# Language structure, perception and acquisition

## Supported GRE teaching and original transfer practice

# Language structure, perception and acquisition

- Separate the levels of language: sounds, meaningful parts, word order, meaning and use.
- Explain **categorical perception 范畴知觉** and speech segmentation.
- Describe the two routes in reading.
- Interpret children's errors and age effects in learning a language.

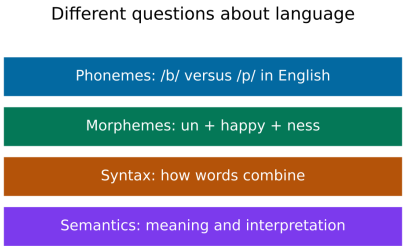
# Levels of language

- A **phoneme** 音位 is the smallest sound unit that changes meaning: /b/ and /p/ separate "bat" from "pat".
- A **morpheme** 语素 is the smallest unit with meaning: "un-happy-ness" has three.
- **Syntax** 句法 is the rules for combining words into phrases and sentences.

# Levels of language (2)

- **Semantics** 语义学 is meaning, and **pragmatics** 语用学 is how meaning depends on context: "Can you pass the salt?" is a request, not a question about ability.
- **Syntax** and **semantics** can separate. Chomsky's "Colourless green ideas sleep furiously" is grammatical but has no sensible meaning.

# Figure: Levels of language




- Each level of language asks a different question about the same utterance
- Match each part of the diagram to the text.

# Speech perception

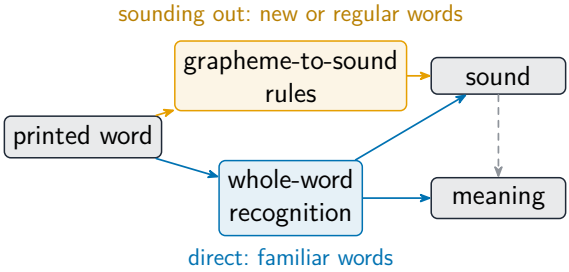
- **Categorical perception**: sounds that vary smoothly (from /b/ to /p/) are heard as one category or the other, with a sharp boundary. Differences inside a category are hard to hear.
- Segmentation: listeners find words in a continuous stream using the likelihood that one syllable follows another, stress patterns and known words.
- Infants can tell apart the sounds of every language, but by about 10–12 months they lose many contrasts their own language does not use.

# Reading

- Sounding out: letters are converted to sounds by rules. This route reads new and made-up words ("blick").
- Whole-word recognition: familiar words go directly to meaning and pronunciation. This route reads irregular words ("yacht").
- Damage to the sounding-out route makes made-up words hard; damage to the whole-word route makes irregular words come out "regularised".
- The eyes move in fixations and quick jumps (saccades), not a smooth glide.

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# Figure: Reading




- Two reading routes: sounding out and direct recognition.
- Read the axes and units first.

# Acquisition

- **Overregularisation 过度规则化**: a child who said "went" begins to say "goed". The child has learned a rule (add -ed) and applies it too widely.
- Children's errors show that they produce new forms rather than only copying.
- Language learning gets harder with age of first exposure, especially for accent and grammar, but there is no single sharp cut-off age for a second language.
- Bilingualism does not lower intelligence; when schooling replaces the first language rather than adding to it, both languages can suffer.

# Worked example: counting units

- "Unhappiness": three morphemes (un, happy, ness).
- "Cats": two morphemes (cat, plural -s), one syllable, four phonemes (/k/, /æ/, /t/, /s/).
- Morphemes are counted by meaning, not by letters or syllables.

# Worked example: a child's error

- "Goed" applies the regular past-tense rule to an irregular verb: **overregularisation**.
- It shows the child is using a productive rule, not only repeating forms heard from adults, who never say "goed".
- It does not prove that input or feedback do not matter. A single error cannot decide between theories of acquisition.

# Common errors

- Counting morphemes by letters or syllables.
- Thinking spoken words are separated by audible pauses.
- Treating **syntax** and **semantics** as the same level.

# Common errors (2)

- Reading **overregularisation** as a step backwards rather than as evidence of rule learning.
- Claiming one sharp critical age for learning any second language.

# Key terms

- **phoneme**: The smallest sound unit that changes meaning.
- **morpheme**: The smallest unit of language that carries meaning.
- **syntax**: The rules for combining words into phrases and sentences.
- **semantics**: The study of meaning in language.

# Check yourself

- How many morphemes are in "replayed"?
- A patient reads "yacht" correctly but cannot read the made-up word "blick". Which reading route is damaged?
- "It's cold in here" is used to ask someone to close a window. Which level of language explains this?