Cognitive and sociocultural analysis of metaphoric expressions in Polish texts

Metaphor is a universal, conceptual mechanism of human communication which enables human beings to communicate in a flexible way, going far beyond common notions and their interdependencies. Initially it was commonly thought that metaphor is characteristic for literary, poetic language, and this thesis is still accepted in some scientific communities. However, the cognitive approach to language has shown that metaphor is commonly used by all language users.

Some metaphoric expressions become established in language, and their meaning drifts away from the primary, literal meaning of the verb. For instance, a *chick* is a young woman, one can *fly of the handle* while not even making a move, etc. Metaphors of that kind, called *conventional*, are recorded in dictionaries and should be detected directly on that basis. The phenomenon of *unconventional (novel) metaphor*, which results from the creativity of language users, is much more interesting. Metaphors of this kind cannot be registered in a dictionary.

For example, all three sentences (1) are metaphoric, but only the expression *wjeżdżać na stół* 'drive on table' has undergone the conventionalisation (is lexicalised).

(1) a. Ciasta znowu wjechały na stół.
    Cakes.NOM again drive.PAST on table.

    'Cakes were served again.'

  b. Ta sama ilość [ubrań], która wjeżdża do szafy, musi z niej wyjechać.
    the same amount [of cloths] that drive in wardrobe must out it drive.

    'The same amount of cloths that comes into a wardrobe has to come out of it.'

  c. Do Polski kapitalizm wjechał czołgiem i kompletnie nas staranował.
    To Poland capitalism drive.PAST tank.INST and completely we.ACC ram.PAST

    'Capitalism drove into Poland on a tank and smashed us completely.'

In this project, a corpus of real Polish texts annotated with respect to metaphoric expressions occurring in them together with their type and structure will be prepared. We plan to annotate a complex cognitive structure of metaphoric expressions for its subcorpus. A complete cognitive analysis of the occurrence of metaphoric expressions in the corpus with regard to their context and text genre will be performed. Moreover, we plan a sociocultural study of the role of metaphors for notions concerning our identities such as gender, family, self/other etc.

Algorithms for automatic detection of metaphor by means of computational linguistics methods will be developed. They will be based on the assumption that metaphoric expressions differ from standard ones in the characteristics of their constituents. For instance, for the verb *wjechać* 'drive, ride', typical arguments are an agent which can be a human being, an instrument which can be a vehicle, and a place which can be a particular region. Indeed, in sentence (2), *dziewczynka* 'girl' is an agent, *winda* 'lift' is an instrument and *piętro* 'floor' is a place.

(2) Dziewczynka wjechała windą na V piętro.
   Girl.NOM   ride lift.INST on V floor.

   'A girl took the lift on the fifth floor.'

However, the sentences (1) violate this rule to different degrees. *Cakes* and *clothes* are not human beings or even vehicles, but they are physical objects. On the other hand, *tank* is definitely a vehicle and it is heavy enough to *ram*, but *capitalism* is an abstract notion, completely different from the other, concrete notions.

Such tools can help researchers studying the phenomenon of metaphor from the purely linguistic, cognitive and sociocultural point of view, as well as psycholinguists, sociologists and psychologists. They could so far choose between artificial examples of metaphoric expressions from linguistic literature or created on the basis of their own language competence, or to laboriously search through texts for them.