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Reconfiguring territory and the media ecosystem in Pima County: Tensions between industrial transition, environment and health

- **The case of the Rosemont mine project (COMIN)**
- **The case of water shortages in a semi-arid climate in Arizona (TEREM)**

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with

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Catherine Brooks, *School of Information (University of Arizona)*

Scientific Goals

The scientific goal of our research is to analyze the publicization of debates on public policy orientations, socio-technical choices and alternative solutions put forward by players or groups of players, to deal with conflicting situations.

Two research questions

- We investigate, on the scale of a “subsistence territory” (Latour, 2017) and the relationships of codependence of its occupants, the “publicization process” (Cefaï, 1996) of debates and conflicts of use around different issues (water scarcity or hard rock mining)
- In the media, we examine the forms of visibility and invisibility (Voirol, 2005) of the individuals and collectives - with their positions and discourses - involved in these debates.

Theoretical background

Publicization and media coverage of public problems, Agenda-building theory, Stakeholder Theory, the pragma-dialectics model for argumentative analysis

The local press plays a central role in monitoring sensitive and crisis situations in environmental matters (Comby et al., 2014; 2011).

In the digital media, the choice of Twitter is based on the work of (Tavoschi et al., 2020) concerning the role of this platform in its ability to bring out, to make visible, issues that are not present, and therefore rendered invisible, in the written press

Instrumented Methodology

qualitative and quantitative approaches

Qualitative methods

Case studies in social sciences: ethnographic observations, semi-structured interviews, literature research

Corpus analysis: discourse analysis (enunciative, lexical, argumentative), analysis of discursive strategies using the linguistics concepts of pragma-dialectics model for argumentative analysis

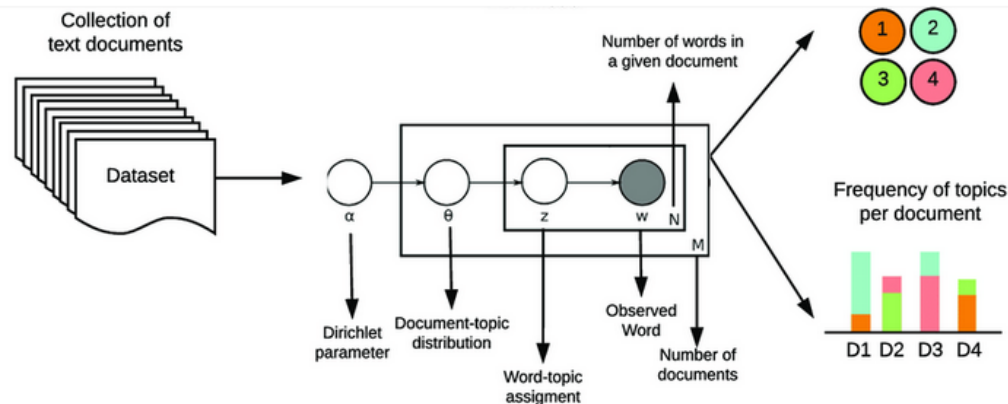


Instrumented Methodology

qualitative and quantitative approaches

A quantitative approach:

- **Identification of topics using** Unsupervised Learning by Probabilistic Latent Dirichlet Allocation (LDA) (Blei et al. 2003) : Building a generative probabilistic model to study the variation of topics over time, compare the distribution of topics between different articles or sources
- **Stakeholder identification in the press** by identifying named entities using deep learning tools (NLP tools, Named Entity Classifier),
- **Stakeholder identification on Twitter** using snowball sampling (Goodman, 1961)
- **Visual representations** as a heuristic method



Crédit : Revue IA, Adib Habbou

Corpora

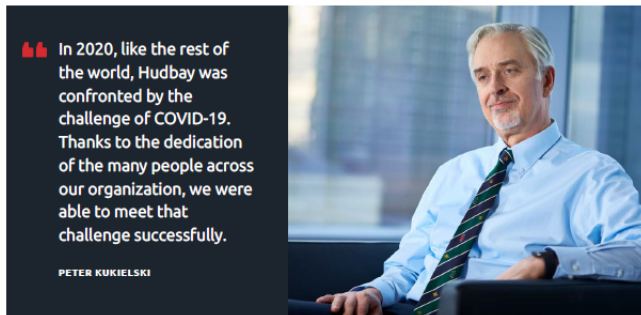
- Press corpora
- Posts on web sites (companies, activists, agencies, etc.)
- Reports from companies, local regional or federal agencies
- Twitter (until 2022)



CEO Message

Beyond the Pandemic Challenge

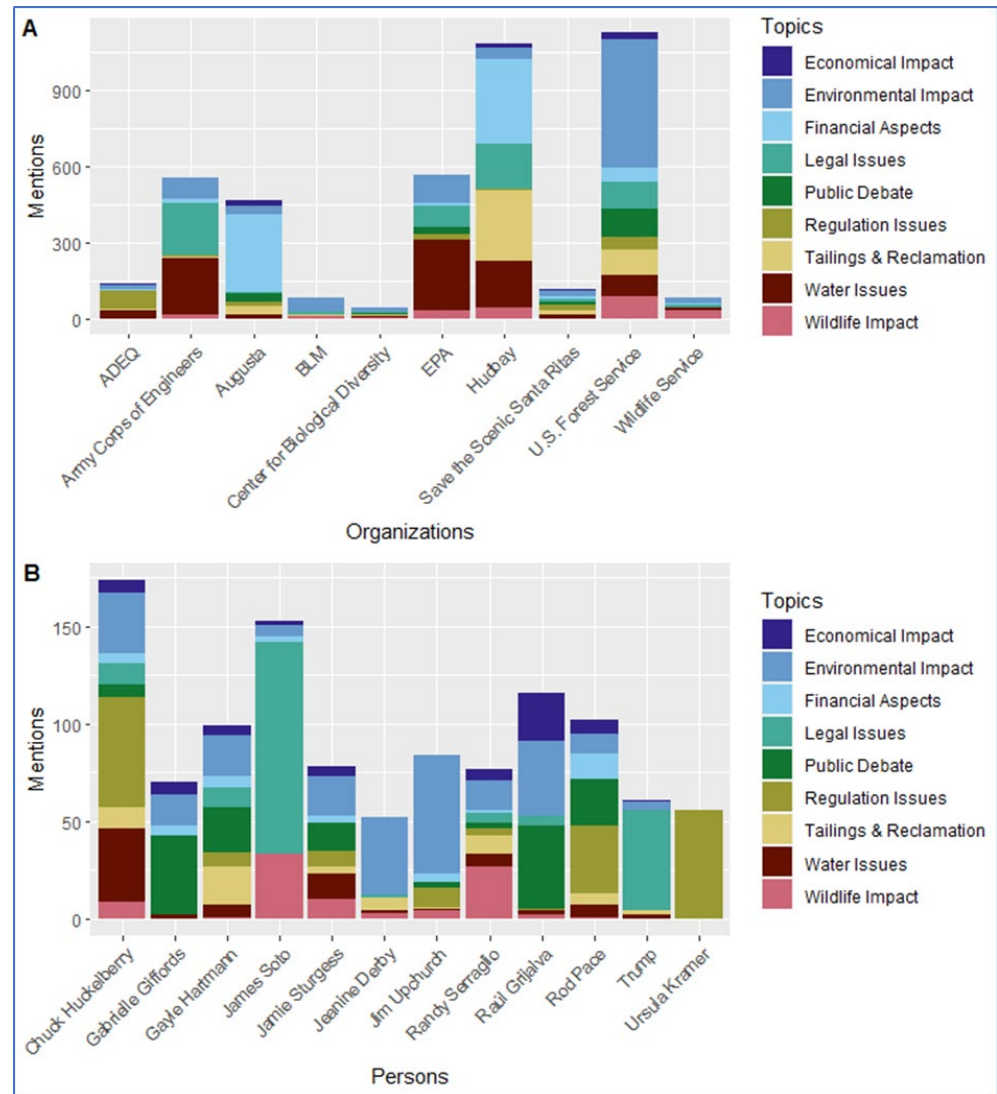
In 2020, like the rest of the world, Hudbay was confronted by the challenge of COVID-19. Thanks to the dedication of the many people across our organization, we were able to meet that challenge successfully and protect the well-being of our employees and communities while continuing our operations. Beyond COVID-19, 2020 was a year defined by delivery, in which we met our guidance, delivered on our commitments, made progress on key projects, and continued to invest in our organization and culture. Against a background of challenging political situations, we acknowledged the imperative of addressing climate change, and a renewed expectation that businesses must contribute to building a more inclusive society. While this combined annual and sustainability report focuses on what we achieved in 2020, I see these accomplishments as the foundation for long-term growth and exceptional results.



Some findings

Rosemont case

- Pro-mine positions are linked to the powerful world of the mining industry and business groups, whereas the resistance comes from civil associations of local opponents, a prominent environmental advocacy group, the County and the native tribes that use the land.
- The local printed press highly quotes and reports speeches from enunciators in position of power and authority.



Some main findings



Rosemont case

Paradoxically, the mining company appears to promote the energy transition, participating in efforts to support America's transition to a cleaner future, while ignoring the consequences on health and ecosystems of an open pit mine, and asserting its corporate “values” on sustainability towards environment and communities at a local level.

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WHY COPPER?

Copper is a fundamental part of life today and an indispensable part of the future. It is an essential component in the computers, servers, tablets and smartphones that keep people connected. And as the world transitions away from carbon-based infrastructure to electric vehicles and renewable power, demand for copper – already among the most heavily consumed metals in the world – is only going to grow. The typical battery-powered electric vehicle, for example, requires approximately four times more copper than a conventional internal combustion engine vehicle.

Copper helped usher in modern civilization thousands of years ago and has been contributing to the advancement of humankind ever since. It is affordable, adaptable and ever present – an essential and necessary part of modern life today and tomorrow.

Some findings

Water shortages in a semi-arid climate in Arizona

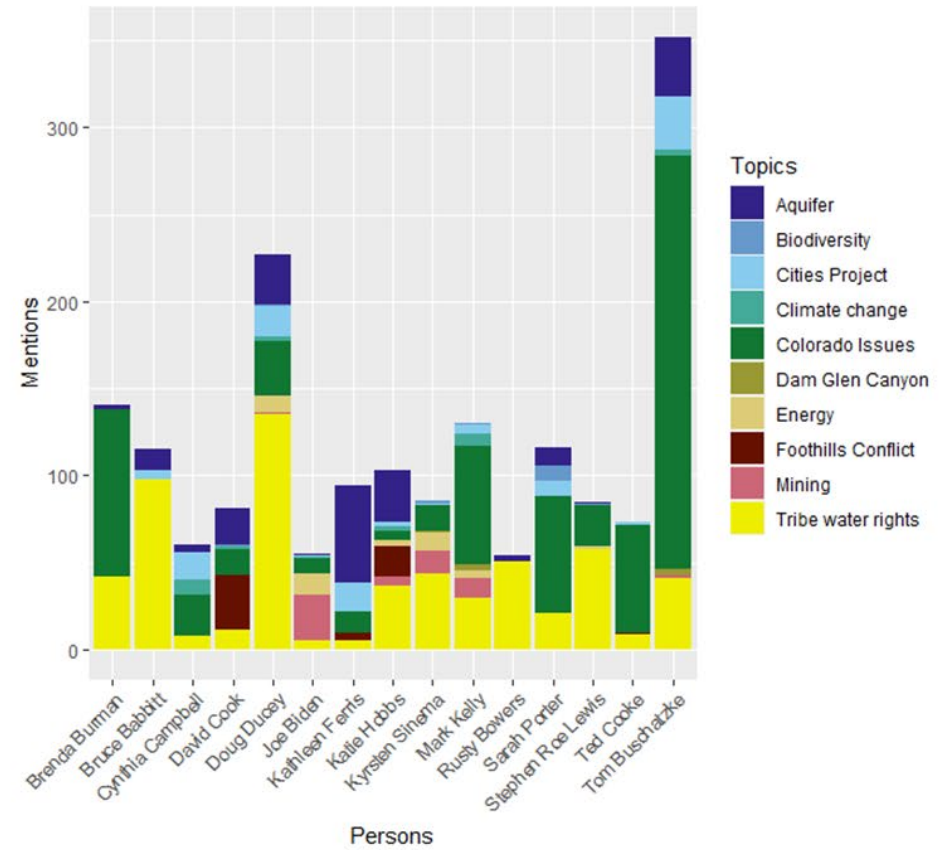
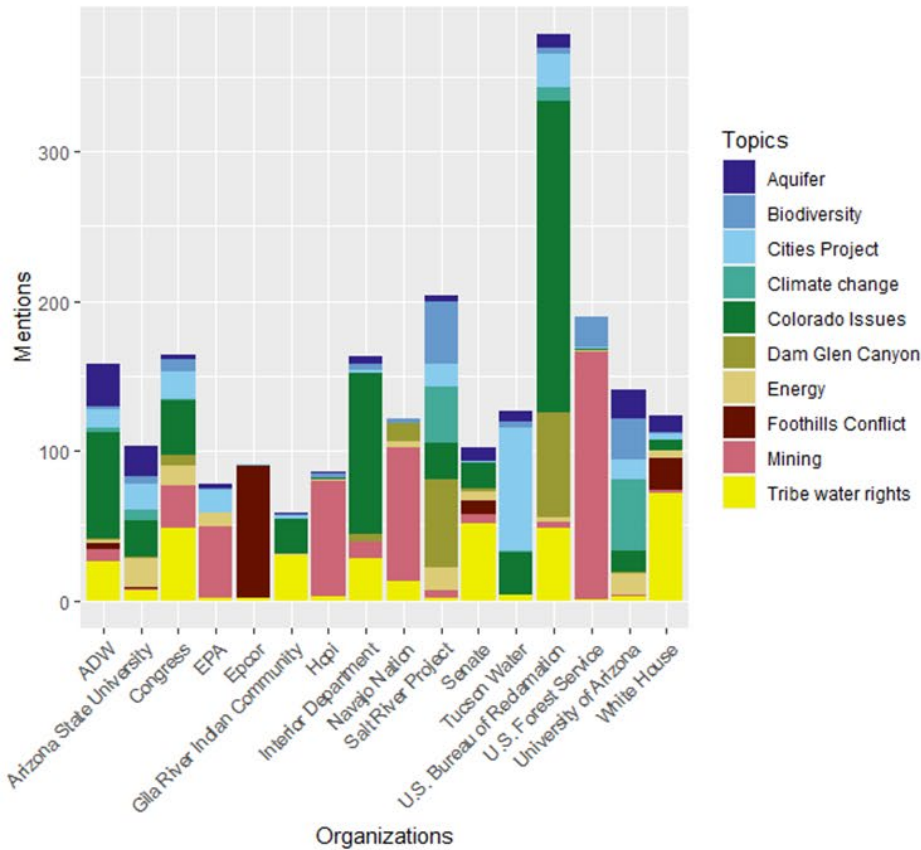
The question of the visibility of aspects related to water shortages has shown the orientations of the press in publicizing debates and the positions taken by players:

- the choice of industrial development supported by the policies of the State of Arizona,
- the priority given to economic objectives,
- the emergence of consideration for the preservation and balance of ecosystems favoring healthy environments.



Some findings

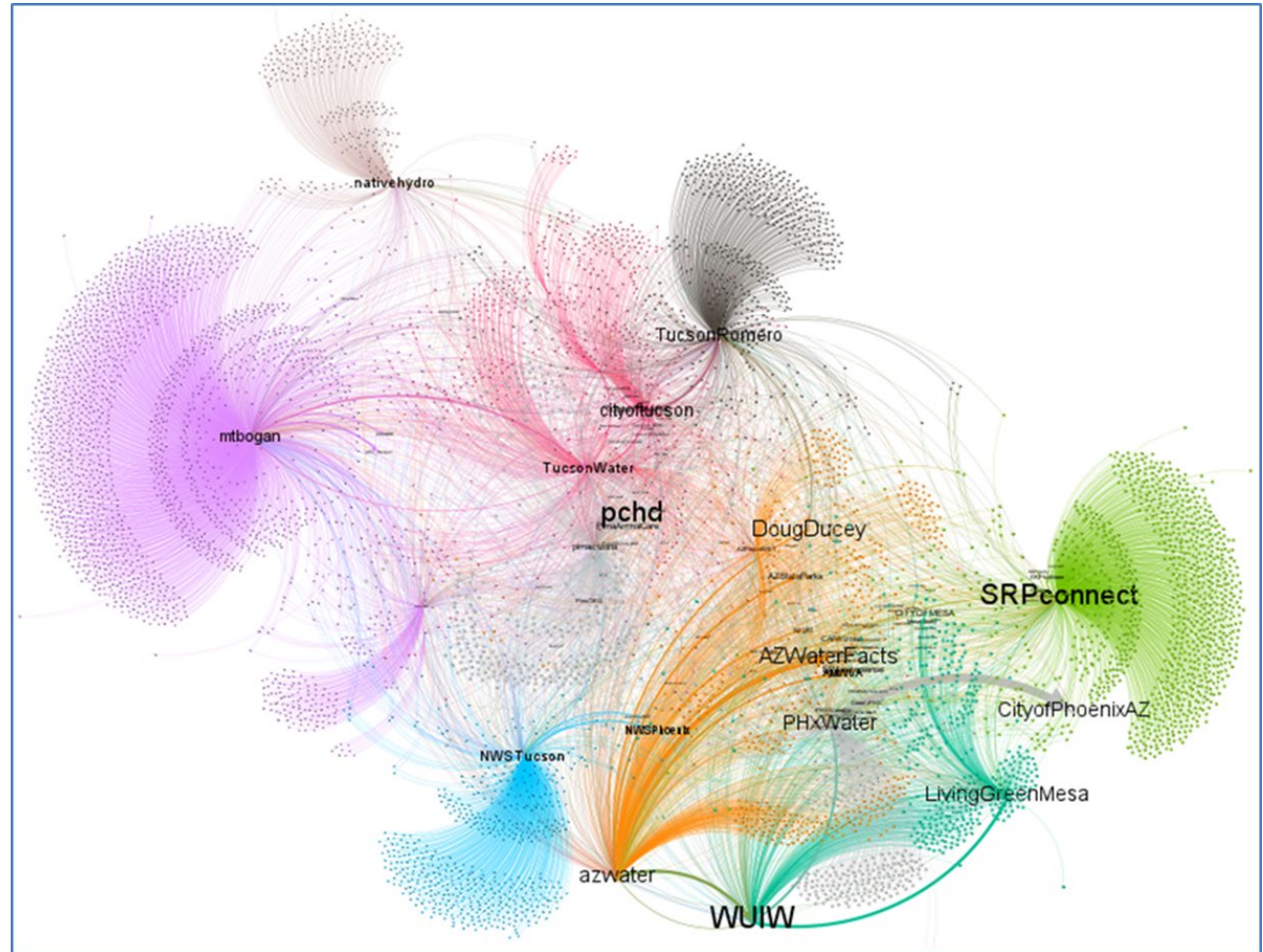
Water shortages in a semi-arid climate in Arizona



Some main findings

Water shortages in a semi-arid climate in Arizona

Comparing the press with Twitter, shows no major differences in terms of the actors put forward. This finding can be explained by the persistence of the bureaucratic model of the "big water machine" (Fleck, 2016) in the southwestern United States.



Conclusion

The synergy of field research and media analysis underscores the peril of media narratives fixating solely on major players large-scale, headline-grabbing technical projects, like seawater desalination.

This singular focus tends to overshadow the spectrum of smaller-scale alternatives already in practice, tailored to the locality, aimed at accommodating the region, particularly its urban centers, to the challenges of a hotter, water-scarce environment

In Arizona, deemed a "sentinel territory," the challenges posed by water scarcity are sparking discussions and shaping policy orientations and decisions. Analyzing these developments helps fortify and facilitate discussions surrounding the drought management toolkit across various scales: global, national, regional, and local.

Publications (2023 -2024)

Journals

- Boyer, AL., Juanals, B., Minel JL. (2024). Débats médiatisés et numériques sur la sécheresse. Le cas des pénuries d'eau dans un climat semi-aride en Arizona, *Communiquer* (accepted)
- Brooks, C. Juanals, B., Minel, JL. (2024), Environmental Debates in the Media: The Case of Hardrock Mining in Arizona and Energy Transition Dilemmas, *Sage Open* (in revision)
- Boyer, AL., Juanals, B., Minel JL. (2024). Analyzing the Publicization of Drought Debates in Arizona Newspapers, *Communications in Computer and Information Science, Advances in Computational Collective Intelligence*, Springer, (Submitted)

Publications (2023 -2024)

Conferences

- Boyer, AL., Juanals, B., Minel JL. (2024). Drought Awareness. Exploring the forms of partnerships in the process of publicizing drought in the media, *WRRC 2024 Annual Conference*, Tucson, Poster
- Brooks, C. Juanals, B., Minel, JL (2023), Agenda building and topic modeling for analyzing environmental debates in the energy transition era: A case study in hardrock mining. *International Association for Media and Communication Research*, Lyon
- Brooks, C. Juanals, B., Minel, JL (2023). Copper Mining in Arizona in the Era of Climate Change : Analyzing Press Coverage and Digital Media.. *73rd Annual ICA Conference.*, *International Communication Association*, Toronto.
- Boyer ,AL., Juanals, B., Minel JL. (2023). Analyzing the forms of visibility and invisibility in the process of publicizing drought: Methodological proposals. *International Symposium of LabEx DRIIHM* , Strasbourg, Poster

Publications (2023 -2024)

Photodocumentary

- Boyer, AL., Juanals, B., Minel JL. (2024). Hydrological drought, discussing solutions. The case of water shortages in Arizona's semi-arid climate (release in May 2024)



Thank you for your attention

