The analysis of a learners' dictionary of multi-meaning words:

From the perspective of cognitive linguistics

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The purpose of this research project is to explore the semantic structures of basic polysemous Japanese verbs and their influence on the acquisition of such terms, as well as to apply these findings in education of Japanese as a second language, including the development of materials like dictionaries.

This year, the last year of this project, I investigated the development of a learners' dictionary, which has not been able to be conducted so far. Unlike some theories, such as generative grammar, cognitive linguistics does not address vocabulary and grammar separately, but deals with the acquisition of constructions and grammar on extension lines of vocabulary acquisition. Learners memorize words and sentences as a whole, at first, then, extract patterns or regularities from them, and finally, acquire them as grammatical rules or constructions. Therefore, cognitive linguistics makes much of vocabulary learning and teaching, and so, it assumes that a dictionary plays a significant role in vocabulary learning. Designed based on cognitive linguistics, some English dictionaries were published so far, but unfortunately, there haven't been any Japanese ones.

However, Japanese multi-meaning learners' dictionaries were published, the noun's and adjective's editions in 2011; and verb's in 2012. This investigation aims to explore the educational effects and improvements, focusing on the verb's edition. I investigated its educational benefits using questionnaires and interviews.

In sum, the aspects that were informed by theories within cognitive linguistics, including "network diagram", "relationship with superior meaning", "illustration", "cultural note" and "usage note" generally received high evaluations, and thus the insights from cognitive linguistics can be seen as useful for second language teaching and learning. However, the benefits differed in nature and extent, depending on whether the participant was a teacher or a learner, and if s/he was a teacher, whether s/he was native or non-native, and if s/he was a learner, how high his/her competence was, and so on.

Various concrete comments were written in the questionnaire. For instance, one respondent said of the "network diagram", "in the case where a word has quite many meanings, the diagram was too complicated to comprehend its semantic structure", and regarding "relationship with

superior meaning", the following responses were given: "it was not so easy to understand the explanation" or "it was difficult for me to understand since the explanations were written in Japanese". For the "illustration", the evaluations were generally good, however, contrary to expectations, users were not able to extract a common schema, called "super schema" of all the illustrations drawn for each of the meanings of words in the dictionary. For these points, further improvements are to be needed.

In conclusion, even though considerable cost and time was required for the investigation, I was able to make a number of findings that would never have been realized if I had not conducted the investigation. These suggestions will be helpful for the further development of the dictionary.

Despite these outcomes, there still exist a few issues to be solved. For instance, we did not have enough participants to make a truly detailed analysis. Moreover, we did not have a control group with which to compare the result, nor did we use a statistical operation to analyze the results, and so I was not able to get fully objective results. This could be problematic in the future.