Linguistics E: Class 5 Quantization of language elements

1 Quantization of language elements

Q.1 Discuss what the smallest unit of language elements is.

Q.2 Can we think of linguistics that mimics quantum physics?

Q.3 If language elements can be quantized, how should we be aware of the difference between physics and linguistics?

Q.4 Discuss how to calculate quantized elements.

Q.5 Is there a universal grammar?

Q.6 Is language innate or learned?

Q.7 What's the relation of language to thought?

2 Context table

Q.8 Tokenize sentences into words and tabulate the context of every word.

Q.9 Discuss what features of a word can be represented by a vector by calculating the vector for each word using a context table.

Q.10 If there is a problem with this vectorization, discuss what the problem is.

3 Second language acquisition

Q.11 One student said that English was difficult but Korean was easy. What is the ease of learning language? Can you define the ease of learning language?

Q.12 Describe significant differences of acquisition between the first language and the second language.

Q.13 Does the acquisition of the first language depend on the structure of the language?

Q.14 Does the acquisition of a second language depend on the structure of the target language?

4 Complex/compound sentence

Q.15 To make a compound sentence, you must prepare two or more sentences. Discuss what words are used to connect sentences.

Q.16 There are cases where it is only necessary to arrange two s entences in a single sentence, or cases where it is necessary to make them into a compound sentence. Discuss the conditions that two sentences must be compounded.

5 AI and linguistics

Q.17 An information science professor said that linguistics has come to an end with AI, but is this true?

Q.18 Is it possible to teach AI the rules of language? If possible, how can we teach it? If not possible, what are the problems?

Q.19 Is it possible for AI to reveal how human cognition and thought are connected?