



SOCIAL TEAMS

SOCKS ALL-HANDS MEETING March 2026

Projects: Social Applications



B4: Dynamics of Narrative Information on Networks



B5: Sonic experiences of place in Vermont: Narratives of changing land/soundscapes over time



B6: Measuring social capital through media: COVID-19 in Vermont



B7: Driving change with stories: Personal narratives and personal experience



B8: Social media sentiment, population dynamics, and regional settlement patterns



B9: Narrative explanation



B10: Data governance, privacy, and translation benchmarks

Social Teams: Methods Survey

Interviews and surveys with research team members

Social sciences, humanities, data sciences, natural sciences, interdisciplinary

Qualitative, quantitative, mixed approaches (training and used in SOCKS)

Challenges in matching tools, training and approaches

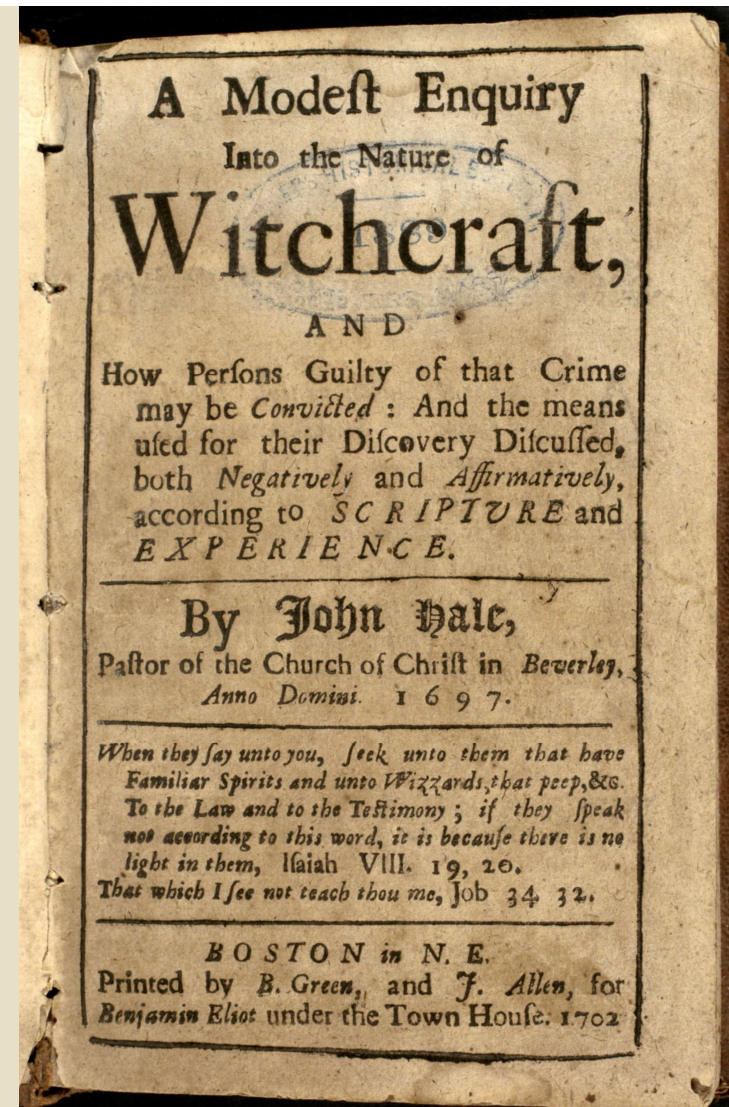
Development of new tools and approaches most exciting

Collaboration – regardless of outcome – cited as particularly fruitful

B4: Dynamics of Narrative Information on Networks

Develops general theories and tools for understanding how information spreads, persists, and mutates within complex social and organizational networks.

- **Self-Reinforcing Cascades**
 - Social contagions such as ideas, beliefs, and products can lose or gain momentum as they spread: a meme gets refined, a story or rumor gains new adherents who add details, and an open-source project improves with each fork. We model this by allowing the “intensity” or quality of a spreading item to increase or decrease at each transmission step, depending on whether it reaches a receptive or non-receptive node.
- **Historical Transmission Modeling — Salem Corpus**
 - This project uses the 1692 Salem witch trials as a natural laboratory for studying narrative contagion. The core insight is that accusers were required to describe not just who afflicted them, but how, the precise supernatural mechanism by which harm was alleged to have occurred
- **Content–Label Alignment in Tagging Systems**
 - This project investigates divergence between user-applied tags and actual content in digital platforms, with implications for information retrieval, recommendation systems, and user experience. YouTube API data collection is complete as of this week and analysis is starting now.
- **Structural and System Effects via Sheaf Models**
 - This project develops topological (sheaf-theoretic) approaches for studying coherence and coordination in complex systems, building on mathematical work developed by Alice Patania. We are continuing to develop the model and will work with SOCKS interns on this over the summer.

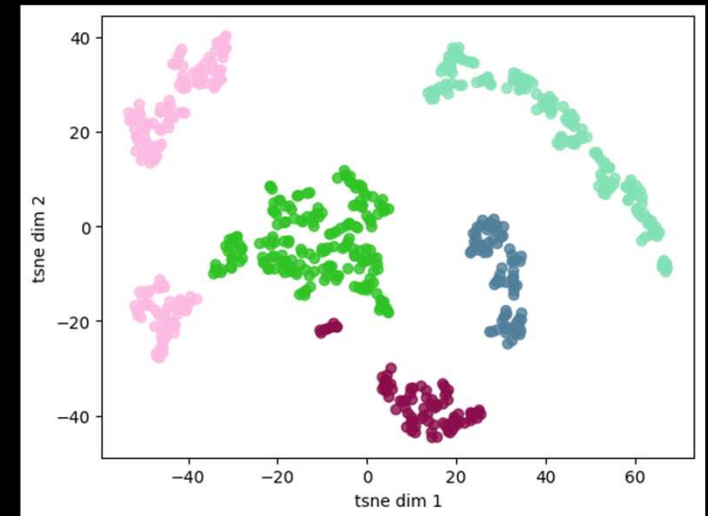


B5: Sonic experiences of place in Vermont: Narratives of changing land/soundscapes over time

Champlain College Sub Team: two ongoing projects:

- *The Vermont Survey of Acoustic Ecology*, an ongoing, statewide field research initiative deploying twenty custom-built listening kits across urban, suburban, rural, and wilderness environments in all fourteen Vermont counties, where *the Distant Listening Tool*—an interactive machine learning classification system—analyzes recorded audio to quantify anthroponic, biophonic, and geophonic sound patterns and establish baseline data on noise pollution.
- *The Numerical Data to Meaningful Sonic Information Converter for Nonlinear Sonification (ND2MSI)*, a web-based data sonification tool built with React and Tone.js that converts numerical datasets, such as social media sentiment analysis, into sonic information for nonlinear auditory interpretation

Images from student created sonic neural network



B6: Measuring Social Capital Through Media

- **Objective:** examine the role that “stories of community” play in two areas where Vermont demonstrates national leadership
 - broad adoption of COVID-19 mitigation measures
 - widespread implementation of restorative justice practices
- **Products**
 - **Paper:** “The Role of Social Capital in Explaining Divergent Responses to the COVID Pandemic in Vermont and New Hampshire” presented at Midwest Political Science Association in 2025
 - **New corpus:** transcribed and diarized every Vermont Governor Press Briefing held during the COVID-19 pandemic (March 2020 – February 2022)
 - **Interview data:** in-depth interviews with police officers and staff at community justice centers across the state



Climate Stories

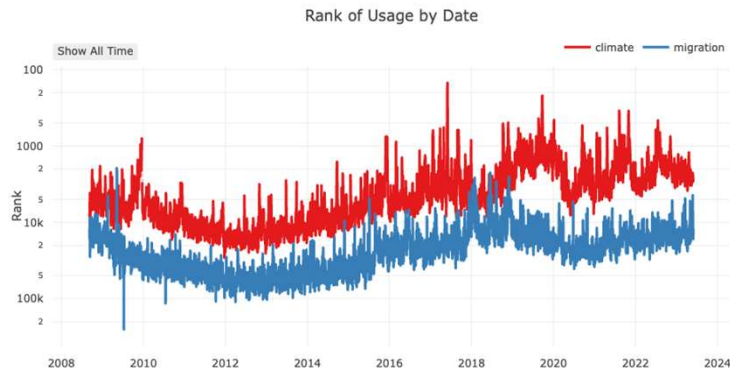
B7: Driving change with stories: Personal narratives and personal experience

- This semester, the Climate SOCKS team is conducting a randomized controlled experiment to test the causal effects of writing specific story arcs on behavioral and attitudinal outcomes. The team will use undergraduate research assistants to human-code the sentiment arcs of letters, creating a ground-truth dataset to evaluate and compare quantitative hedonometer-based methods. In parallel, they will continue refining methodologies for applying the hedonometer to short- and medium-length narratives, then apply these methods to experimentally generated letters and examine how resulting arc clusters relate to key outcome variables. Findings from this work will be prepared for dissemination through abstract submissions to IC2S2 and other relevant research conferences



How Countries and Communities
Are Shaping A Sustainable Future

B8: Social media sentiment, population dynamics, and regional settlement patterns



- Explore the circulating narratives surrounding migration, refugees, and their relation to current events
- 4 sub-projects, examining whether we can discover echoes, ripples and predictors regarding popular sentiments on different migration patterns
 - Rural and amenity migration (Cheryl Morse)
 - Climate migration (Pablo Bose)
 - Migration in populist politics (Harlan Morehouse)
 - Border discourses in Spanish-language social media (Kaitlin Thomas)

B9: Narrative Output

- Harp, Randall. 2026. “Stories and Big Data: The Possibility of Narrative Explanations at Scale.” *Philosophy of the Social Sciences* 56 (2): 116–33. <https://doi.org/10.1177/00483931261418167>.
- It has been suggested that computational tools can enable us to identify narratives in large data sets, and that we can use those narratives to facilitate social science research at scale in the same way as distant reading techniques facilitate literary analysis at scale. In this paper I attempt to determine whether a Bag of Words approach to natural language processing can identify such narratives. I argue that a Bag of Words approach can capture some features of narratives but fails on others, especially the extent to which the meaning of the parts of narratives are dependent on the ending.
- Working on a project studying the use of LLMs as replacements or augments for human participants in social science research

B10: Data Governance, Privacy and Translation Benchmarks

Investigates how people and institutions negotiate data governance, privacy, and translation challenges in settings where trust, transparency, and fidelity matter.

- **Data Governance in Creative-Industry Datasets**

- Survey of 459 artists across two sampling phases (a convenience sample and a Qualtrics panel), producing a sample broadly reflective of the demographics of the American adult art workforce.

- **Context-Dependent Privacy Preferences**

- Privacy is typically treated in system design as a stable individual trait, a user is “private” or not, and consent frameworks are built accordingly. This project challenges that assumption empirically. Using 2,912 survey responses from 782 college students collected across seven survey periods in 2023-2024 during the LEMURS study, we measure comfort sharing personally identifiable information across 17 different institutional contexts, from friends and medical professionals to police, government agencies, and social media platforms.

- **Multilingual Educational Content Translation Benchmark**

- When teachers adapt mathematics word problems for multilingual classrooms, they do much more than translate: they replace culturally unfamiliar names, foods, currencies, and settings with locally meaningful equivalents while preserving the underlying mathematical structure. This is skilled pedagogical work, and teachers are increasingly using large language models to assist with it. This project asks whether those LLMs perform reliably and without cultural bias when doing so.

- **Cross-Cutting: Research Ethics: Ethical Frameworks for Social Challenge Studies**

- Computational social science research increasingly uses methods that deliberately expose participants or communities to potentially harmful conditions, presenting conspiracy theories in surveys, deploying bots on social media platforms, submitting flawed code patches to open-source projects, setting up honeypots to attract attackers. These studies raise serious ethical questions, but unlike medical research, they have no shared ethical framework that systematically addresses them