



APHASIOLOGY

CLASSIFICATION OF APHASIA

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DIFFERENT APHASIA SYNDROMES

Wernicke's Aphasia/fluent

- ☐ Normal fluency, sometimes excessive(logorrhea)
- ☐ Impaired auditory comprehension
- ☐ Affected repetition
- ☐ Neologism, paraphasia, jargon speech(lexical retrieval)
- ☐ Usually normal prosody and articulation
- ☐ Affected reading and writing



Broca's aphasia

- Nonfluent effortful speech, slow rate, flat melody
- Limited word output /telegraphic speech
- Agrammatic
- Impaired repetition
- Affected naming, reading, writing (often hemiparesis)
- Better auditory comprehension



Conduction Aphasia

- Fluent, less than Wernicke's
- Minor defect....auditory comprehension
- Repetition impaired
- Phonemic paraphasia
- Usually paresis of face and body



Transcortical sensory

- Fluent, paraphasic speech
- Global paraphasia
- Intact repetition (occasional echolalia)
- Impaired naming



Transcortical Motor

- ❑ Nonfluent speech
- ❑ Global and phonemic paraphasia
- ❑ Intact repetition(echolalia)
- ❑ Affected auditory comprehension, not severe



Anomia

- Naming difficulties as a residual symptom.
- Normal fluent output with occasional interruptions as the patient pauses to find the next correct word.
- Circumlocution.
- Anomia does not have clear localizing significance.

Pure word deafness

- Specific deficit of perception of spoken language, other auditory perception is intact.
- Writing is normal, reading may be impaired.
- Lesion of the primary auditory cortex contiguous to Wernicke's area produces this syndrome.

Agraphia (pure)

Usually without other language disturbances.

- Well-formed letters but characteristic spelling errors.
- Lesion of the second frontal convolution (Exner's area), superior parietal lobule and perisylvian areas produce this syndrome



Alexia:

- Cannot read, other language functions are intact
- Lesion of the left occipital lobe that also includes the pathways connecting the visual perceptual areas
- The patient comprehends auditory information and can write and speak normally



Global aphasia


Deficits in

- ☐ Expression
- ☐ Comprehension
- ☐ Reading & writing
- ☐ Naming
- ☐ Ability to repeat

	Comprehension	Verbal expression	Repetition	Other names
Broca	Mild to moderate	Agrammatic	Agrammatic but better	Motor, expressive, syntactic
Global	Severe	Minimal stereotypic	Equally impaired	
Transcortical motor	Mild to moderate	Nonfluent	Less impaired	Dynamic
Wernicke	Severe	Parahasic (jargon)	Equally impaired	Sensory, receptive, semantic
Conduction	Mild to moderate	Phonemic paraphasia	More impaired	
Anomia	Mild	Circumlocution	Spared	Amnesia, nominal
Transcortical sensory	Severe	Paraphasic	Less impaired (echolalia)	Isolation syndrome

NEED FOR CLASSIFICATION

- **As many patient====clinical forms even**
- **Brookshire (1983) ----- type of aphasia is probably is a subject characteristics most likely to be influenced by the beliefs, biases, and opinions of the investigator.**
- Classification is a sorting system...
- Each school of thought has their own classification system and thus there are more than one right way to classify any phenomenon

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- This has led to terminological CONFUSION
 - These confusions appear to be related to various factor
 - Indifferent usage of various terms to refer to the same phenomena
 - The same label may be employed, according to different usage, to refer to different clinical phenomena
 - Semantic ambivalence (coexistence of opposing meaning)



CLASSIFICATIONS ARE A NECESSARY EVIL..

DAMASIO 1998

- **Opponents of classification:** inadequate in capturing the complexity and severity of the given patient's language impairment.
- **Supporter:** consider classification as an efficient method for describing symptoms that can be used to enhance communication among professionals.

CLASSIFICATIONS ARE BASED ON:

- Clinical =By symptoms
- By theories of how the brain works
 - Connectionist/Locationist
 - Holistic
- Anatomoclinical
- Physiological
- Psycholinguistic
- Anatomical

PROS AND CONS OF CLASSIFICATION

- Different aphasics almost never share the same set of symptoms (Benson&Ardila)
 - Variations “are so plentiful as to be the rule”
 - A single type of aphasia may have distinctly different loci of pathology
 - Conduction aphasia
 - Parietal
 - Temporal
 - Transcortical motor aphasia
- Differing interpretations of sets of symptoms
- Different approaches to classification



MAIN ARGUMENTS FOR CLASSIFYING APHASIA INTO TYPES:

- Different aphasia types have different cerebral site of lesion
- Different brain areas control different language functions
- Different lesions sites produce distinctively different syndromes
- Treatment techniques vary with typology
- Prognostic implications may vary with different syndrome.

MAIN ARGUMENTS AGAINST CLASSIFICATION

- Brain functions as an integrated unit controlling language
- Localization of site of lesion is not same as localization of language function
- Different site of lesion effect most if not all language modalities/ functions
- Variations in fluency may be due to variations in severity
- Longitudinal studies show that aphasic patients who appear different may appear similar later during the course of recovery



WHY SO MUCH OF VARIATION IN SYMPTOMS

- Difference in areas of brain damage
- Difference in kinds of brain damage
 - Strokes vs trauma vs infection vs tumors
 - Different kinds of stroke
- Anatomical variation among people
 - Differing cortical structures
 - Differences in vascular anatomy
- Difference in location of cortical functions



HISTORICAL PERSPECTIVE

From aphemia to aphasia

- Paul Broca, 1861

Aphemic

- Can understand/
- Recognize words
- Cannot repeat
- speechless/monosyllables

Amnesic verbale

- Does not recognize associations between ideas and words
- Can pronounce, but expressions empty

BAILLAREGER (1865)

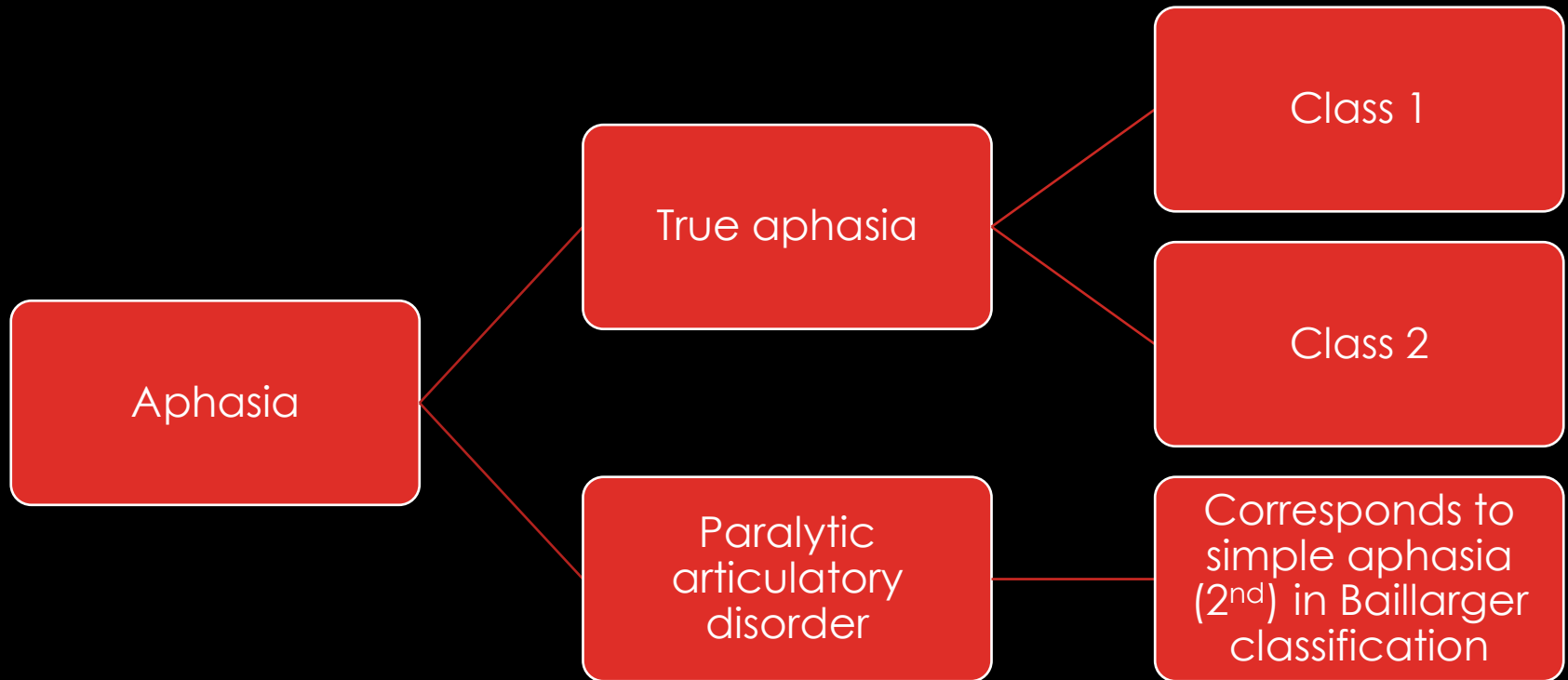
Simple
aphasia

- Both speech and writing are impaired
- Impaires speech and spare writing

Aphasia with
perversion of
faculty of
language

JACKSON (1868)

SIMILAR TO
BAILLARGER



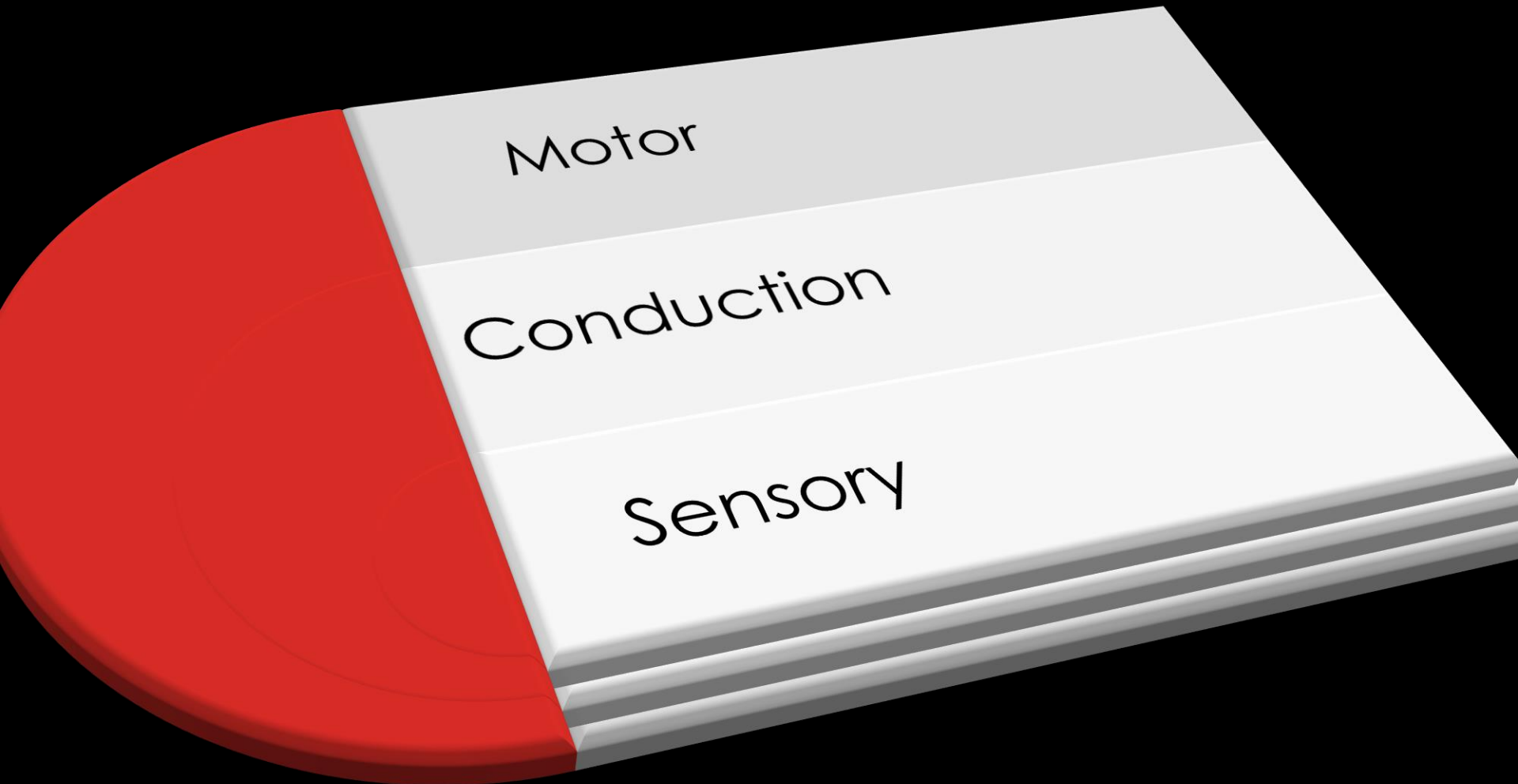
WERNICKE (1874)

Motor aphasia

Sensory aphasia

Conduction aphasia

LICHTEIM (1844) AND WERNICKE (1885-1886)



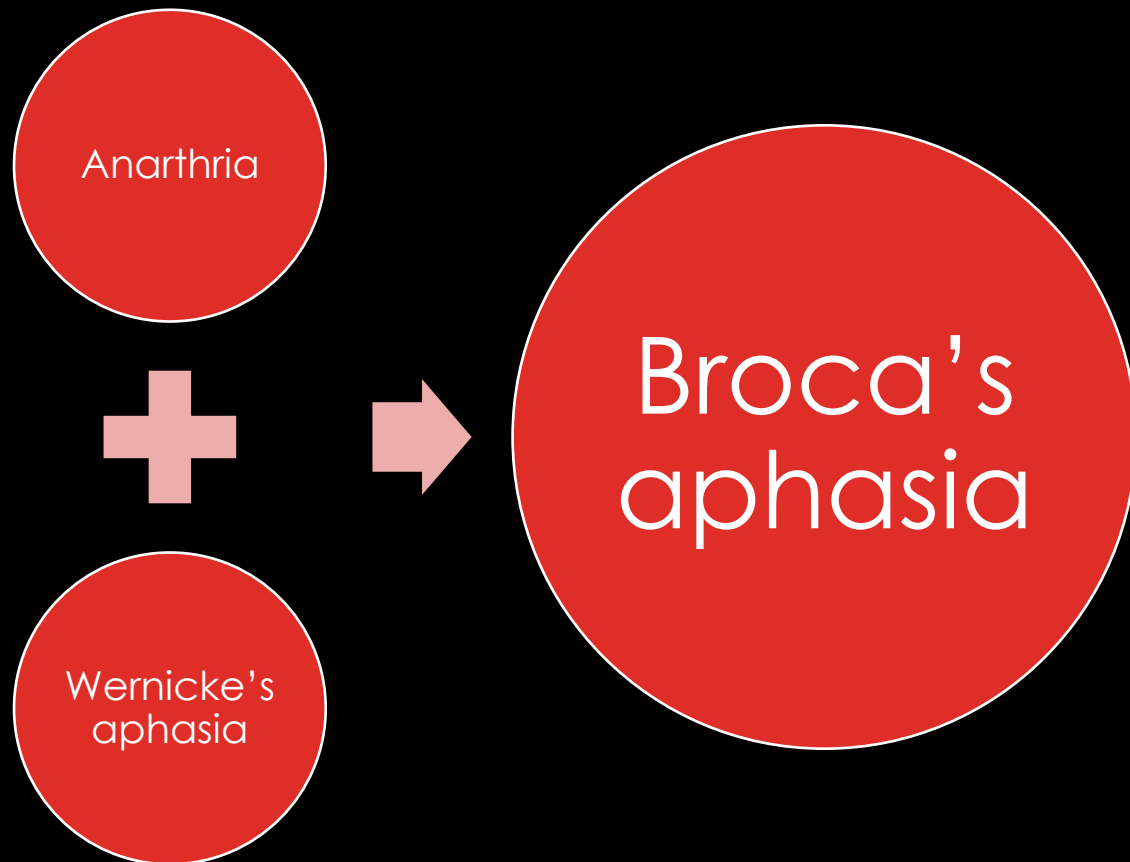
FREUD (1891)

Verbal aphasia

Asymbolic aphasia

Agnosic aphasia

PIERRE MARIE (1906)



DEJERINE (1914)

- Expressive aphasia
- Comprehension aphasia
- Total aphasia

True
aphasia

- Pure motor aphasia
- Pure word deafness
- Pure word blindness

Pure
aphasia

- Verbal amnesia
- Transcortical aphasia

Other

FOIX (1917)

Non aphasic disorder

Anarthria

Pure agraphia

Pure alexia

Pure word deafness



Aphasia (Wernicke's aphasia)

Full wernicke's aphasia

Temporal aphasia

Aphasia due to lesion in supramarginal gyrus

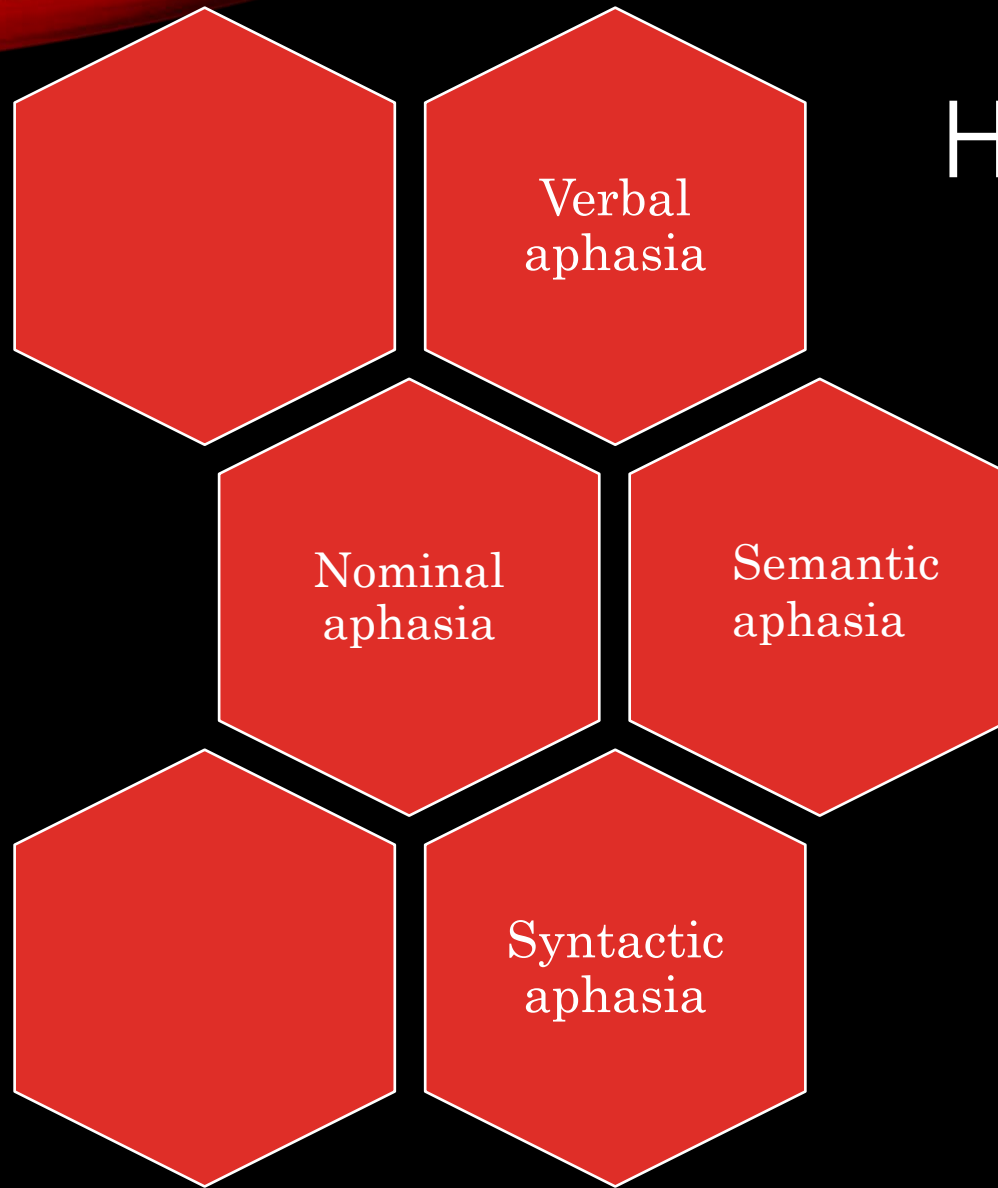
Aphasia due to lesion in angular gyrus



Aphasia with concomitant anarthria

Broca's aphasia

HEAD (1926)



GOLDSTEIN (1948)

- Aphasia from predominant impairment of instrumentalities of language
 1. Peripheral motor aphasia
 2. Motor agraphia
 3. Peripheral sensory aphasia
 4. Primary alexia
- Aphasia linked to a dedifferentiation of inner language= central aphasia
- Aphasia linked to a disturbance of abstract attitude= amnesia aphasia
- Impairment in instrumentalities of language+ abstract attitude+ dedifferentiation of inner language
 1. Central motor aphasia
 2. Central sensory aphasia
- Aphasia from anomalies of non-linguistic mental processes
 1. Transcortical motor
 2. Transcortical sensory
 3. Mixed

BAY (1964)

Cortical dysarthria

True aphasia

ALAJOUANINE (1968)

Wernicke's aphasia

- Complete temporal aphasia
- jargonaphasia

- Temporal aphasia with sensory predominance
- Amnesic aphasia
- Parieto angular gyrus syndrome

Impaired verbal articulation

- Full broca's aphasia

- Broca's aphasia

Isolated impairments

- Pure anarthria
- Pure agraphia

- Pure word deafness
- Pure alexia

HECAEN (1972)

Types

Expressive aphasia

- aphasia of phonemiatic realization
- Disorder of sentence programming

Amnesia
aphasia=disorder
of morpheme
selection

Sensory aphasia

- pure word deafness
- Sensory aphasia (three main symptom constellation are under this)

GOODGLASS (1972)

- Broca's aphasia
- Wernicke's aphasia
- Anomic aphasia
- Conduction aphasia
- Transcortical sensory aphasia
- Transcortical motor aphasia
- Alexia with agraphia
- Pure aphasia
 - Pure alexia
 - Pure word deafness
 - Pure agraphia
 - Aphemias



DAMASIO'S CLASSIFICATION (1998)

- Wernicke's aphasia
- Broca's aphasia
- Conduction aphasia
- Transcortical sensory aphasia
- Transcortical motor aphasia
- Global aphasia
- Anomic aphasia
- Alexia
- Pure word deafness
- Atypical aphasias



CONTI. NEXT CLASS

- Linguistic approaches to classification