How Discourse Shapes Dam Decision Making: News Stories as Sites of Meaning

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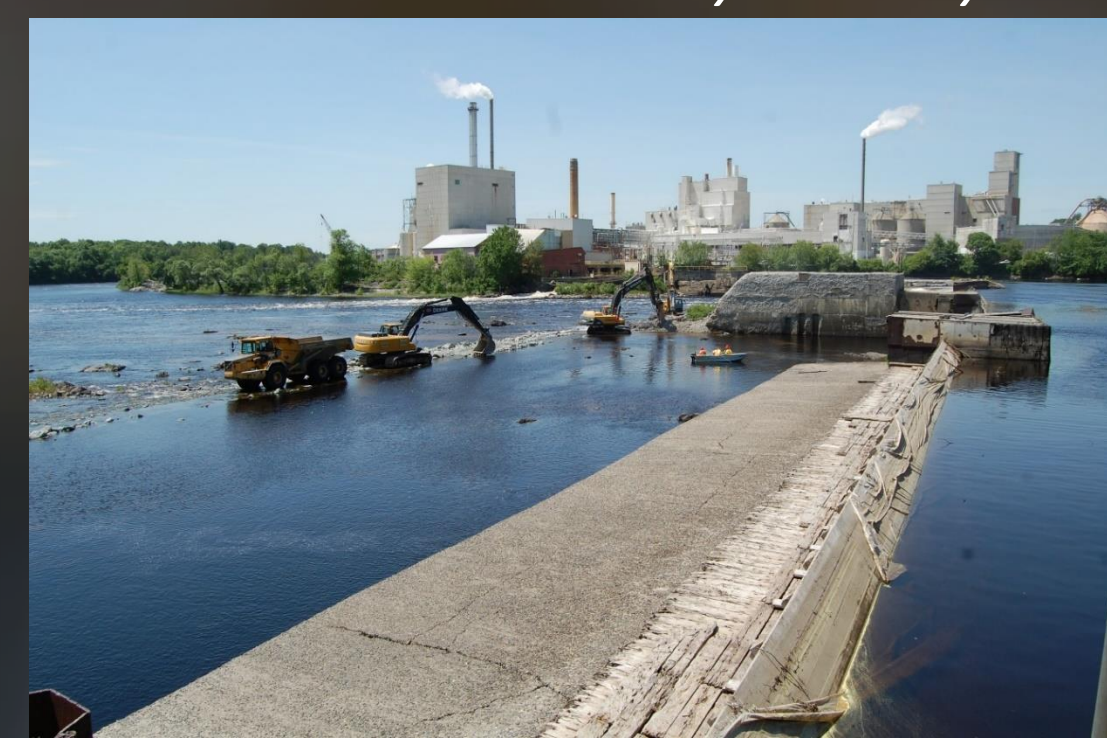
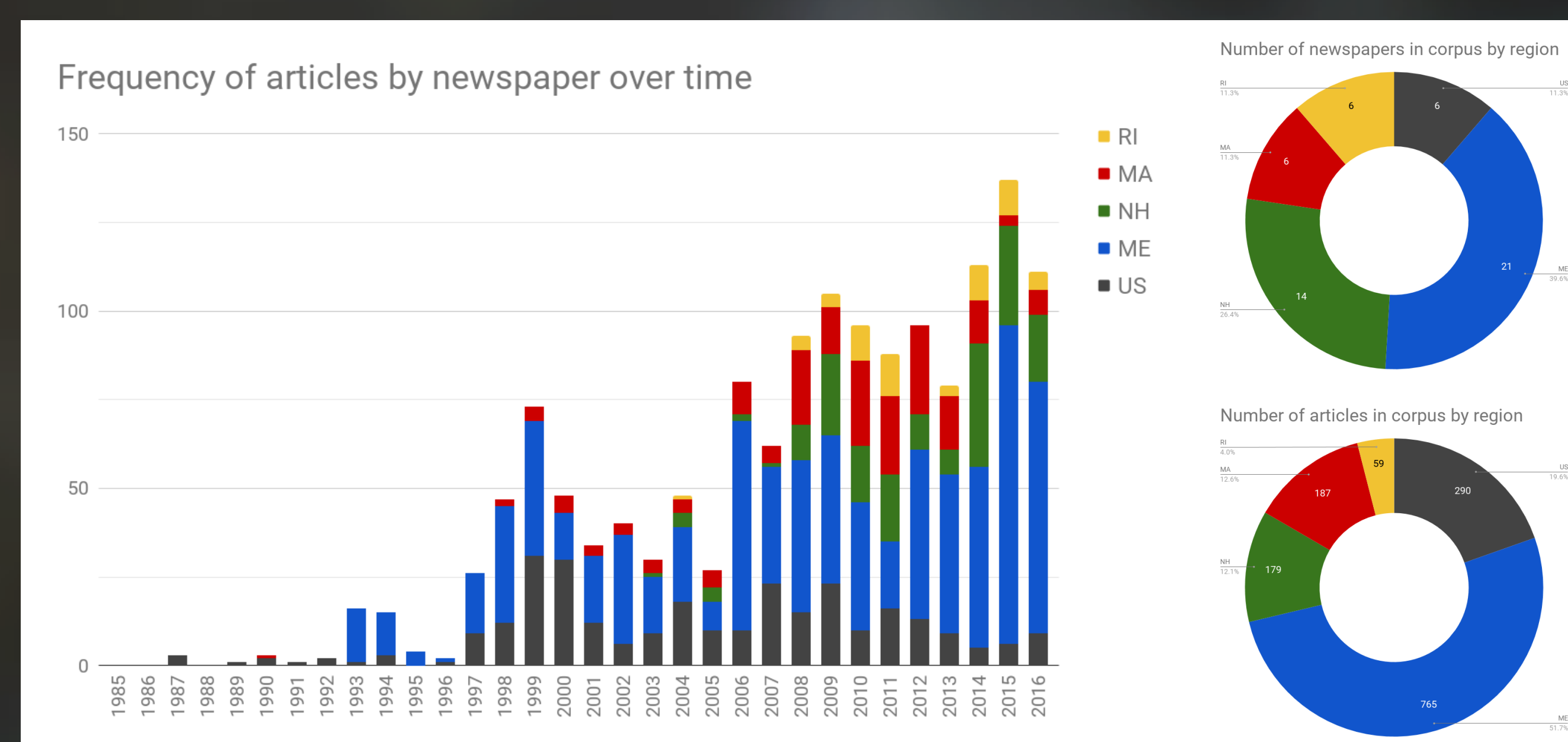## Research Problem

Photo by Josh Royte

- There are more than 14,000 dams in New England, which connect with a complex set of uses, issues, and perspectives.
- As dams age, communities need to make decisions about them.
- News reporting informs discussions and decisions, and knowing how news media report about dams can support efforts to connect science and other forms of knowledge with dam decision making.
- Sharing media discourse texts and analytical processes across disciplines can shape the possibilities for collaborative research.

Key Terms and Concepts

- **Discourse** refers to how groups make sense of issues, and news media are important because they shape this process.
- **Boundary objects** are things like maps, diagrams, and other outputs that provide opportunities to negotiate across difference. Our media discourse analysis database has become a boundary object for our engaged research with collaborators and decision makers.

Characteristics of Corpus

- 1480 articles about dams and dam removal from 53 New England regional and U.S. national newspapers reporting over 30 years.
- Excel database of articles compiled from LexisNexis and ProQuest databases (search terms: "dam removal" and "remove the dam").

Frequency of articles by newspaper over time

Number of newspapers in corpus by region: RI, MA, NH, ME, US

Number of articles in corpus by region

Discourse Analytic Methods

This study is part of the Future of Dams project (FoD), an effort by the New England Sustainability Consortium (NEST). NEST is a team of more than 80 researchers collaborating across 6 institutions in Maine, New Hampshire, and Rhode Island. Because of this unique context, we decided to design our data collection and analysis in ways that can draw on and enrich a range of collaborative approaches and capacities. Specific methods include:

- Ongoing thematic qualitative coding based on close readings of texts and iterative development of a collaborative codebook.

- Mixed-method content analysis to identify decision criteria and alternatives and support participatory economic modeling.

- Pattern analysis using R to thematically summarize the corpus.

- Quantitative content analysis to identify major stakeholders and support participant selection for interviews and workshops.

- Close readings of a sampled corpus subset with inter-coder reliability to enhance accuracy of an automated content analysis in Python to determine which dams are mentioned in the corpus.

Articles Mentioning Penobscot Nation

Articles Mentioning Penobscot Trust

Articles Mentioning Penobscot Project

These graphs compare how many articles per year in our corpus refer to the Penobscot Nation (top), Penobscot Trust (middle), and Penobscot Project (bottom). Quantitative analyses like these can support qualitative coding.

Excerpts and Insights

As we and our collaborators work with this database, several themes are emerging:

Material and perceptual expressions of decision making success
- Discourse associated with the prominent Penobscot River Restoration Project expresses both a change in material conditions of the river and a variety of stakeholder attitudes toward the project.

"It's important that everybody knows what an uplifting experience it has been for the tribe to be part of a project where we were given a lot of deference and our opinions were valued." (Native nation representative)

- Conversely, the discourse surrounding the town of Orland's 2016 decision to maintain an ailing dam illustrates tensions between cultural values, biodiversity, and decision making under uncertainty:

"Aesthetics are the main thing," Barlow said. "What will it look like? We have seen some options, but there are still some unknowns." (Municipal official)

"Advocates of dam removal said that option would be beneficial to the alewife run by making it easier for the species to get upstream. They also said dam removal could encourage other species of fish, birds and marine mammals to find a habitat on the Narramissic River." (Journalist)

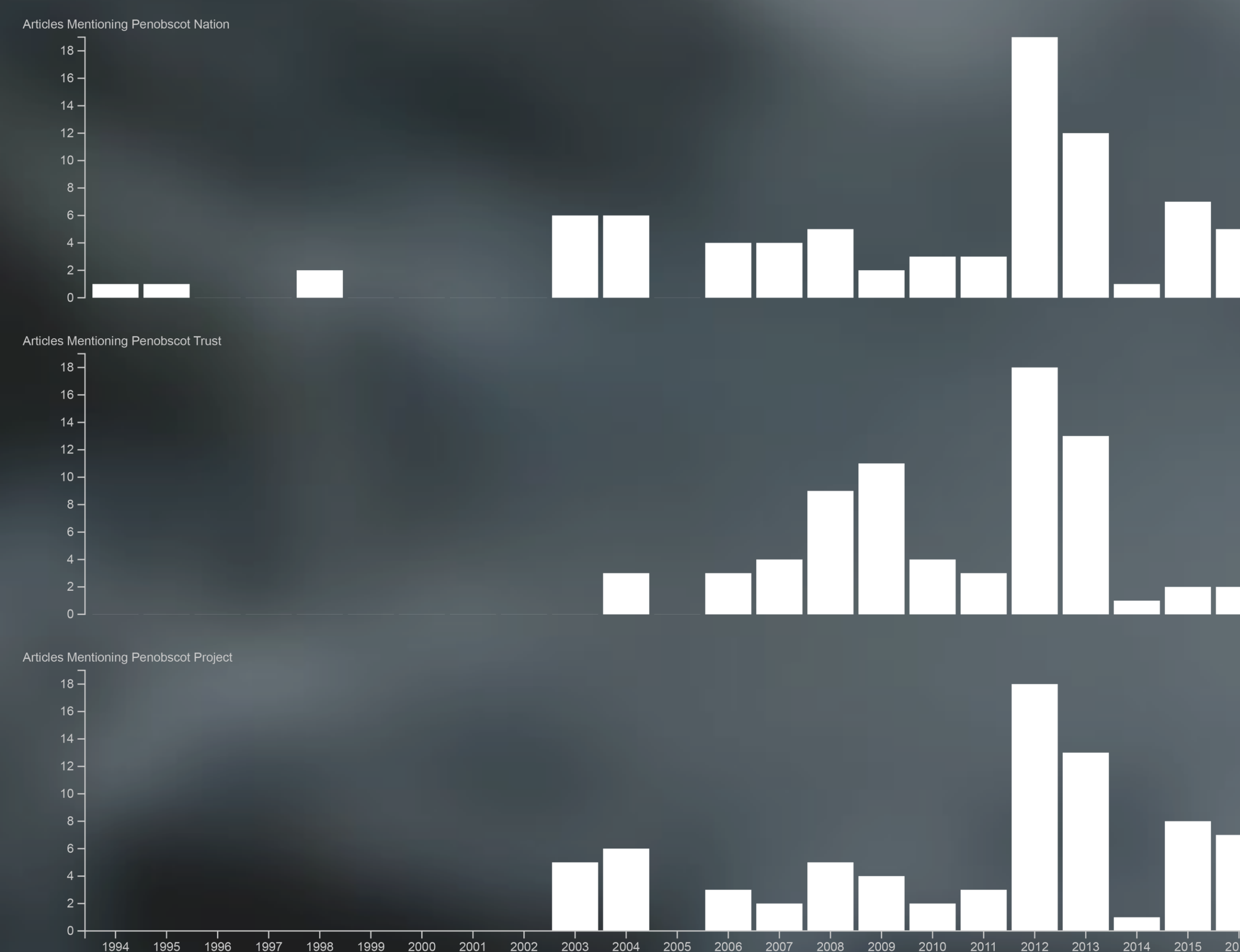**Contentiousness of media representations**
- Decision makers sometimes are critical of how journalism portrays dams, rivers, and decisions. This can be seen in letters to the editor:

"[My photos] clearly show that the [Kennebunk River] in those areas did not turn into a muddy ditch, as has been stated repeatedly in the media and at various public meetings in recent months." (NGO employee)

Media discourse analysis as boundary object for team science
- As our diverse collaborators organize around this database, it informs and shapes the possibilities for our collective work.

"I realized after the [media discourse analysis] meeting the other day that I was throwing around the word 'value' and I'm pretty sure that means something different to me than it does to some other disciplines. Maybe I should have made that more explicit but it didn't even occur to me at the time." (Graduate student, from a semi-structured interview)

Acknowledgements