# Dictionary-based learning of conditionals

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I will present the core problems related to my doctoral dissertation, that is:

1. the development of a dictionary-based ontology of concepts for the purposes of interpreting certain conditional sentences of the natural language;
2. the relationship between the dictionaries and the probability assignment which allow me to later develop a probabilistic neural semantics for certain types of conditionals;
3. bases of the learning paradigm for learning concepts necessary for conditional analysis, where the learning function learns dictionaries by creating an empty dictionary for each concept, adding keys to it and adjusting the value for each key when hearing new sentences of the natural language;
4. a method of reconstucting logical inferences in terms of the newly obtained semantics.

Starting with the dictionary-based heuristics and developing it into semantics for logic of conditionals has several potential advantages. In particular, this type of approach:

1. provides an alternative to the standard interpretation of propositions in natural language sentences in the spirit of taking each proposition to express a property of an object (although we must be aware of the consequences of this approach),
2. yields a similar interpretation of conditional sentences as the possible-world approaches, but there is no talk of possible worlds as objects: in case of counterfactual conditionals we will create a copy of a dictionary and tenatitively tweak probabilities in it, no other objects are postulated,
3. creates a bridge (via the same underlying ontology) between the procedure for a learning function and logical inferences,
4. allows testing on neural networks (one can limit the number of concepts being used and generate sentences in order to test whether the neural network will yield results similar to the learning function),
5. allows the learner to spontaneously generate correct conditional sentences based on the probability ordering within the dictionary (by picking the key with the highest probability and creating a sub-sentence with this key).