Continued from previous page

Using the nodes (keywords) with the highest betweenness centrality values, the shared or unique key interests of each of the four countries were then identified and visualized, as presented in Figure 3. It can be observed that 'energy,' located in the center, was the key interest shared by all four countries. Common key interests are expressed as nodes placed between the respective countries, and unique interests are expressed as dots located along the periphery of each country node. Inflation (represented by 'price') was a common concern to the three Northeast Asian countries, and South Korea and Japan

also shared concerns about the missiles launched by North Korea. It is of interest to note that, for China, 'health' was identified to be a key interest, alongside 'development,' 'security,' and 'trade.' This suggests that the government's handling of the pandemic at home has come to be regarded as a key issue affecting government stability.

These results of Big Data analytics clearly show the complex security risks that have emerged due to the geopolitical shifts of the post-COVID-19 era. With the possibility of escalating military conflicts, such as those between Russia and Ukraine, the concept of 'security' has expanded and evolved to include responses to climate and

environmental crises, public health crises, the securing of value chains, protection of technological competitiveness, and well-controlled trade and economy. It will be interesting to trace the predictive nature of these results of big data analytics in order judge the viability of Big Data analytics as an alternative research tool for gaining insights into the region.

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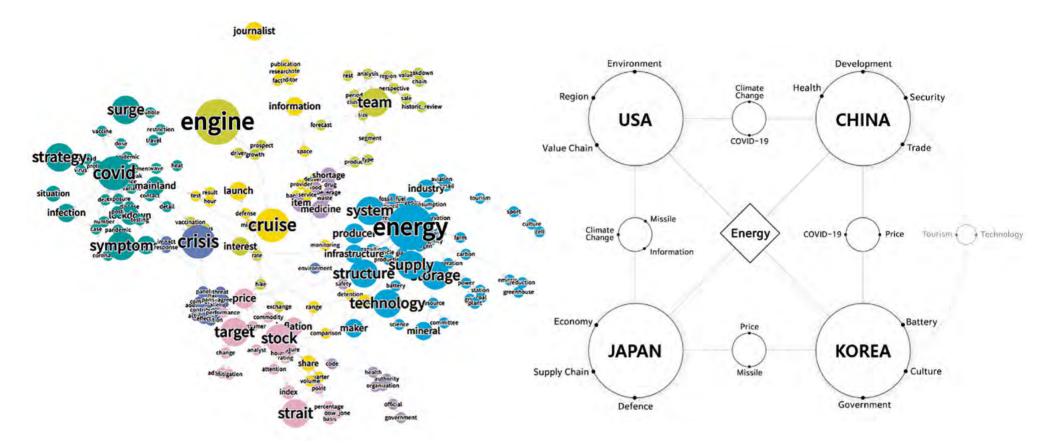
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Fig. 2 (below left): Semantic network of Asiarelated news articles from the English news outlets of South Korea, China, Japan and the USA (January 1, 2020 to Sept. 30, 2022). (Figure by the authors, 2023)

Fig. 3 (below right):
Shared or unique key
interests as seen through
Asia-related news articles
from the English news
outlets of South Korea,
China, Japan and the USA
(January 1, 2020 to Sept.
30, 2022). (Figure by the
authors, 2023)



Examining Northeast Asia's Cultural Heritage on the UNESCO World Heritage List through Data

Ilhong Ko, Minjae Zoh, and Junyoung Park



Fig. 1: Word cloud illustrating the most frequently occurring words in the official texts related to all of Asia's Cultural World Heritage Sites (n=187). (Figure by the authors, 2023)

he concept of 'World Heritage'
was conceived and developed in the
West by the UNESCO Organization
in 1972, and since the establishment of
the official World Heritage Convention,
almost all Asian countries have actively
designated their national heritage as
'World Heritage.' In principle, 'universalism'
is at the core of the World Heritage
Convention's concept of 'Outstanding

Universal Value (OUV).' However, because this framework was shaped and cemented in the West, this means that Western standards were and continue to be applied to other parts of the world, including Asia. With this in mind, data analytics can be used to question whether a pattern can be found to decipher a particular 'Asian' characteristic or strategy in the case of the sites of Northeast Asia.

According to the World Heritage Convention, the region of 'Asia' is categorized under 'Asia and the Pacific.' As of 2021, a total of 187 cultural heritage sites were registered within the 'Asia and the Pacific' region. The findings from quantitative data analysis reveal that the inscription of sites located in Asia began in 1979, a year after the first set of World Heritage Sites became designated in 1978. Iran (with three Cultural Heritage Sites) and Nepal (with one Cultural Heritage Site) were the first countries to designate. With the turn of the 1980s, South Asia was responsible for pushing up the inscription rate in Asia and then, in the 1990s, Northeast Asia began to govern the fluctuation patterns of the region. From that point forward, the fluctuation patterns for site inscriptions in Northeast Asia are mirrored by the fluctuation patterns for the whole of Asia.

Fig. 2-6 (right):
Word clouds illustrating
the most frequently
occurring words in the
official texts related to
a particular country's
Cultural World Heritage
Sites. (All figures by the
authors, 2023)

Fig. 2: China (n=37)
Fig. 3: South Korea (n=13)
Fig. 4: Japan (n=19)
Fig. 5: Mongolia (n=3)
Fig. 6: North Korea (n=2).

A total of 74 sites in Northeast Asia have been inscribed onto the World Cultural Heritage List: 37 sites in China, two sites North Korea, 19 sites in Japan, three sites in Mongolia, and 13 sites in South Korea. In order to identify how each of the countries of Northeast Asia perceive the way in which the value of their cultural heritage should be presented to the wider world, the OUV 'Brief synthesis' texts, 'Criteria' texts, 'Integrity' texts, and 'Authenticity' texts of the Cultural World Heritage Sites for each country were analyzed, with a particular focus on frequently occurring concepts.

The word clouds that were produced to visualize the most frequently occurring words/concepts per country reveal some interesting patterns that provide insights into both shared and distinctive perceptions regarding Cultural World Heritage among the countries of Northeast Asia. The word clouds presented in Figures 2-6 illustrate that 'management' and 'protection' are the common key concerns; this is also the case for all of Asia, as can be seen in Figure 1.

However, some notable differences can also be observed. In the case of China and Japan, it is interesting to see that the respective country names occur with high frequency. In contrast to this, for South Korea, the country name occurs with less frequency. This may be because the South Korean strategy of site inscription was to appeal to their 'universal' value. The fact that 'heritage' occurs with particularly high frequency in the texts for South Korea reflecting the intention to objectify the sites as (universal) heritage – is meaningful in this context, particularly given the fact that 'heritage' is an underused concept in the texts of Japan.

Finally, it can be observed that in the case of North Korea and Mongolia, description of the sites themselves, rather than discourse on the sites, features centrally in the official Cultural World Heritage documents. The fact that 'mountain' in the case of Mongolia and 'tomb' in the case of North Korea appear with high frequency attests to this fact.

This study used the 'distant reading' method of text analysis to deconstruct the discourse on Cultural World Heritage with great effect. Distant reading, a radical approach to the study of a large collection of texts that first emerged within the field of literary criticism, but which has since been used to great effect in numerous other disciplines, made the study of the large corpus of material associated with 87 sites a feasible endeavor. By adopting this method, the commonalities and differences in the heritage related discourse of the Northeast Asian countries could be identified, allowing a transition from national to regional narratives to take place. It is expected that further analyses on Asian heritage-related datasets using this approach will help bring together 'Asian Studies,' 'Heritage Studies,' and 'Digital Humanities.'

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