CONJUNCTION IN A NATURAL LANGUAGE

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Although in mathematical logic all statements can be assigned only one of the values 0 and 1, the situation is not the same in real life. On the contrary, it is often not possible to decide whether a statement is true or false, as the truth values of particular statements depend on the speaker's or listener's opinions, emotions, on the situation, etc. The same can be said in connection with conjunctions of statements. To investigate the principles according to which truth values of conjunctions are being produced from truth values of simple statements in real situations is the aim of our research.

We verify, whether (and which) of the four most commonly used triangular norms (minimum, product, Lukasiewicz, drastic product) can be applied to conjunctions of statements in a natural language, in particular the Slovak language. To this goal a statistical research is being carried out.

Respondents are asked to consider the truth values of 150 statements and to assign an integer from 1 (completely false) to 10 (completely true) to each one. From these 150 statements there are 70 simple ones and the rest are conjunctions of single ones, always including the conjunction in both orders. The order of all 150 statements is random, so that the respondents are not influenced by their previous answers.

Some interesting facts can be revealed enlightening the rules of conjunction in a natural language. These can become a basis for a more extended and complex research.