

Language Disorders

Aphasia:

The inability to perceive, process, or produce language because of physical damage to the brain.

The linguistic skills which are affected as a result of aphasia depend on the site of the brain damage.

Broca's Aphasia ("expressive aphasia")

-inability to plan the motor sequences used in speech or sign

content words preserved
function words omitted

speech production is difficult
writing is impaired
comprehension is okay (esp. "everyday speech")

BUT there can be some difficulty matching semantic interpretation to a sentence

example: (reversible passive sentence)

The lion was killed by the tiger

likely to be interpreted as

The lion killed the tiger.

loss of ability to express grammatical relationships

Wernicke's Aphasia ("receptive aphasia")

speech is fluent - but doesn't make sense
Sentences sound grammatical (or nearly grammatical) but the words don't make sense

Seem to not comprehend speech, but:
-they can perceive phonemes
-show evidence for semantic priming

-difficulty interpreting words from lexicon, resulting in circumlocutions

circumlocutions, examples:

water = "what we drink"

nose = "what we smell with"

Jargon Aphasia (a type of Wernicke's Aphasia)

very fluent speech and

neologisms (nonwords of unknown origin)

Conduction Aphasia

damage to the Arcuate Fasciculus

(bundle of nerve fibers connecting Broca's and Wernicke's areas)

characteristics:

-fluent but meaningless speech (like Wernicke's aphasic)

-show signs of being able to comprehend speech of others (like Broca's aphasic)

-can comprehend sentences but cannot repeat them.

If Wernicke's and Broca's Areas cannot communicate with each other, then...

what is happening to the flow of information?

Does it explain the symptoms?

Pure Word Deafness

damage is to the auditory nerve and to the part of the corpus callosum that sends signals from the RH auditory center to Wernicke's area in RH.

symptoms: cannot perceive spoken language as speech

BUT: can speak, read and write

Alexia

results from damage to the Angular Gyrus.

-inability to read and comprehend written words

-written form of a word cannot be matched with the form in the lexicon

sometimes accompanied by

Agraphia

the inability to write words

attributed to the inability of the angular gyrus to relate the lexical entry of a word with a picture of the written form in the visual cortex.

Note that Alexia is not the same as Dyslexia!!!

People with Alexia have *physical damage* to the angular gyrus and never regain previous reading skills. Dyslexia caused by a structural difference in the temporal lobe.

Dyslexic individuals can almost always read and write as most non-dyslexics do with special training.

Others:

Anomia ("No-Name-ia") inability to name things

such aphasics use very few common nouns (but sometimes produce an uncommon alternative, such as "proboscis" for "nose")