Research Proposal

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Title

"Domestic news flow"? : City and news attention

Problem statement

Almost every city nowadays has its news media, which cater to the news of their local communities. Although these media focus mainly on localized issues and events, not all the news items are about local affairs. To serve for trans-local needs, municipal news media cover a certain proportion of non-local news.

Not all cities attract media attention equally from other municipal news media; some cities are more news-salient than others. The topics of non-local news coverage are usually diverse, and which kinds of news are more popular are unknown. What's more, the news coverage between the two cities is usually unbalanced. For example, city A might cover a high level of news on city B but receive relatively less news attention.

Relevance of the study and embeddedness within existing literature

Places and news

What makes some places more newsworthy than others? Many scholars have studied this problem at the national level. According to news flow theory, today it is widely accepted that the prominence of a place in the news is attributed to three groups of variables: (a) traits of the place (e.g., the size and power of the place), (b) relatedness (namely, proximity to that place in terms of geography, demography, etc.) and (c) events (e.g., disasters, wars, conflict, local protest) (Balmas & Sheafer, 2013; Guo & Vargo, 2017).

Spatial social network analysis

Spatial social network analysis is an integration of spatial and social network

analysis used to understand the interactions between spatial and social dimensions of the built environment (Liu, Xu, & Ye, 2019), and it has been reflected in sociology, public health and organization science.

Objectives of the study

Traditional news flow studies usually referred to "international news flow" studies, news flow phenomena on a less micro aspect thus are less studied. The main purpose of this project is to explore "domestic news flow" phenomena at the municipal-level. Specifically, the project is going to (a) explore the relationship of city traits, news characteristics and news prominence; (b) map the urban network of media attention.

Methodology

Data collection

The project is going to use Chinese municipal-level newspapers as an example. The main reason for using China as an example is that the media system in each city is quite uniform. The newspaper industry in China operates on a dual-track system, which means that newspapers are not only regarded as the tools of propaganda by the Communist Party and the government but also enterprises that earn profits. The content of Chinese newspapers is diversified, including both ideological content and non-political content such as entertainment and sports. There are three layers in China newspaper system, namely, central-level, provincial-level, and municipal-level. Every city in China has an official newspaper which affiliated to the municipal Communist Party.

The data analyzed in this project include the traits of cities and the content of the municipal newspapers.

The data on the characteristic of cities (e.g., population, GDP) come primarily from the *China City Statistical Yearbook* compiled by the National Bureau of Statistics of China (NBSC) and from relevant statistics and reports. Corpus of municipal-level official daily newspapers will be downloaded from the Wisenews Database. The dataset will include the text of the articles, without advertisement or other content, as well as metadata such as the title of the article, the date published, the author name, the page number, and URLs of images associated with the article, if any.

Data Measurement

A weighted directed graph will be constructed using cities as nodes and cross-region news coverage as edges. Numbers of trans-region news items would be used to add weights to edges. More specifically, if the newspaper of city i has mentioned city j (i ≠ j) in a given period, then a directed link will be drawn from i to j and this would be denoted as $e_{i,j} = 1$. Otherwise, if the newspaper of city i has not mentioned city j, then $e_{i,j} = 0$. $num_{i,j}$ represents the number of news items that the newspaper of city i that mentioned city j (i≠j).

The importance of nodes in a specific network can be indicated with the node degrees. Based on the definitions of e_{ij} and num_{ij}, different kinds of node degrees can be calculated by the following formula.

Table 1. Definitions of different kinds of node degrees

Indices	Node degrees of range S^{city}	Node degrees of strength S^{num}
Out-degree	$S_i^{out,city} = \sum_{j=1}^{N} e_{i,j}$	$S_i^{out,num} = \sum_{j=1}^{N} num_{i,j}$
In-degree	$S_i^{in,city} = \sum_{j=1}^{N} e_{i,j}$	$S_i^{in,num} = \sum_{j=1}^{N} num_{i,j}$
Network degree	$s_i^{all,city} = s_i^{in,city} + s_i^{out,city}$	$s_i^{all,num} = s_i^{in,num} + s_i^{out,num}$

Data Analysis

The project will apply both traditional statistical methods and computational methods. Computational content analysis methods will be used to explore the place, sentiment (negativity or positivity) and topic (e.g., sports, politics) of news items. Traditional statistics methods (e.g., correlation analysis and multivariate regression analysis) will be applied to test the relationship among the traits of cities, characteristics of news, nodes degree of cities. Spatial social network analysis will be applied to map the results. Moreover, dates would be taken into consideration in the project to see the changes over time.

Limitations

The media ecosystem of China is different from other democratic countries, so the conclusions of the project may need to test empirically in other media environment.

Scientific and Societal relevance

The project will have theoretical and methodological contributions. The project has theoretical importance for better-understanding news flow among cities and sheds light on the geographical aspect of news value theory. Methodologically, the use of spatial social network analysis will allow us to obtain a more comprehensive picture of "domestic news flow" in China. Moreover, the methods may also be available to use on international news flow studies.

References:

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