

Lecture 6

Neurolinguistics

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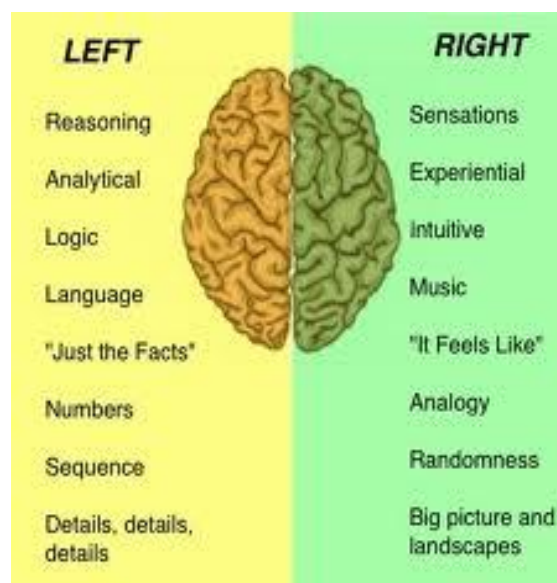
- What is Neurolinguistics?
- How can aphasia tell us about the representation of language in the brain?
- Language lateralization

Neurolinguistics:

Neurolinguistics is the study of the representation of language in the brain.

How does the brain look like?

Which hemisphere controls language?

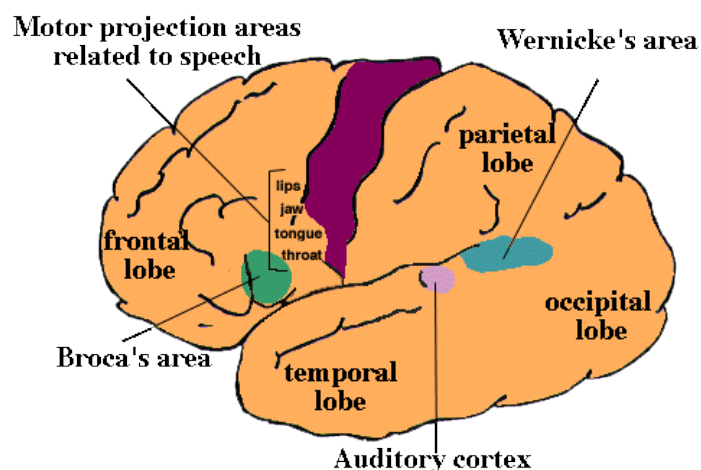


What happens to language if there is a damage in the left hemisphere of the brain?

It can lead to aphasia: language impairment caused by brain injury.

Aphasia:

There are two types of aphasia, depending on the damaged area of the brain:



Broca's aphasia is also known as non-fluent aphasia.

Is characterized by halting, effortful speech; it is associated with damage involving *Broca's* area in the frontal lobe of the left hemisphere.

Wernicke's aphasia is also known as fluent aphasia.

Is characterized by fluent meaningless strings; it is caused by damage involving *Wernicke's* area in the temporal lobe of the left hemisphere.

Language lateralization:

Contra-lateral control:

The left hemisphere of the brain controls the right side of the body, and vice-versa



How can this affect language?

Handedness:

For the majority of people, language is in the left hemisphere (this is why the majority of people are right-handers)

Some people, however, language is in the right side (left handers)