

Day 3

Language: Making It Up and Getting It Out

Questions to talk about

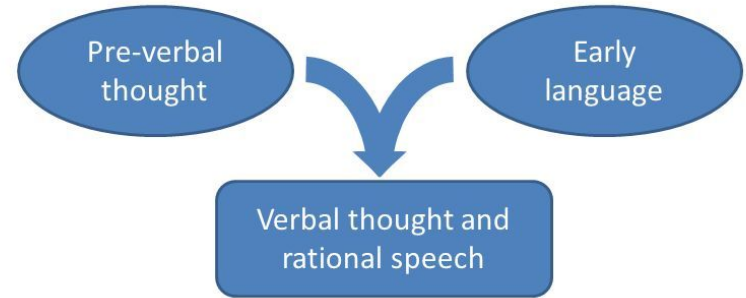
- ❑ What came first: language or thinking?
- ❑ What does a language do?
- ❑ How does the brain process language?
- ❑ What does “knowing” a language mean?
- ❑ Is there a connection between language use and brain health?

What does a language do?

- **Describes the world**
- **Shares experience or knowledge between people**
- **Declares the truth of something**
- **Gets someone to do something now or later**
- **Expresses feelings to or for someone or something**
- **Changes the state or condition of someone or something**
- **Finds things out**

Social basis of language and thought

1. Children always and only start learning their first language in a social context
2. Language serves two purposes in shaping children's brain development
 - a. A social purpose
 - b. A psychological purpose
3. Children apply the psychological purpose to talk to themselves (i.e., to think)
4. Children apply the social purpose to communicate with others
5. The psychological and social purposes act together to interpret and produce meaning



Some “brainy” assertions about language

“Language disguises thought.”

— Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*

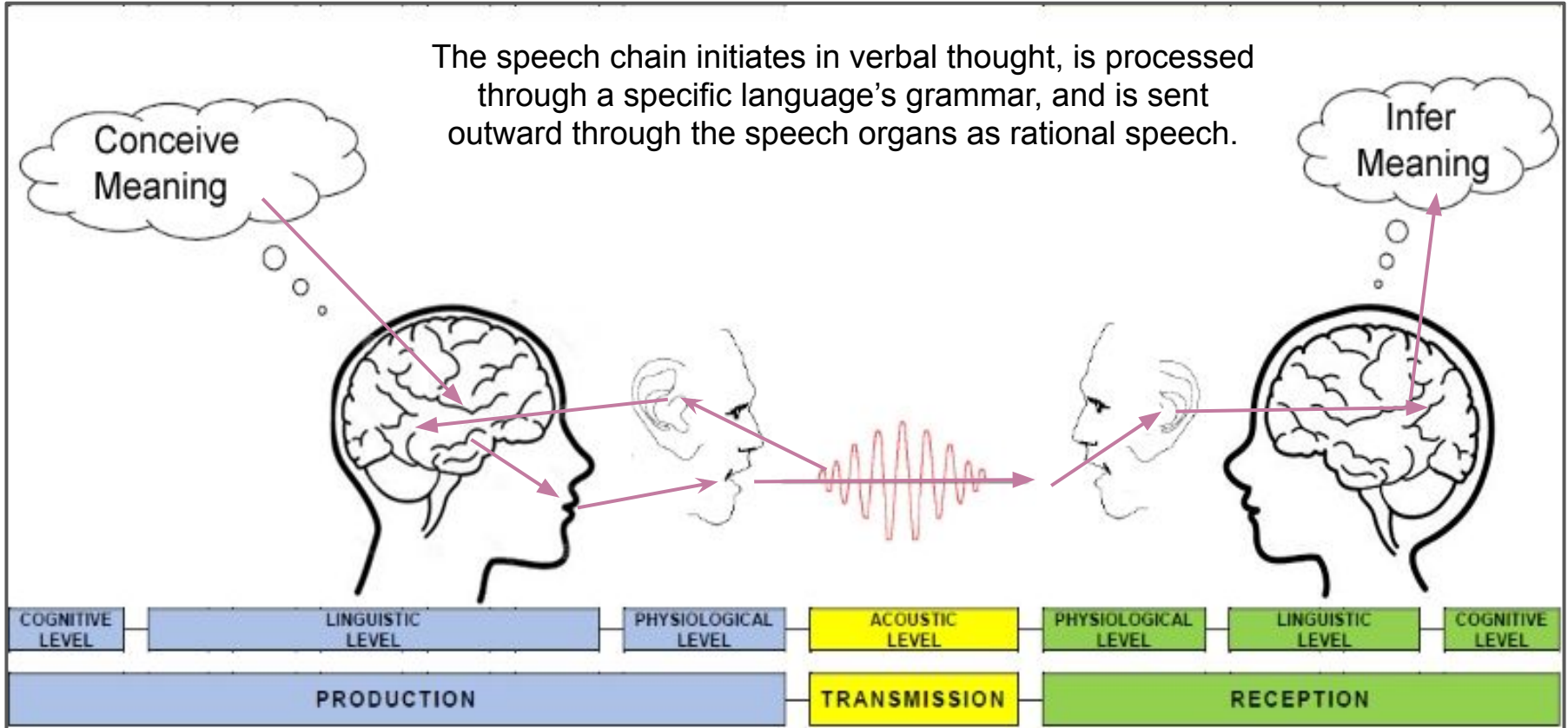
“As soon as we start putting our thoughts into words and sentences everything gets distorted, language is just no damn good—I use it because I have to, but I don’t put any trust in it.”

— Marcel Duchamp

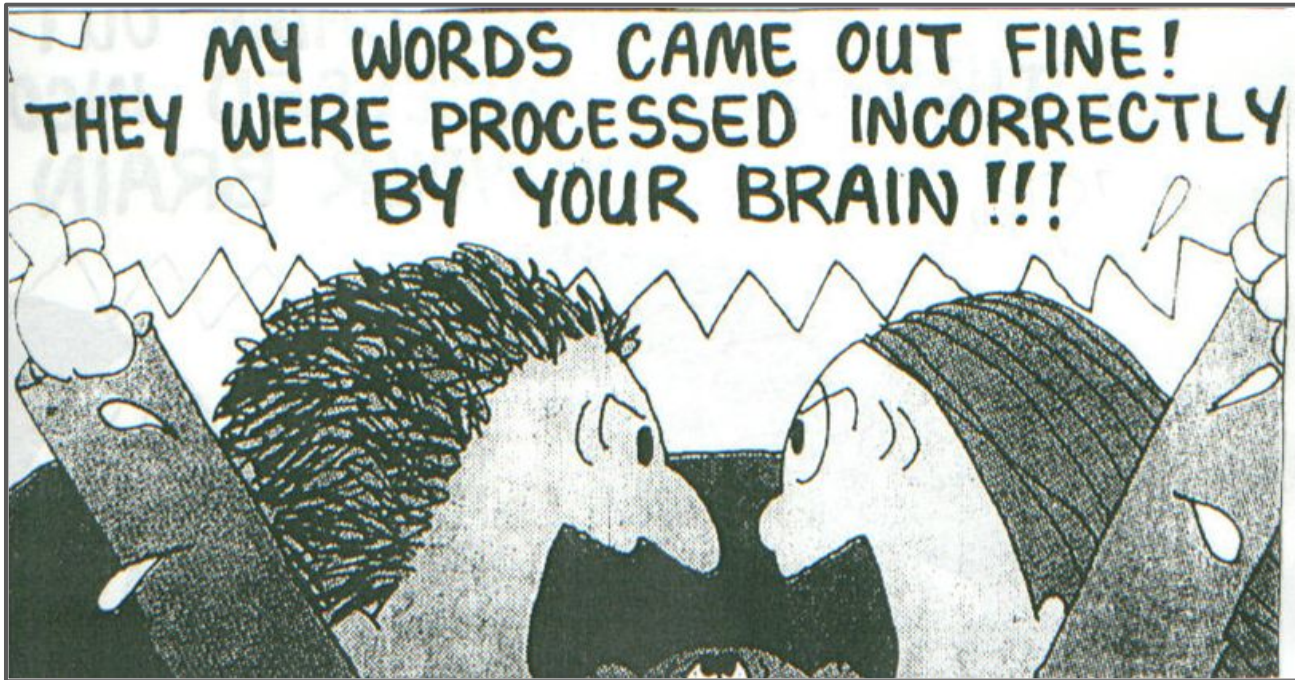
1. Language is a cognitive function unique to humans.
2. The purpose of language is to change the biological actions of others.
3. One’s early experience with language changes one’s own cognitive operations (Sapir-Whorf hypothesis)
4. The human body and its biology shape language structures.
5. All languages extend themselves through metaphors.
6. Language and thought are intricately related.
7. A language reflects what’s important in a cultural environment.

Speech and hearing chain

The speech chain initiates in verbal thought, is processed through a specific language's grammar, and is sent outward through the speech organs as rational speech.



Speech production and comprehension

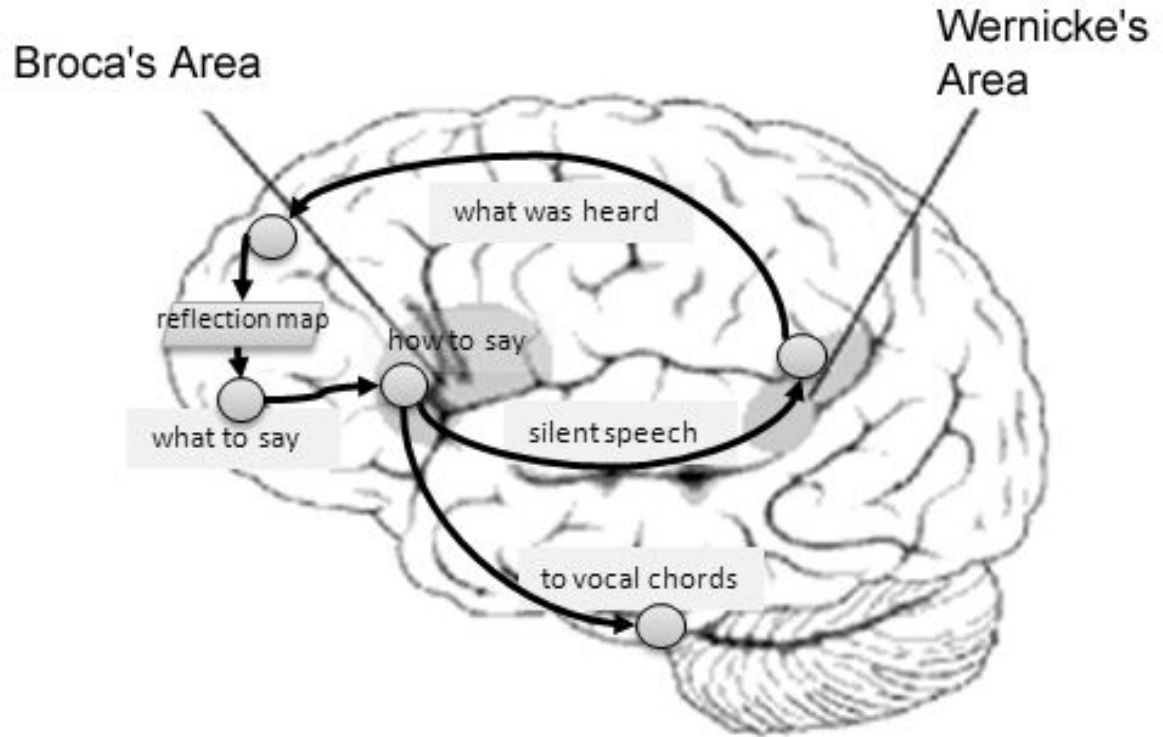


“It is the search for coherence [and relevance] that leads to the successful comprehension of utterances.”

— Diane Blakemore, *Relevance and Linguistic Meaning*

Your brain on language

The brain wires a feedback loop from the social to the inner speech processing areas, so people can monitor their own speech and make on-the-fly changes.



Speech and comprehension pathway in the brain

Mental processes involved in language processing

“Cultural meanings peculiar to a society often fail to migrate across anthropological or historical boundaries, but the basic mental processes that make these meanings possible are universal.”

— Mark Turner, *The Literary Mind*

Data

Perception

Attention

Emotion

Memory

Learning

Decision making

Motor control

Problem solving

Cultural
and
linguistic
filters

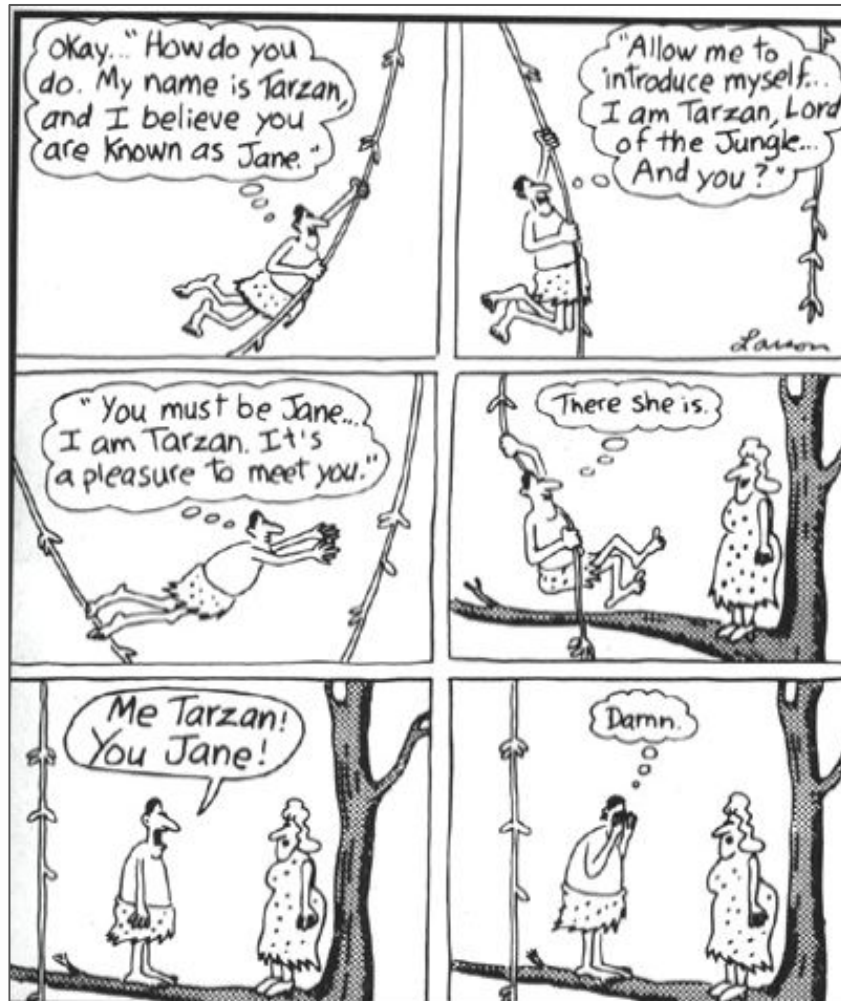
Internal
and
external
dialog

Tarzan thinks, Tarzan speaks

The **Knowledge** side
of language--grammar
(knowing about)

Versus

The **Using** side of
language--pragmatics
(making it happen)



How does a language do what it does

Basic tools of language:

- Words
- Constructions
- Phrases
- Sentences
- Discourse

Basic semantic constructions:

- Declarative expressions
- Hypothetical expressions
- Yes and no queries
- Wh queries
- Imperative expressions
- Exclamatory expressions

Basic discourse modes:

- Conversation
- Monologuing & storytelling
- Playing
- Interrogating
- Directing & commanding

All languages are wired to express certain things

Speaker's intent	Sentence & discourse type	
Naming	Nouns, verbs	
Positive vs negative	Yes and no	
Quantity & quality	Numbers adjectives, adverbs	
Context in space & time	Pointers, pronouns	
Location & motion	Prepositions	
Timing of events	Tense & aspect markers	
Causation and probability	Causatives, modals	
Classification	Gender markers	
New & old information	Articles; topic markers	

Putting stories together

Topics and Comments: New and Old Info

I saw *a boy* riding *a bike* on *the street*. Suddenly *a car* came along and knocked *him* down. *The boy* wasn't hurt, but *the bike* was badly damaged.

Na *ulicy* widziałem *jakiś chłopaka*, który jeździł na *rowerze*. Nagle nadjechał *samochód* i powalił *go* na ziemię. *Chłopiec* nie został ranny, ale *rower* został uszkodzony.

In English new info marked by “a”, old info by “the” or pronouns.

In Polish new info follows a verb, old info precedes a verb or is marked by a pronoun.

Actors and Actions

“The **falsification** of a **belief** in the **goodness** of politicians is often **abetted** by their criminal **behavior**.”

or

“**People** mostly **believe** that their politicians **act** for the common **good**. But a politician who **behaves** as a criminal **proves** that belief **false**.”

Why does the second passage work better?