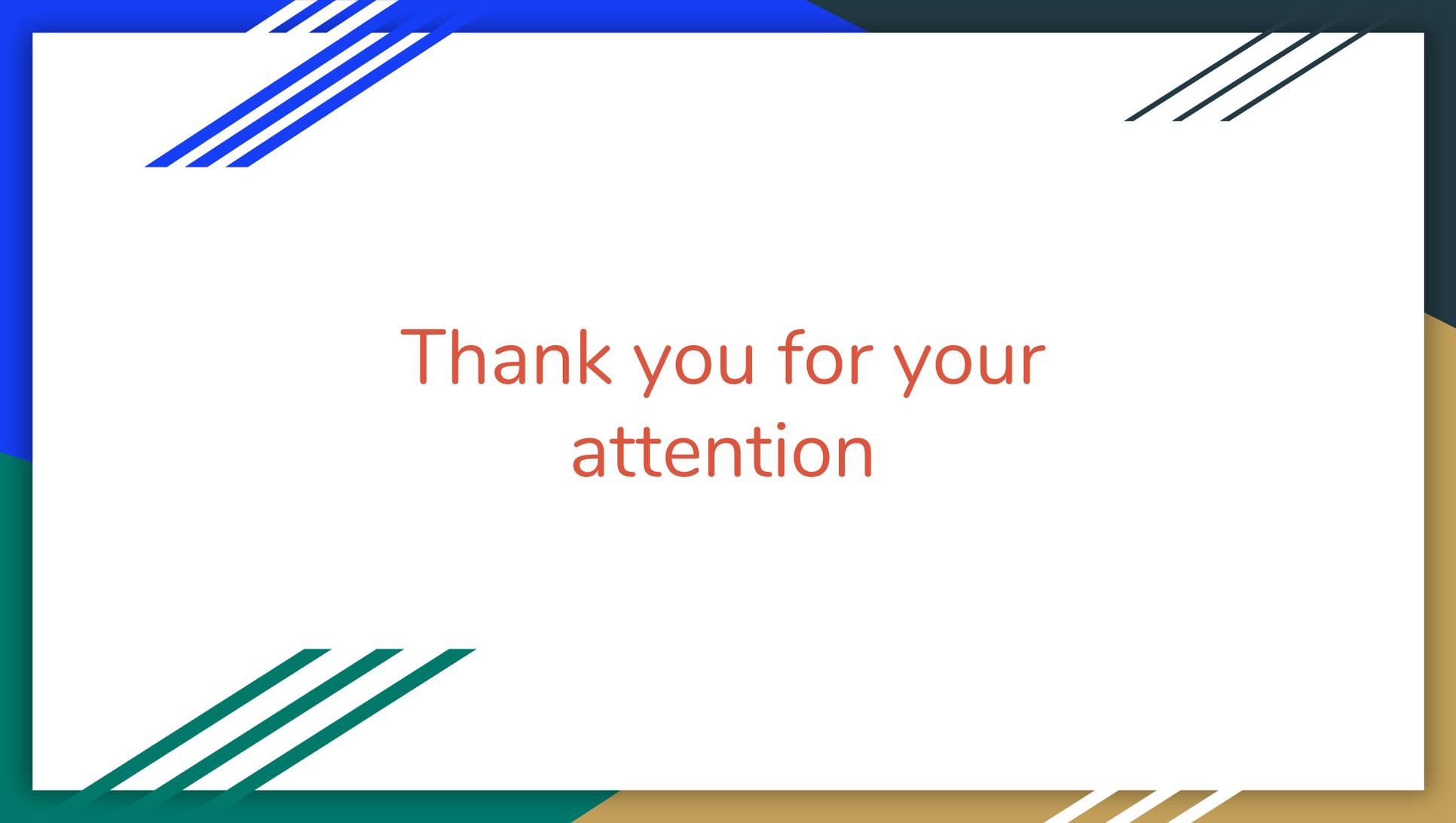
# Conclusions

The oldest person did make the most mistakes

People of an age close to 19 made the least mistakes

Females made the most mistakes on vowels

Males made most mistakes on consonants

# Thank you for your attention