Geography through the lens of Soviet propaganda: how cities are mentioned in the Daily News newsreel, 1954-1992

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People need mental maps to understand their spatial surroundings. Such maps are now studied extensively on the individual level by neuropsychologists, and their peculiar organization is well-established. Most importantly, they are out of scale: some parts of the space, which for one reason or another are important for a person, loom large and are out of proportion to their actual physical size. Similar distortions permeate the collective discourse of a society: some places, topics and narratives are regularly and even excessively talked about while others are neglected. This process is governed by a complex interplay of, on the one hand, habits, beliefs and stereotypes permeating society and, on the other hand, especially in authoritarian and totalitarian societies, narratives and norms imposed directively from the top down and supported by censorship.

Here we suggest a framework allowing to probe this phenomenon quantitatively by studying how geographical locations are mentioned in historical news. We argue that cities as geographical objects are particularly convenient for quantitative analysis: cities are numerous and have a well-defined size (population) spanning multiple orders of magnitude. This allows to construct relatively large datasets, allowing to probe a variety of geographical locations, and formulate and robustly check complex hypotheses.

We apply this framework to the study of historical Soviet newsreels. Newsreels are short news films shown in cinemas before the feature film. They were influential means of depicting the contemporary world for the cinema going audiences in the 20th century. Here we use the corpus of the Soviet Newsreel "Daily News" [Novosti Dnya / Khronika Nashikh Dney] covering the period from 1954 to the beginning of 1992, with several additional reels from earlier years, 1944-53. The reels are downloaded from the internet archive Net-Film (https://www.net-film.ru/en/) with permission of the owners and manually cleaned. The resulting corpus consists of more then 10000 short video stories, and metadata containing their outlines. We use this metadata to determine how many times each of the cities in a pre-set list (202 cities inside the USSR and 256 foreign cities) is mentioned.

To interpret this list, we construct a series of models in the following way. We assume that for each city there exist an underlying expected number of mentions, which depends on its attributes (population, geographical region, etc.) and some numerical parameters; and that actual observed number of mentions is a Poisson random variable with mean equal to expected number of mentions. We then find numerical parameters by maximizing the likelihood of the observed list of mentions. Systematic examination of the outliers of simpler models allows us to iteratively refine lists of attributes.

We show that mentioning of the cities in the USSR is strongly influenced by their geographical location (it is beneficial to be located close to Moscow, near Black or Baltic sea, in the Far East and in the Northern Kazakhstan and detrimental to be located in Central Asia, Trans-Caucasus, Eastern Ukraine and Western Siberia); administrative status (capitals of Union-level republics are over-represented while capitals of lower-level national units are heavily neglected) and prevalent industries (hydroelectricity and steelworks are overrepresented while coal-mining is underrepresented).

Mentioning of cities outside the USSR is governed by their political status (capitals dominate the list), geographical location (Europe is very heavily overrepresented) and, most importantly, their relations with the Soviet Union. Indeed, while all socialist countries are over-represented, the small group of most loyal Soviet allies (Poland, Czechoslovakia, East Germany, Hungary and Bulgaria) as well as USSR-friendly neutral countries (Austria and Finland) are particularly prominent.

We conceptualize the results by discussing forms of the "other" and "self" in Soviet worldview, and the roles these have played in the ideological discourse.