

# A Quantitative Analysis on the 17-19th Century Korean Culinary Manuscripts

Kihwang Lee\* Jae-yun Lee\*\*

The KNU Corpus of Late Chosun Culinary Manuscripts is a collection of 26 pre-modern Korean culinary texts. The source material was composed of more than 1,300 pages of culinary manuscripts hand-written mostly by the female members of noble families in late 18th to early 20th century. Since the source texts were transcribed in archaic cursive style and had no word spacing or punctuation marks, digitization process required some serious and hard work of trained researchers. In addition to the digitization of texts, rich morphological and semantic annotation was performed. Every single morpheme has been carefully identified, segmented and labeled with a pre-designated part-of-speech tag. The semantic annotation involved marking objects and actions of ingredients, measuring units, kitchenware, cooking and storing methods that are unique and essential elements of culinary texts. This article reports the result of quantitative text analysis based on network analysis methods on the corpus utilizing the rich semantic annotation. The first step was representing each recipe in the form of set of matrices reflecting co-occurrence patterns of cooking methods and ingredients, two key culinary elements found in the recipe. Then the matrices were mapped to networks of culinary elements and various quantitative operations including centrality and clustering analyses were applied on the networks. The results revealed many interesting facts such as ingredients that played important roles in pre-modern Korean cooking and the relative similarities of individual recipes and texts. In summary, we confirmed that the quantitative analysis methods provided very useful insights on understanding the pre-modern Korean culinary texts and cooking culture in 18 to early 20th century Korea in general.

**Keywords: Korean, Culinary Manuscripts, Quantitative Text Analysis, Corpus, Network Analysis**

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\* Research Professor, Institute for Language and Information Studies, Yonsei University. Email address: kihwang.lee@yonsei.ac.kr.

\*\* Assistant Professor, Department of Library and Information Science, Kyonggi University. Email address: memexlee@kyonggi.ac.kr.

# 十七至十九世紀朝鮮食譜手稿之量化分析

Kihwang Lee\* Jae-yun Lee\*\*

江原大學所整理的「朝鮮晚期食譜手稿」文件集，共收錄 26 件韓國現代化前的料理文獻；來源包括超過 1,300 頁的手稿，大部分是由 18 世紀末到 20 世紀初的貴族婦女親手抄寫的食譜。這些原始文件是以古代草書體抄寫，並沒有分段及標點。因此數位化的工作，不僅十分繁重，也需要由受過訓練的專家擔任。數位化後的文件，運用大量（語源及語意）的註記，將每個詞（語素）都很謹慎地識別出來，再予以斷詞；並用事先設計好的「句中詞」標籤，進行標記。這些食譜的語意註記，主要針對其中獨特且重要的元素，如食材、調味料、計量單位、食器、烹調與儲存方法等，進行標示。本文主要闡明如何以量化方法來進行文本分析的結果，利用大量的語意註記，將網絡分析的方法應用在這個文件集裡。首先將每樣食譜以一組的矩陣型式呈現，找出食譜中最重要的一項要素（烹調方法與調味料）同時出現之模式；再將這些矩陣對應到一個料理元素的網絡，然後在這個網絡上進行中心性和群聚分析等不同量化方法的操作。研究結果發現許多關於現代化前的韓國料理的有趣事實，例如調味料扮演非常重要的角色；而所有的食譜及文獻，幾乎都是大同小異。簡言之，本文證實量化分析方法，對於 18 至 20 世紀現代化前韓國烹飪文獻及飲食文化，提供非常有用的理解方法。

**關鍵字：**朝鮮、食譜手稿、量化文本分析、文件集、網絡分析

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\* 延世大學語言與資訊研究所教授，Email address: kihwang.lee@yonsei.ac.kr。

\*\* 京畿大學圖書資訊科學系助理教授，Email address: memexlee@kyonggi.ac.kr。