

A Semantic-Based Approach to Noun-Noun Compound Interpretation

You-shan Chung* and Keh-Jiann Chen*

Abstract

In this project, we have studied Chinese noun-noun compounds (NNCs) and have found that N1 and N2 are linked either by semantic roles assigned by events (complex relations) or by static relations (simple relations), including meronymy, conjunction, and the host-attribute-value relation. Using data from the FrameNet and E-HowNet, we have found that, for NNCs of either type, the major semantic relations between the two components are limited enough to allow computational implementation. Regarding simple relations, most conjunction pairs have been listed in E-HowNet, and so are host-attribute-value sets. The E-HowNet Taxonomy also makes identification of meronymy possible. As for NNCs involving complex relations, each component's semantic role, along with the events that assign these roles, can be restored through mappings to corresponding frame elements (FEs) in entity and to event frames and lexical units (LUs) in FrameNet's frames, respectively, that represent the concept the NNC conveys.

Keywords: Noun-noun Compounds, Automatic Interpretation, Extended HowNet (E-HowNet), FrameNet

1. Introduction

Noun-noun compounds (henceforth NNC) are compounds composed of two nouns. For example:

麵包刀 *mianbao-dao* 'bread knife'

衛星城市 *weixin-chengshi* 'satellite city'

金融股 *jinrong-gu* 'stocks in the financial sector'

秋蟹 *qiu-xie* 'autumn crab'

* Institute of Information Science, Academia Sinica, Taipei, Taiwan
E-mail: {yschung, kchen}@iis.sinica.edu.tw