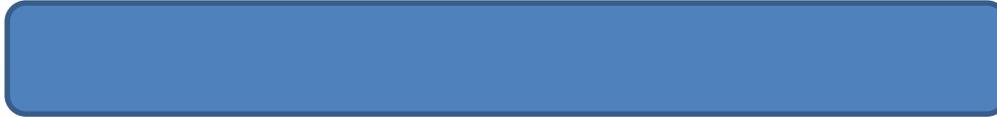


Can you get the "A-HA" moment? Or are you a victim of a mental set?

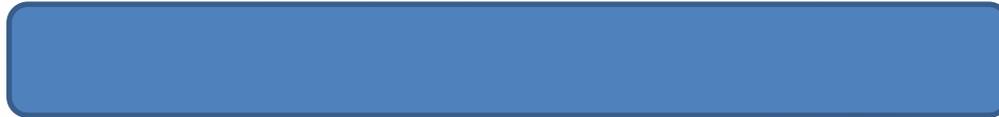
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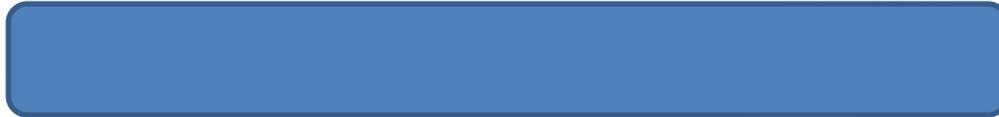
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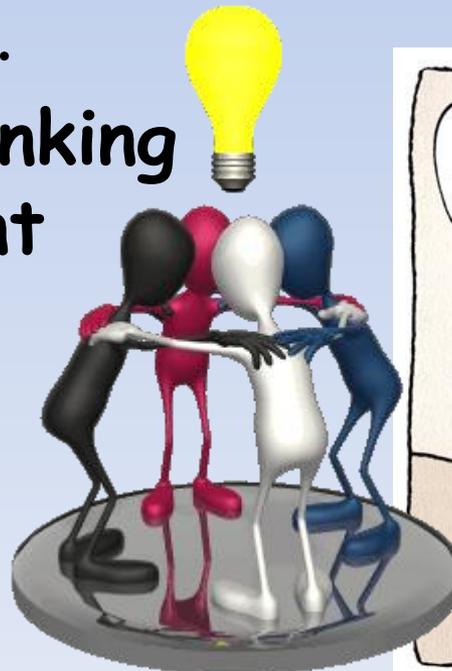
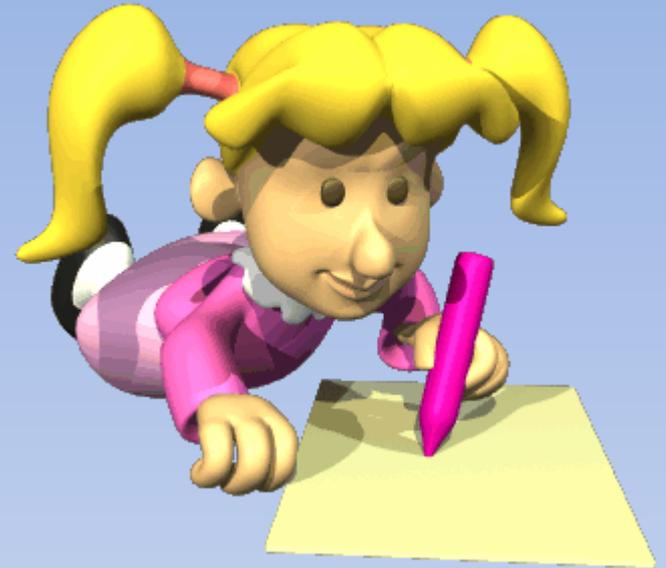


(4)



CREATIVITY

- Almost impossible to define.
- Little correlation between creativity and intelligence.
- **Convergent Thinking versus Divergent Thinking**



Divergent thinking, Convergent thinking

- *Divergent thinking* is thinking in which multiple solutions are desired. (creativity tests - areas in frontal lobe.)
- *Convergent thinking* is more conforming but just as good. Sometimes the standard way is the best. (school success, intelligence tests - left parietal lobe)

Example of Divergent Thinking

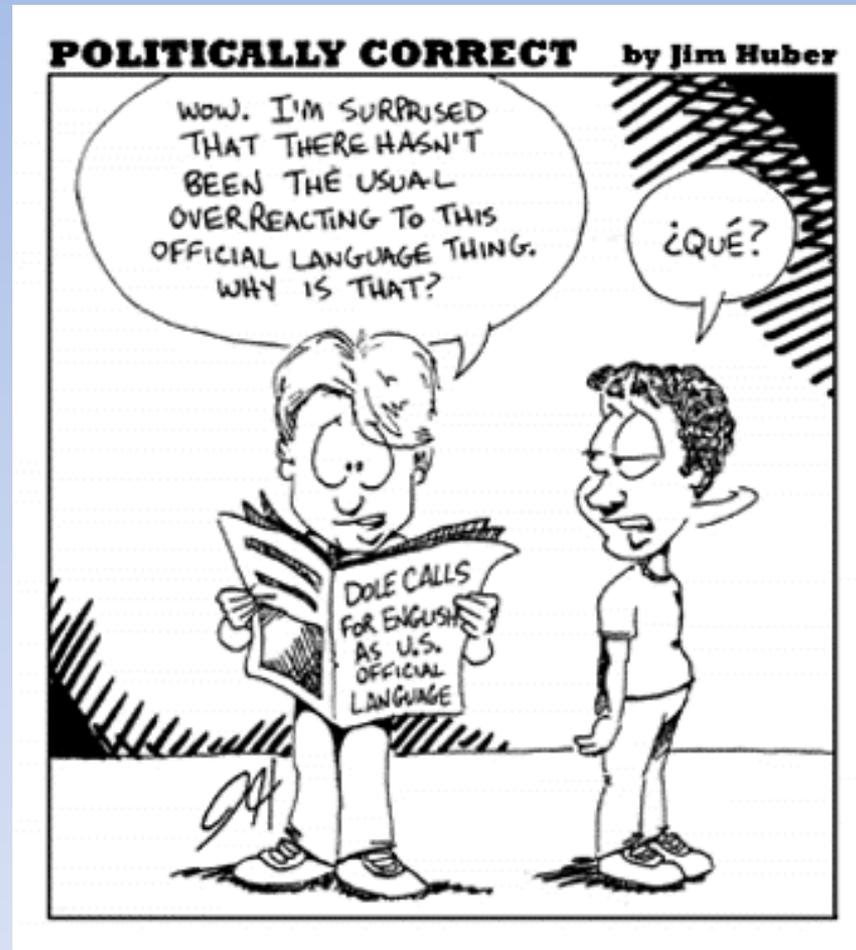
A man who lived on the 10th floor of an apartment building took the elevator to the ground floor every summer morning in order to get to work. When coming home in the late afternoon, the man took the elevator to the 5th floor and walked up the stairs to his apartment on the 10th floor except on rainy days when the man took the elevator all the way to 10.

How do you explain this behavior?

Example of Divergent Thinking

1. The man was a little person and could only reach as high as the 5th floor button. On rainy days, though, he could use his umbrella to hit the 10th floor button.
2. The man enjoyed the exercise of walking up steps but could only manage 5 floors at a time. On rainy days he would create a muddy mess in the hallway so he took the elevator to 10 then.
3. The stairs from the 5th to 10th floor are outside and unprotected. The man took the stairs when convenient to enjoy the late afternoon sun and view overlooking the ocean. On rainy days that was out of the question.

Language



A means of communication.

Language can be.....

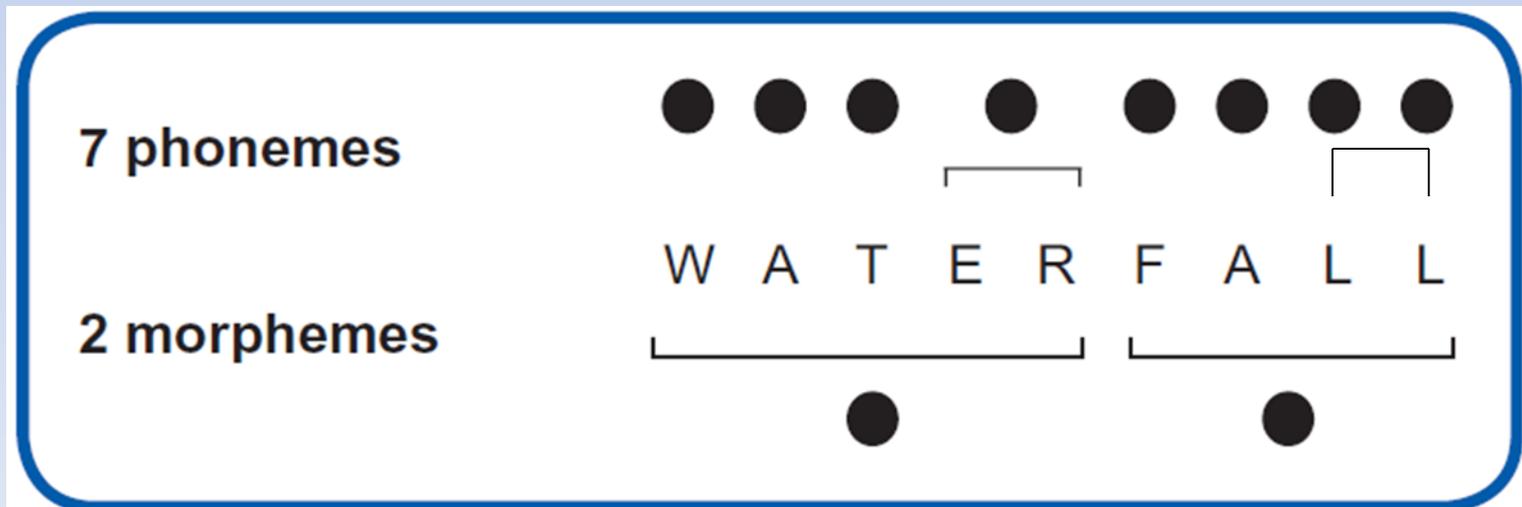


Phonemes

- In a spoken language, the smallest distinctive sound unit.
- May be a word or part of a word
- English has about 40 phonemes.
- A young baby produces all the phonemes of all the languages of the world.
- How many phonemes does "chug" have?
- Chug has three phonemes, ch, u, g.

Morphemes

- In a language, the smallest unit that carries meaning.
- Can be a word or part of a word
- Can be a prefix (pre) or suffix (ed).
- English has about 100,000 morphemes

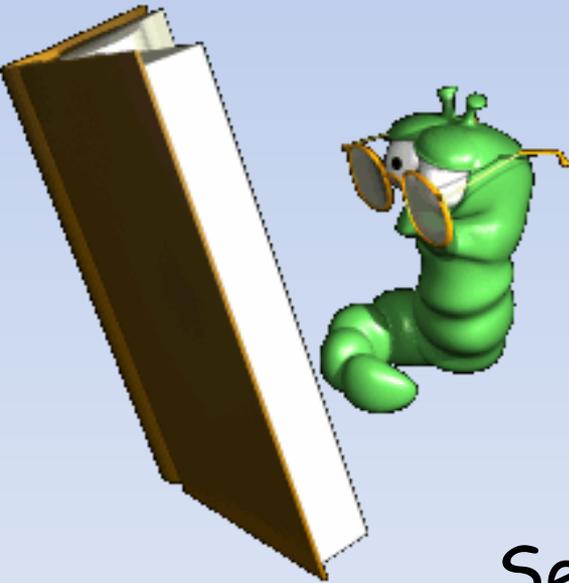


Structuring Language

Phonemes	Basic sounds (about 40) ... <i>ea, sh.</i>
Morphemes	Smallest meaningful units (100,000) ... <i>un, for.</i>
Words	Meaningful units (290,500) ... <i>meat, pumpkin.</i>
Phrase	Composed of two or more words (326,000) ... <i>meat eater.</i>
Sentence	Composed of many words (infinite) ... <i>She opened the jewelry box.</i>

Grammar

Grammar is the system of rules in a language that enable us to communicate with and understand others.



Grammar

Semantics

Syntax

Grammar - Context

The artist painted me on the porch.



The artist painted me on the porch.



The artist painted me on the porch.



Syntax

- The rules for combining words into grammatically sensible sentences.
- In English, adjectives come before nouns, but not in Spanish!!

"the girl the boy saw" - violates syntax



Is this the White House or the House White?

Semantics

- The set of rules by which we derive meaning in a language.
- Adding *ed* at the end of words means past tense.

"the rapid freedom ran around the curious emptiness" - obeys syntax, but makes no sense due to meaning of the words

"Did Pat pat a caterpillar's back?"

Your knowledge of semantics tells you:

- 1st Pat: Noun, name of a person
- 2nd pat: verb, signals action

Language Acquisition

Stages that we learn language...

1. **Babbling Stage** – 4 months
2. **Holophrastic Stage** (one word stage) – 12 months
3. **Telegraphic Speech Stage** (two word stage) – 24 months
4. **Sentences**
4 years old – 3 to 8 words long.
 - After the telegraphic stage we get ***overgeneralization***.



Overgeneralization

- Child will generalize grammar rules so they apply the rules too broadly.
- Example: "I dugged in the sandbox" rather than "I dug in the sandbox"



How do we learn language?



Learn Chinese Characters Vol1A

Learn Chinese Characters Volume 1A

水	心	人	口	小
山	天	下	上	中
文	明	日	用	才
生	公	白	平	不

End

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How do we explain language
development?

Skinner

- Skinner thought that we can explain language development through *social learning theory* (which is?).



"It sure didn't pay to increase my vocabulary *that time!*"