Things you know about language you don't know you know

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Talk about linguistics

- What is linguistics?

- The scientific study of language and its structure, including the study of morphology, syntax, phonetics, and semantics. Specific branches of linguistics include sociolinguistics, dialectology, psycholinguistics, computational linguistics, historical-comparative linguistics, and applied linguistics.

- What does **that** mean?

How about this instead….

- Linguistics is the study of things you know about language you don't know you know

  - Such as? A native speaker of English knows, for example, that the previous sentence could also be uttered as

- Linguistics is the study of things ____ you know about language ____ you don't know ____ you know

  -

Sounds we don't hear

- Consider the following two words

  - cap (as in baseball cap)

  - cab (as in taxi cab)

Sounds we don't hear

- Consider what happens when we pluralize these words

  - caps

  - cabs

- Notice anything? Put a hand on your throat and pronounce the two words

Sounds we don't hear

- Consider what happens when we pluralize these words

  - caps   the end sounds like [..ap**s**]

  - cabs   the end sounds like [..ab]

Who has ever noticed this?

- This is something you know about language that you don't know that you know!

- You might ask yourself at this point: WHY is this the case? In fact, this little fact raises two interesting questions:

  1. Why is it that the plural -s sometimes sounds like z?

  2. Why have you never noticed this before?

- There is an answer to both these questions, and we'll try to understand what these are here today…

The first question

- To answer why the plural -s sometimes sounds like [z] requires a basic understanding of **articulator phonetics,** which is

  - The production of speech sounds

    - Air in our lungs that is pushed through our throat and mouth

    - Position and movement of the articulators in your mouth and throat leads to the production of different sounds

- Important point to retain here: the sounds /s/ and /z/ are almost the same sounds

/s/ and /z/: *alveolar fricatives*

- Fricatives:

  - Continuous flow of air from the lungs through the mouth;

  - Noise made by passage of the air through a constriction (a narrow canal);

  - Constriction with /s/ and /z/: tip of the tongue close to the alveoli, the little bumpy ridge right behind your upper teeth

- Pronounce /s/ and /z/ alternatively in a sequence (szszsz): observe that the position of the tongue in your mouth is the same with the two sounds.

- What differs between the two sounds? /z/ feels more noisy than /s/: why?

  - Your vocal cords vibrate with /z/, but not with /s/;

- Same position of tip of the tongue with alveoli

/s/

/z/

no vibration of vocal cord

vibration of vocal cord

About /s/ and /z/

- /s/ is a _voiceless_ *alveolar fricative* (no vibration of vocal cords)

- /z/ is a _voiced_ *alveolar fricative* (vibration of vocal cords)

- This difference is called **voicing**
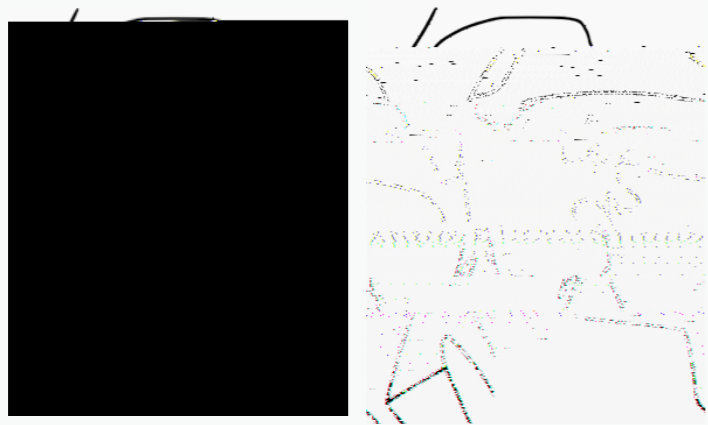
Voiced and voiceless pairs

- Many pairs of consonants in English are articulatory identical, differing only with respect to voicing

- Among those: /p/ and /b/, the final sounds for ca**p** and ca**b** respectively

- Stops:

  - Stops involve the stopping and releasing of the air flow

  - The release of air makes a 'pop' type of sound

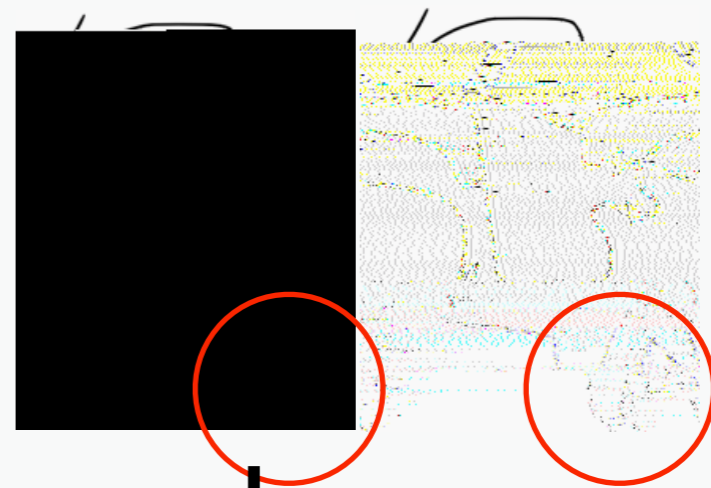# Answering the first question

- Why is the s of the plural in *cabs* sound like z?

  - *caps* sounds like [...aps]

  - *cabs* sounds like [...abz]

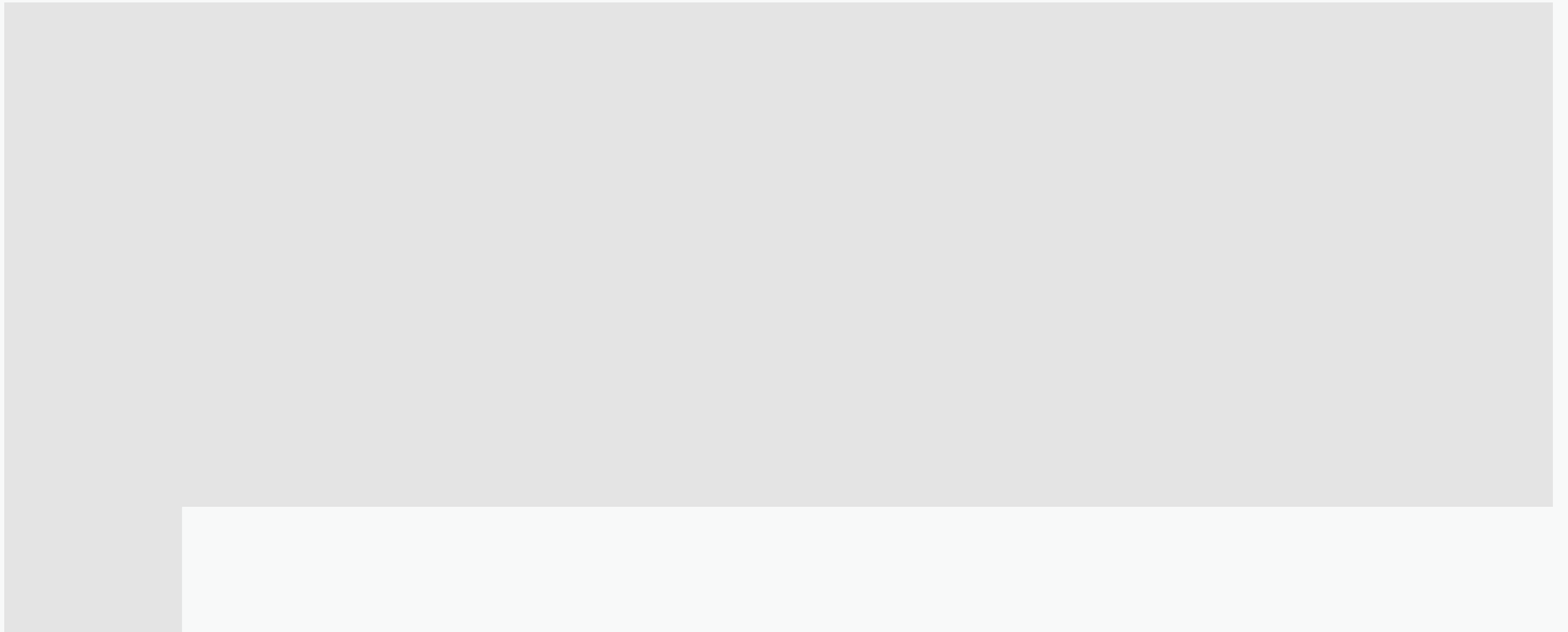When s is next to the voiceless sound /p/, nothing happens...

When s is next to the voiced sound /b/, the vocal cords keep vibrating: **s** then sounds like

...a p   s

...a b   z

English consonants distinguished by the voiced feature

More sounds

- Try to determine if the sound in bold in the following words is voiced or voiceless:

  - p**ie** + s   s sounds like   , /ai/ is voiced
  - b**ee** + s   s sounds like   , /i/ is voiced
  - tub**a** + s   s sounds like   , /ɑ/ is voiced
  - sh**oe** + s   s sounds like   , /u/ is voiced
  - fra**m**e + s   s sounds like   , /m/ is voiced
  - fa**n** + s   s sounds like   **,** /n/ is voiced
  - gri**ll** + s   s sounds like   , /l/ is voiced
  - boa**r** + s   s sounds like   , /r/ is voiced

All things you know, you did not know you know (before today!)

- Funny, the plural -s seems to sounds like -z more often than it sounds like an -s

- Why is it that the great majority of people never noticed this before (except linguists, and..you now!)?

- This is our second question

Words and morphemes

- Do you hear the difference between

  - ap and **s**ap?

  - fu**ss** and fu　?

- Why do you hear these differences so clearly, yet you never heard the difference between the different realizations of the plural -s before, which are phonetically identical?

- It's all semantics!

- The sounds associated with words can be understood as instructions in the brain telling your articulatory apparatus to execute a specific set of movements.

- With *sap* and *zap,* or *fuss* and *fuzz*, the instructions associated with s and *z* serves to distinguish different WORDS:

    - We say that in these cases, *s* and the *z* introduce a <u>meaningful distinctions</u>:

    - the sequences of sounds *zap, sap, fuss* and *fuzz* describe sound

Distinctions that are meaningless

- The plural -*s* is a **morpheme** (a unit that must attach to a word): it also introduces its own specific reality (plurality of things)

  - The different realizations of this morpheme are not meaningful: although it is often realized as -z, what we actually *hear* is the notion of plurality, a reality associated with the instructions that produce /s/.

- Again, this happens all over the place, not just in morphemes: consider words that start with the sequence **ex** in English:

  - **Ex**pect: […ksp…]

  - **Ex**ample: […gza…]

- You now know a little more about

- things you know about language

- you did not know

- you know

- There is a lot more to find out

- This knowledge is at the very centre of what it means to be a human