

The Functional Model of Language Development

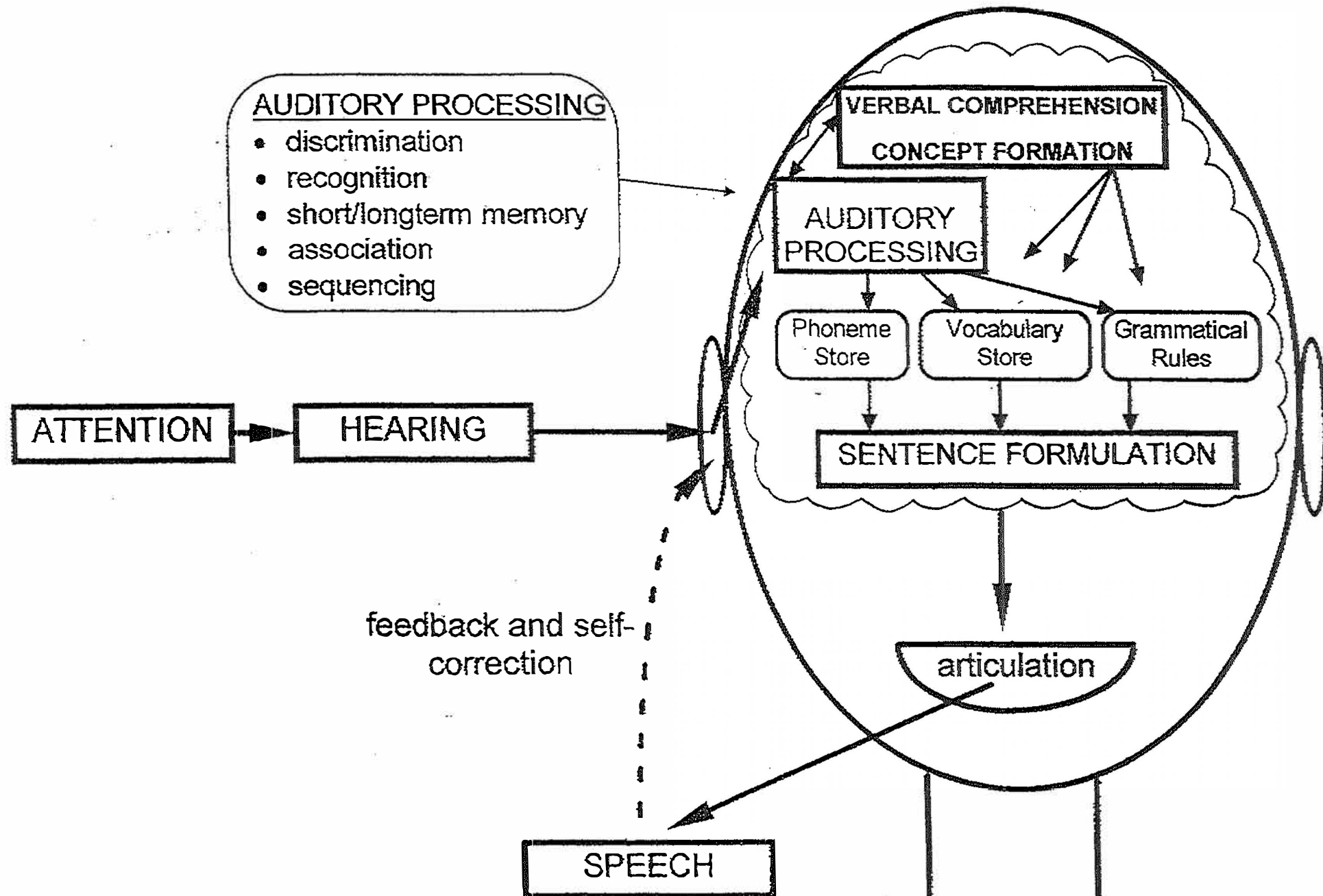
Acquiring and using speech and language involves a number of complex processes in the brain. This diagram illustrates very well what they are and how they relate to each other:

- The starting point is **attention**. Paying attention enables babies and toddlers to **hear** what people are saying.
- The sounds we hear pass through our ears and into the brain.
- Here, the brain uses various different processes to make sense of what it is hearing. This **auditory processing** stage involves **discriminating** different sounds and words; **recognising** words, sounds and phrases it has heard before; using its **memory** to learn them; **associating** words with things or situations and also with each other e.g. 'coat' means going out, 'knife and fork' belong together; and **sequencing** which means recognising that things need to be in the right order: compare 'top' and 'pot'
- Auditory processing enables the brain to make sense of what it is hearing and hence **understand** what people are saying. This in turn enables the brain to learn the meanings of words, and indeed the concept underlying them e.g. 'good' is a positive thing and 'bad' more negative.
- Auditory processing also enables the brain to learn and build up a stock of **phonemes** (sounds e.g. /t/, /r/), **vocabulary** (words) and **grammatical rules** e.g. one toy, two toys.
- All this knowledge enables the brain to then start forming sentences in a process known as **sentence formulation**
- The final stage, **articulation**, enables the child to use speech sounds to say the words they have in mind. At first these will not be very clear, but children keep listening to themselves and others and, with practice, gradually improve their speech.

This is a circular process, which begins when we are very young, and repeats throughout our lives, enabling us to continually refine and improve our language.

Babies realise quite quickly that talking is something quite important and will try and imitate it by **babbling** while they are still only a few months old. Once they start paying attention to people talking, it takes a while for their brains to begin to make sense of what they are hearing. But by around 12 months, they have usually learned enough to start producing their first recognisable words. From this point onwards, continual practice enables them to understand and learn more words and phrases, form longer sentences and produce clearer speech.

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