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How Humans Produce And Interpret Sentences Using Syntax

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Abstract: Humans are able to use languages freely and understand the meaning of languages. This universal linguistic ability of humans can be accounted for by “syntax” in our brains, for which I will provide three pieces of supportive evidence.

Introduction: linguistic ability of humans

We are able to use languages freely in our daily life. Specifically, our language ability has the following fundamental properties:

-can understand expressions with ambiguity:

e.g. American history teacher (Fabb (1998))

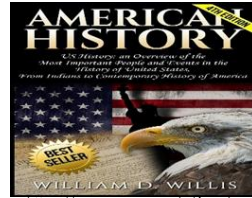
-can create very long sentences:

e.g. I think that Mary said that Tom insisted...

(Chomsky (1965))

-can produce sentences without sounds, i.e. inner speech (Chomsky (2019))

e.g. “It’s hot today” or “That looks delicious”



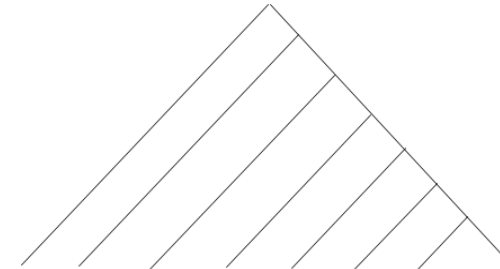
<https://www.amazon.co.jp/American-History-Overview-Important-Contemporary/dp/154042894X>



<https://www.wikihow.com/Become-a-History-Teacher>

Long expressions

I think that Mary said that Tom insisted...



I think that Mary said that Tom insisted

☞ Long expressions are produced by the repeated combining operations.

Inner Speech

“It’s hot today” or “That looks delicious” as inner speech

Sounds

Assign sounds to the combined words

↑
Syntax

Combine words

↑
Dictionary

Pick up words from the dictionary in the brain (Adapted from Chomsky (1995))

☞ Inner speech can be produced in syntax and don’t get sounds in the sound component.

Conclusion

Humans have syntax where we combine words, and through this component, we produce and understand linguistic expressions with ambiguity, create very long expressions and even sentences without sounds. Without syntax, we cannot explain these three properties, which supports the existence of syntax in humans.

References

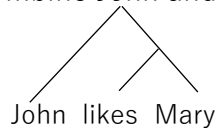
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 Chomsky, N. (2019). “UCLA lectures”. lingbuzz/005485.
 Fabb, N. (1998). “Compounding,” *The handbook of morphology*, ed. by A. Spencer, and A. M. Zwicky, 66–83, Oxford: Blackwell.

RQ: How can humans produce and interpret sentences?

In the framework of “Generative Grammar”, Chomsky (1995) suggests that syntax is a component inside our brains in which linguistic expressions are generated by combining words.

Step 1: Combine *likes* and *Mary*

Step 2: Combine *John* and *likes Mary*

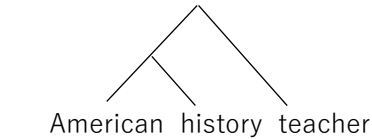


☞ This operation of combining words explains the fundamental properties of languages.

Ambiguity

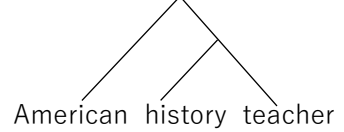
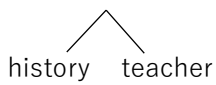
Step 1: Combine *American* and *history*

Step 2: Combine *American history* and *teacher*



Step1: Combine *history* and *teacher*

Step2: Combine *American* and *history teacher*



☞ The two different orders of combining words produce the ambiguities.