

A Methodology for Investigating Public Opinion Using Multilevel Text Analysis

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Abstract : Recently, many users have begun to frequently share their opinions on diverse issues using various social media. Therefore, numerous governments have attempted to establish or improve national policies according to the public opinions captured from various social media. In this paper, we indicate several limitations of the traditional approaches to analyze public opinion on science and technology and provide an alternative methodology to overcome these limitations. First, we distinguish between the science and technology analysis phase and the social issue analysis phase to reflect the fact that public opinion can be formed only when a certain science and technology is applied to a specific social issue. Next, we successively apply a start list and a stop list to acquire clarified and interesting results. Finally, to identify the most appropriate documents that fit with a given subject, we develop a new logical filter concept that consists of not only mere keywords but also a logical relationship among the keywords. This study then analyzes the possibilities for the practical use of the proposed methodology through its application to discover core issues and public opinions from 1,700,886 documents comprising SNS, blogs, news, and discussions.

Keywords : big data, social network analysis, text mining, topic modeling

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