

DATA DURING A PANDEMIC

Harnessing the Potential of Data Visualization and Narratives Produced by Media and Public Actors in Times of Pandemic or Health Crisis



- **During times of pandemic, how is data produced and narrated by journalists and other information professionals?**
- **To what extent are audience interpretations shaped by levels of trust in the media, data literacy and preexisting beliefs?**
- **How might we improve data-narratives for better audience understanding?**

This project aims to improve the practices of actors (journalists and public institutions) producing and using data for public information purposes, in particular in the field of data-related stories and visualizations, to increase understanding and trust.



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RQs & method

WP1: Periodization and analysis of online data-related COVID-19 news stories

- Which indicators and data (and which related sources) were used during the Covid-19 pandemic?
- How were data sources presented, data-related narratives framed, and which controversies arose?

Method: computational methods (lexicometrics, topic modelling, named entity recognition), frame analysis

Early stages of data analysis

- Corpus of 184'000 online news articles created, cleaned and structured:
 - All stories from 5 partner news media between February 2020 and April 2022
 - Sub-corpora (Covid-19, Covid-19 data, dataviz)
- Abstract accepted for SGKM 2024 conference
- Abstract submitted for IAMCR 2024 conference
- Study of evolution of prevalence of data indicators, data visualizations and related frames
- Analysis of data sources and transparency

Hypotheses & preliminary results

- Hyp: as institutional data became more easily available, their use in news articles became increasingly dominant
- Hyp: data within visualizations rely on (the same) institutional data sources more than data in article texts do
- Hyp: the prevalence of different (classes of) indicators over time reflected the framing of the pandemic debate (and reinforced these frames)
- Hyp.: access to source data and transparency of data practices fell short of journalistic best practices

Partners

Media



Public sector



Journalism schools



Consortium



WP 2: Documenting and understanding data practices in newsrooms and beyond

- How did journalists work with data and related sources?
- How did they view their audiences' ability to interpret data and how did this shape their stories?

Method: interviews, case studies

Awaiting early results from WP1 to begin main phase of fieldwork

- Workshop with media and public sector partners
 - Main interview subjects identified
 - Data journalism study day planned with the field's leading experts
- Difficulty: overcoming issues related to memory recall

- Hyp: authorities and news media were very badly prepared in the early stages. However, a structured data ecosystem emerged following the first waves
- Hyp: Covid-19 fundamentally changed news outlets' and journalists' relationship with data and data practices

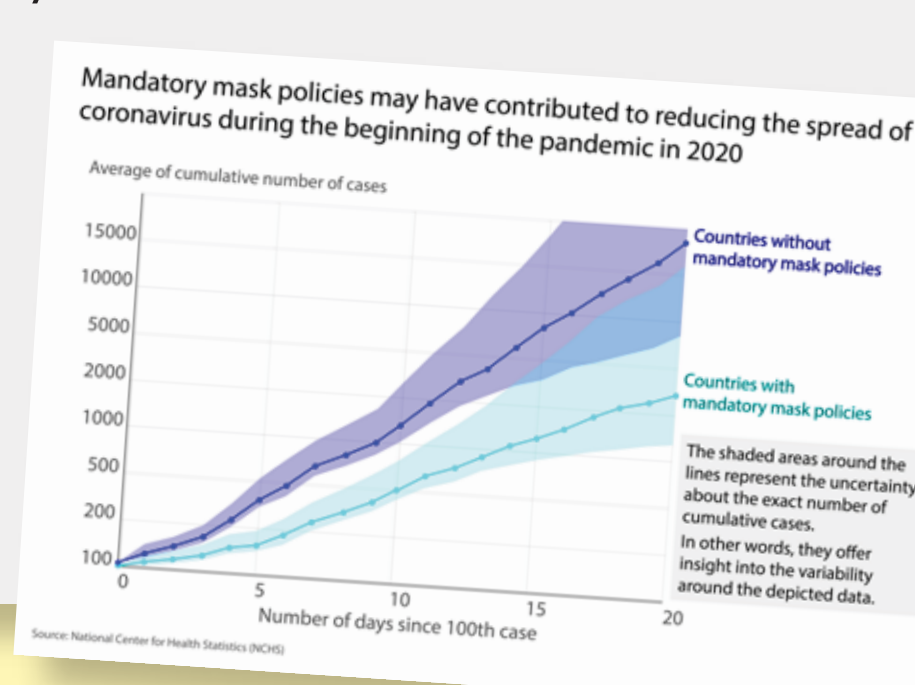
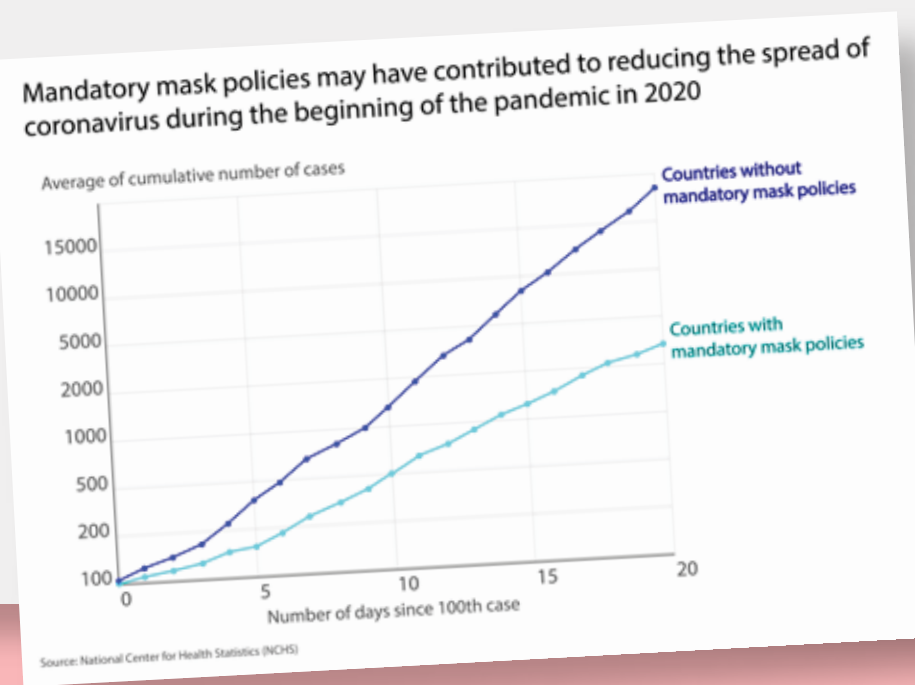
WP 3: Assessing data narrative interpretation according to individual characteristics

- Which factors influence the way people understand and trust data narratives?
- How do trust in the media, data literacy and preexisting beliefs shape audience interpretations?

Method: field and online experiments

First experiment conducted

- Experiment 1: manipulating visual uncertainty in charts
 - Abstract in preparation for submission for ACR 2024 conference
 - Next rounds of experiments in preparation
- Difficulty: establishing objective measures for assessing data literacy



- Prel. res.: visual uncertainty in charts reduces readers' understanding
- Pel. res.: aligned personal beliefs and high data literacy levels increase trust in data sources
- Prel. res.: when uncertainty is represented, people with higher levels of data literacy trust the data source more than those with lower levels
- Prel. res.: high understanding and high data literacy increase trust in the data source

WP 4: Designing and testing new interactive data narratives

- How to create better and more effective data-related narratives & visualizations during health crises?

Method: prototyping, audience testing, field experiments

Awaiting early results from WP2 & WP3

- Preliminary exploratory work underway
- Prototyping, testing & field experiments

Further information

<https://unine.ch/ajm/pnr-panda>
<https://nfp80.ch/>

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