

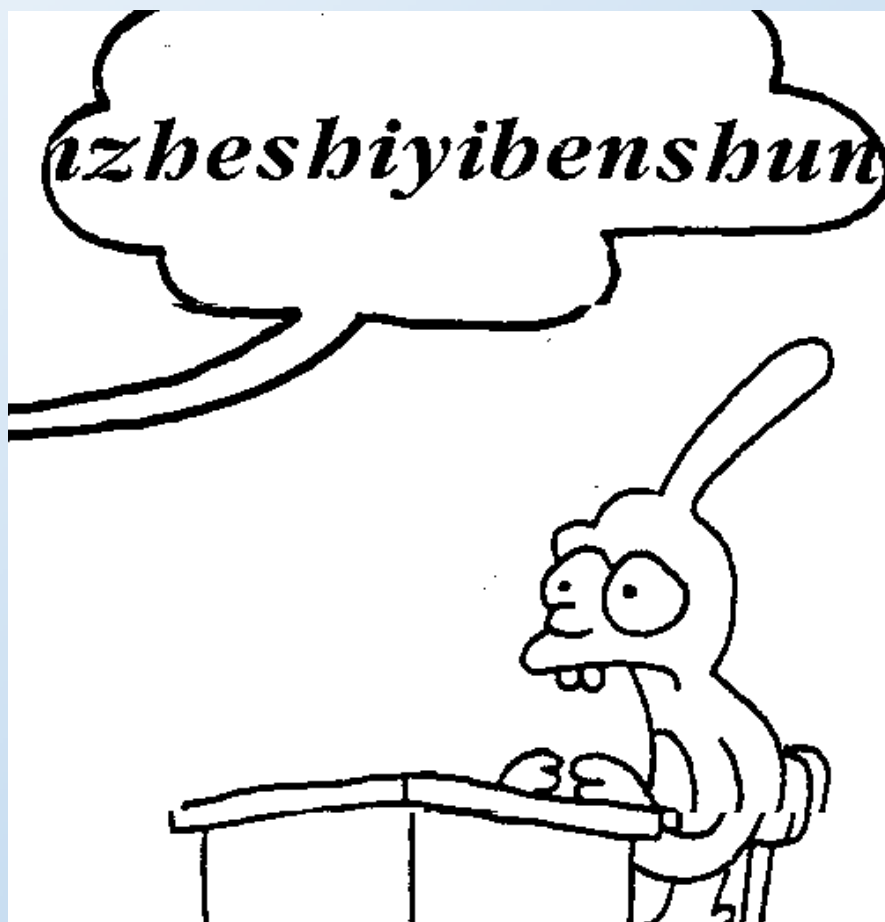
There are no silences between words.

语言

发育

- 失忆症

你听到一串声音，如何确定它们的意思：



这是一个非常困难的任务

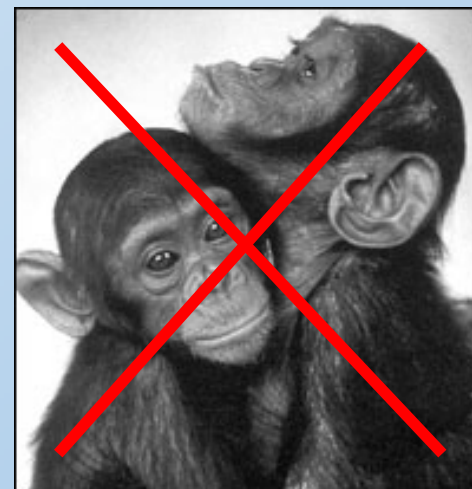
- 如何从一串声音中把词语分离出来
 - Is it, “Lobster” or “clobster,” in “Do you like lobster?”
- 如何确定声音指的是什么事物
- 如何确定词语的准确意思

Ambiguity can be lethal
Driver: Do I turn left?
Passenger: Right.



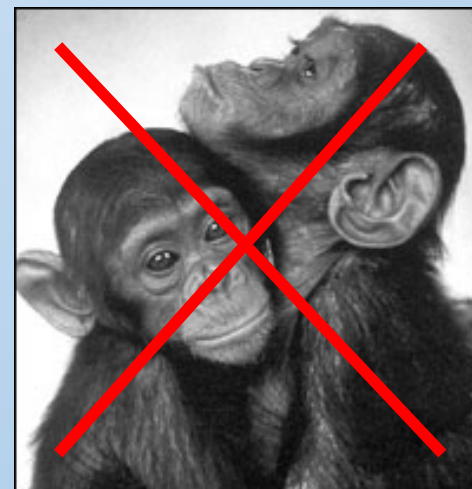
人类是唯一有语言的动物

- 任何人类社会,都有一种语言
- 语言的创造不需要历史积淀
 - 只需要一代人
 - Pidgin → creole
- 任何一个正常的人都有语言



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语言的发育 language acquisition

特殊情况：

野外长大
被隔离
聋哑我

Kamala and Amala



所有语言的特点

- 创造性
 - 我们所说的每一句话几乎都是一种新的组字方法.
- 所有的语言是一样复杂的
- 所有的语言都是变化的
- 语言不是学习来的

语言的结构

牛很好吃.

我知道你喜欢他.

- 白衣服女孩不喜欢吃白菜

- 我听说白衣服女孩不喜欢吃白菜

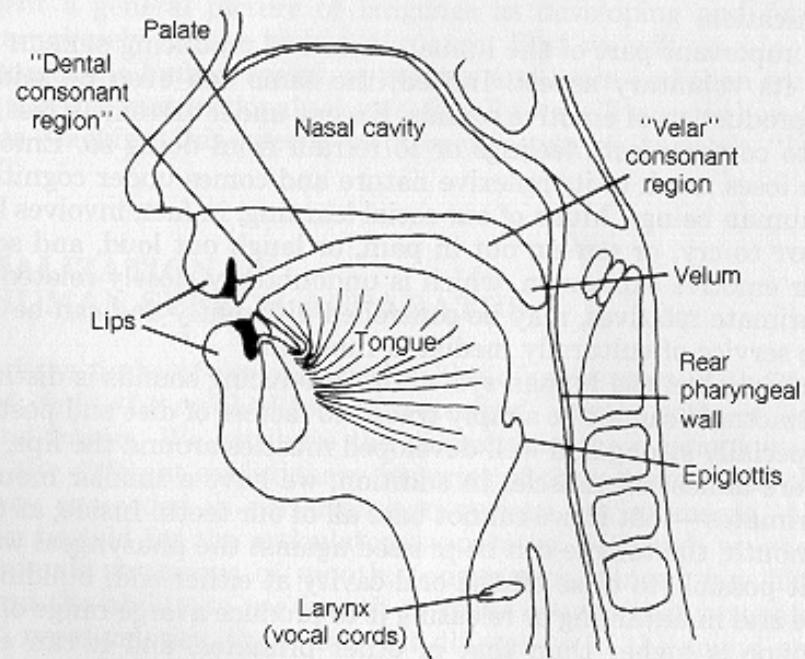
- 黑衣服女孩觉得很奇怪,因为我告诉他我听说白衣服女孩不喜欢吃白菜

- 朱老师在课堂上花了好多时间讨论黑衣服女孩在听到我告诉他我听说白衣服女孩不喜欢吃白菜时很奇怪的事情.

- 我不知道为什么朱老师在课堂上花了好多时间讨论黑衣服女孩在听到我告诉他我听说白衣服女孩不喜欢吃白菜时很奇怪的事情.

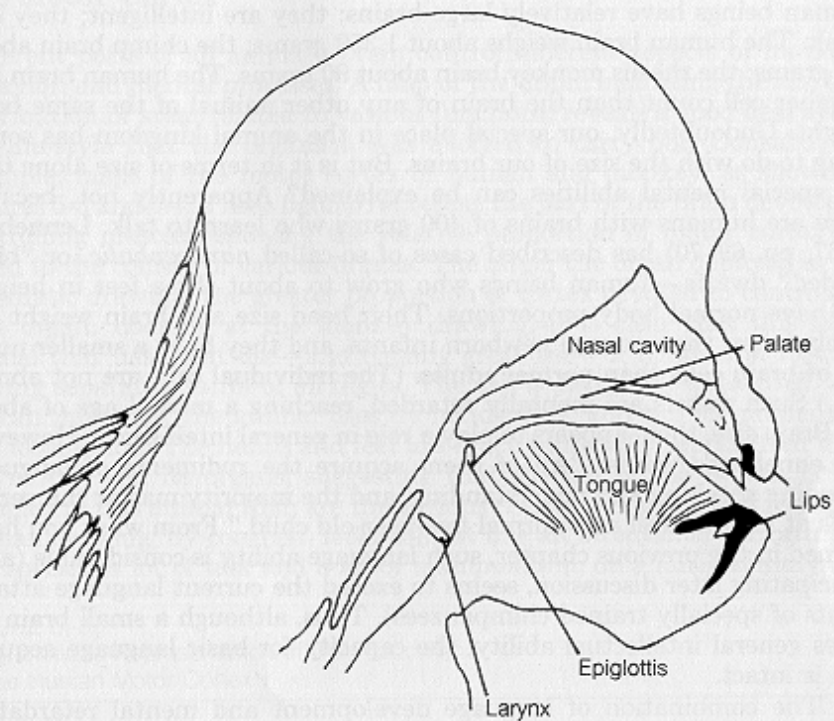
语言的结构

FIGURE 5-1
The Adult Human Vocal Tract¹



¹Figure from Lieberman (1975, p. 60).

Head and Neck of a Young Adult Male Chimpanzee
Sectioned in the Midsagittal Plane¹



¹Figure from Lieberman (1975, p. 106).

语言发展- 总表

- 先认识，后理解
- 理解和能发出之间大致有五个月的间隔
- 4.5个月，能注意到自己的名字
- 6个月 – 开始发出 bababa dadada 之类的声音
 - 理解爸爸或妈妈的意思
- 1岁左右，第一个字
- 2岁左右，数百个词汇量（爆发期50词~）

语言 – 语音

- Babbling
- Baby-talk / Motherese/ Child Directed Speech (CDS)
- Mama & papa

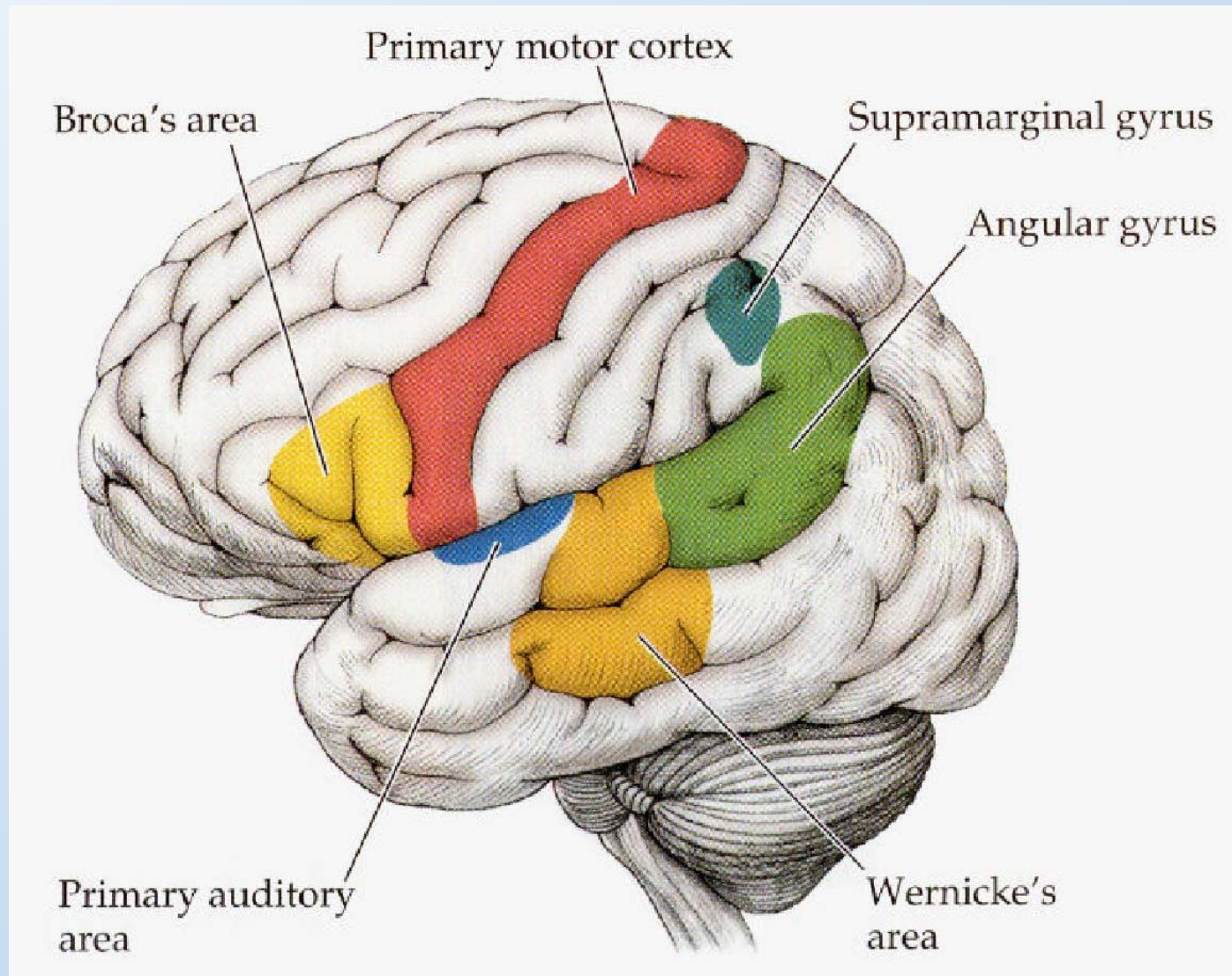
language as communication versus language as thought

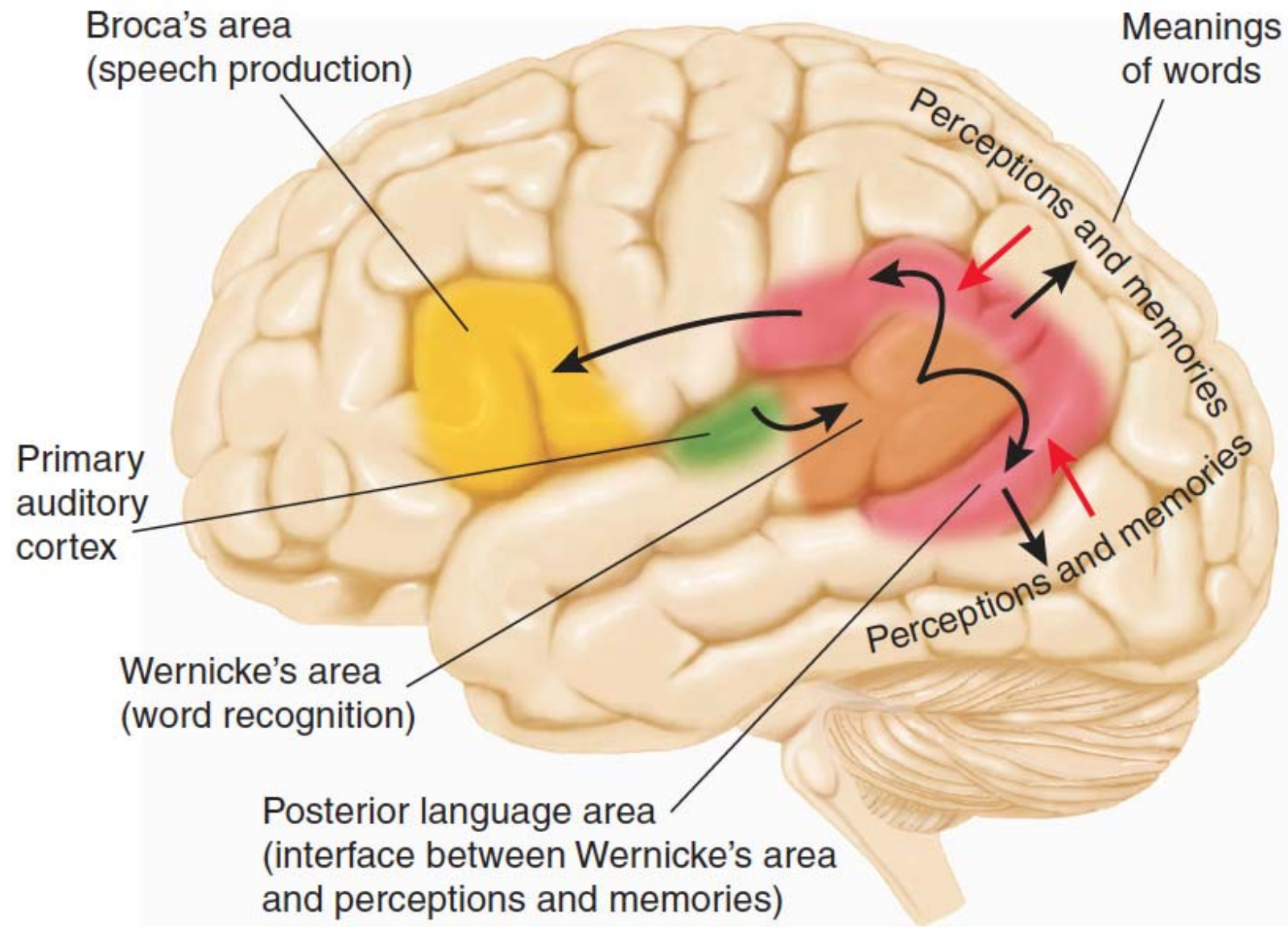
- thought as silent, internal speech
- language as representation of underlying thought

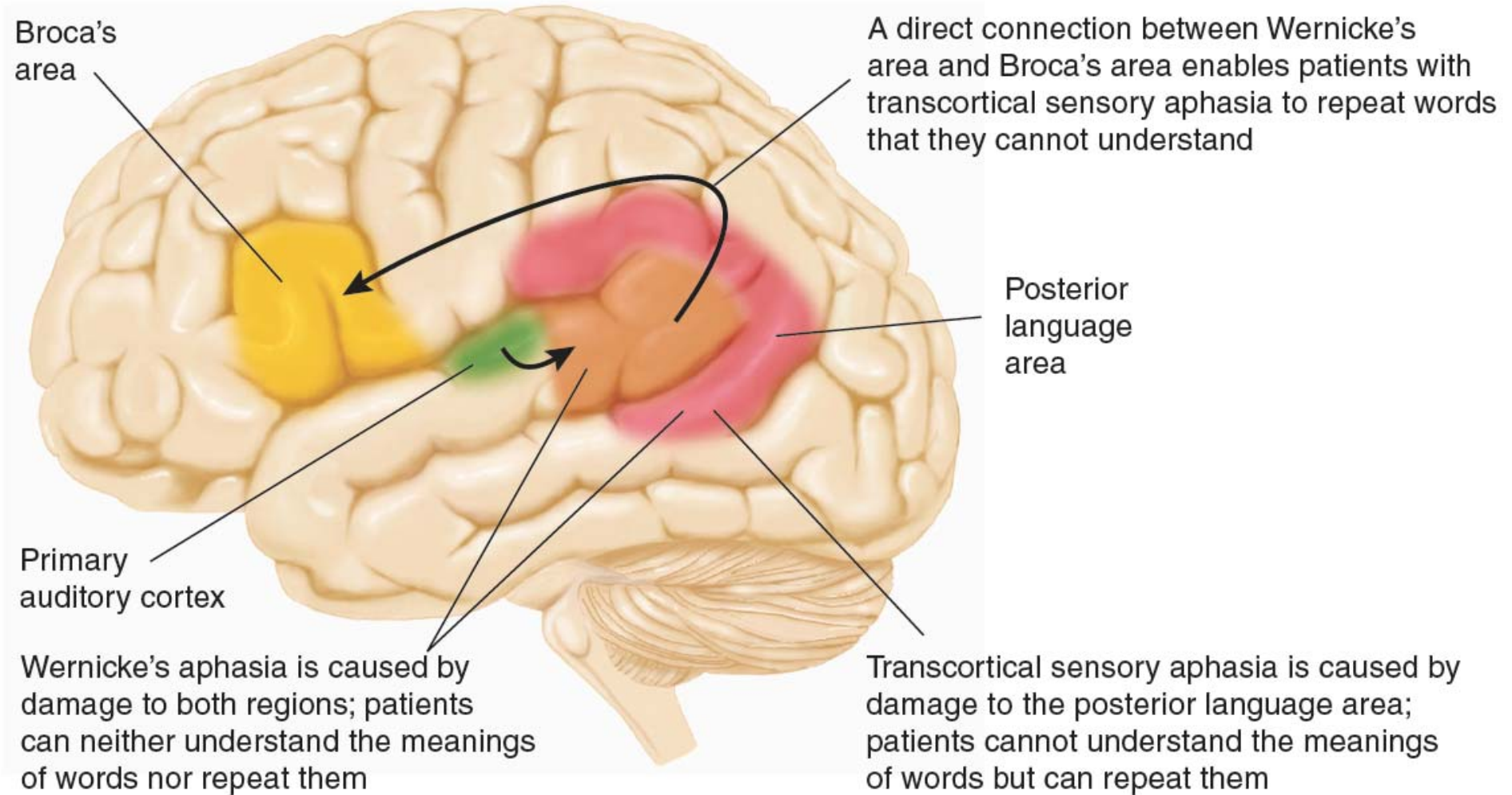
语言问题

- Paraphasia:
 - Substitution of a word by a sound, an incorrect word, or an unintended word
- Neologism:
 - Paraphasia with a completely novel word
- Nonfluent speech:
 - Talking with considerable effort
- Agraphia:
 - Impairment in writing
- Alexia:
 - Disturbances in reading

Brain areas involved in Language



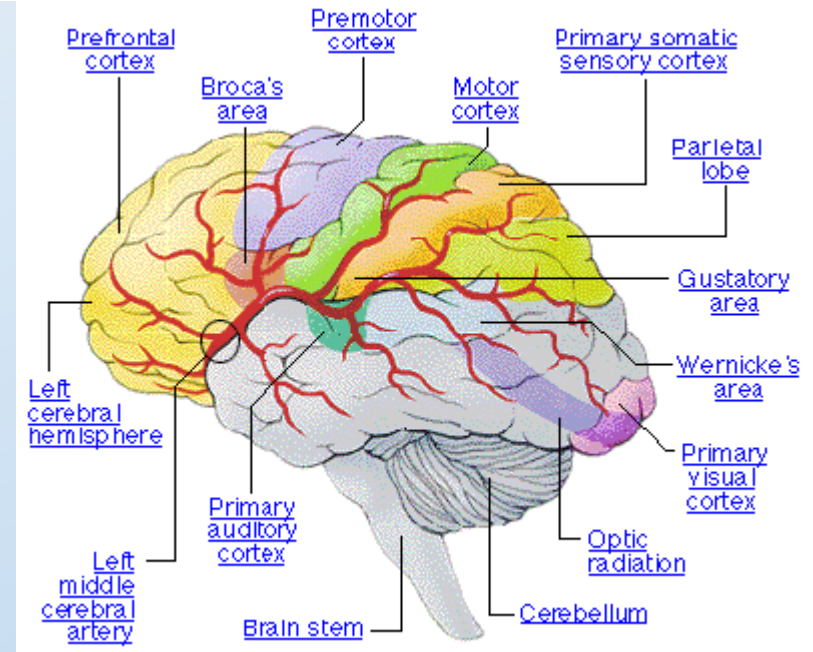




Broca's Aphasia

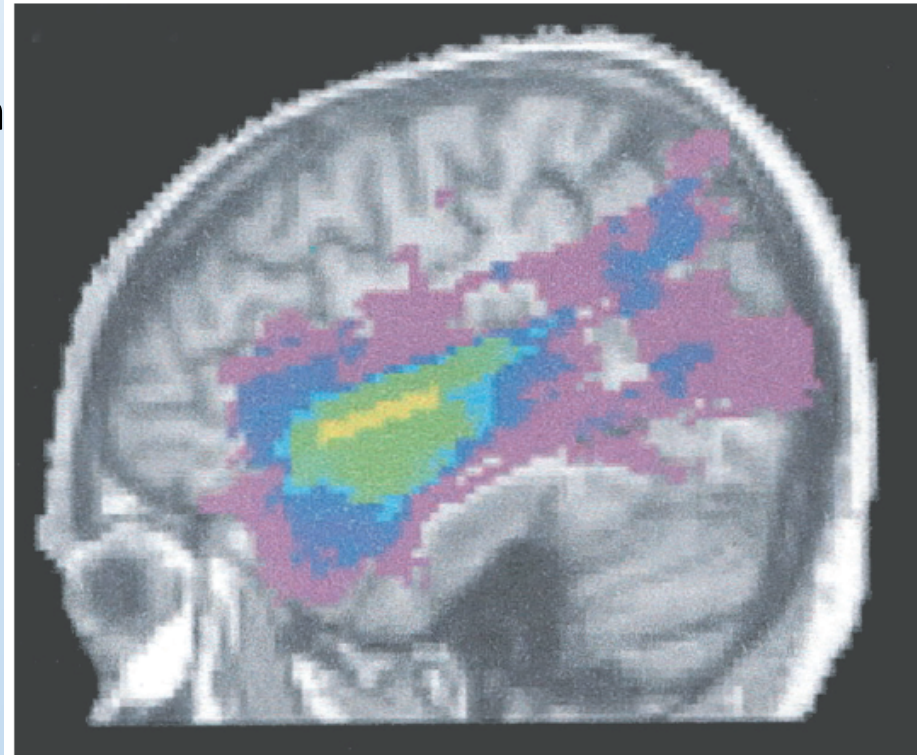
Expressive Aphasia

- Broca's aphasia –
 - Speech is very halting
 - Function words are omitted (*it, is, to, a, etc.*)
 - Pronunciation is simplified (*spoon > poon, etc.*)
 - Inflectional endings are omitted (*running > run, etc.*)
- Broca's aphasics are aware of their language deficit



Wernicke's Aphasia (Brodman

- Fluent speech
- But contains many paraphasias
 - “girl”-“curl”, “bread”-“cake”
- Syntactical but empty sentences
- Cannot repeat words or sentences
- Unable to understand what they read or hear
- Usually no partial paralysis



Range of overlap



FIGURE 13.5 Speech Comprehension. The scan shows the overlap in the lesions of nine patients with deficits of speech comprehension. Note the similarity of the region of greatest overlap (yellow and green) with the damaged region shown in Figure 13.4.

Broca's aphasics & comprehension:

Relatively good comprehension of some sentences:

Can understand sentences like these:

The dog bit the woman.

The apple is red.

...but not these (because their meaning can't be inferred from the meaning of the nouns and verbs alone):

The car is pushed by the truck.

The girl whom the boy is pushing is tall.



2 ~~lane~~ lane,
~~London~~, ~~W1~~.
26 Sept. 1980.

Dear Dr. Warrington,

Thank you for your letter of September
26. I shall be pleased to be at your
office between 10-10:30 am on Friday
17th October.

I still find it very odd to be able to
write this letter but not to be able to
read it back a few minutes later.
I much appreciate the opportunity to

see you.

Yours sincerely,
Harry X.

Psycholinguistics

"Dear Dr. Warrington, Thank you for your letter of September the 16th. I shall be pleased to be at your office between 10-10:30 am on Friday 17th October. I still find it very odd to be able to write this letter but not to be able to read it back a few minutes later. I much appreciate the opportunity to see you. Yours sincerely, Harry X."