Infrastructural TPS Dependency of the News Media: Data as a Resource

This paper explores the structural implication of news media's infrastructural dependency upon third-parties. This paper argues that infrastructural dependency on third-party services (TPSs) undermines news media's ability to leverage digital data as a strategic resource. In the digital economy, the news media are already financially struggling because of deteriorating revenues from advertising and subscriptions, and infrastructural dependency further entails risk for the competitive situation of the news media.

At its core, the paper understands digital data as a resource for news media; that is, as an asset that can be used to reach the strategic goals of the organization. These goals may be, for example, editorial (using data to inform journalistic decisions), financial (selling advertisements or subscriptions), or technological (improving performance or usability of digital offerings). However, when news websites rely on TPSs as part of their digital infrastructure, they create a situation where the third-parties can also collect digital data. And this way, they deteriorate the value of the resource that the digital data constitutes for the news media in the digital economy. In doing so, the paper grounds itself theoretically through integrating perspectives from media management and economics (for understanding organizational matters), critical data studies (for digital power asymmetries), and journalism studies (for editorial implications).

Against this background, the paper asks what the resource position of the news media is in the digital economy, focusing specifically on digital data as a resource.

Empirically, the paper combines research data from multiple on-going studies. These studies cover at least the Nordics (Denmark, Finland, Norway, and Sweden), Singapore, Kenya, Brazil, Australia, and the US. For each of these countries, at least 50 general news websites are analyzed to map the

use of TPSs. The research data is collected through a Selenium-based Python script that registers all TPSs that a website "calls" when it loads. This way, the script emulates a visit to the website and exposes which third-parties a user comes into contact with upon visiting it.

At the time of this writing, the analysis is still on-going. However, analyses of the data from the (thoroughly digitized and largely GDPR-compliant) Nordic countries show that almost all news websites (97 %) rely on TPSs. Those TPSs are mainly used for advertisement delivery or analytics. And Google is by far the dominant actor in the network of TPSs, owning services that 73 % of the news websites have integrated in their digital infrastructures. This way, the preliminary analyses exhibit extensive dependencies that bring issues such as uneven resource control, structural lock-in, and implication for media autonomy into question.

The inclusion of research data from other countries in other media-systemic parts of the world adds a comparative element to the analysis, contributing to the understanding of the global geography of infrastructural dependency in the news media and their resource position in the digital economy. We expect to find national differences based of regulatory environments and market characteristics.