

Corpus assisted discourse analysis of most frequent environmental terms

Djurdja Jovanovic Padejski
Fulbright Research Fellow 2024/2025
Faculty of Arts, Charles University

Home institution:
School of International Letters and Cultures,
Arizona State University

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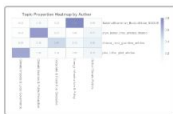
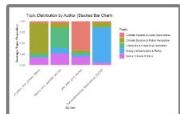
New Ways of Meaning: A Challenge to Applied Linguistics

- Language is never neutral—especially in domains as contested as climate change. It is construing reality with material consequences for the living world (Halliday, 1990).
- Language does not simply describe environmental problems; it is integral to how they are constructed, prioritized, and responded to in public and media domains.
- The need for more precise and critically examined semantic distinctions in environmental discourse (Fill and Penz, 2021)

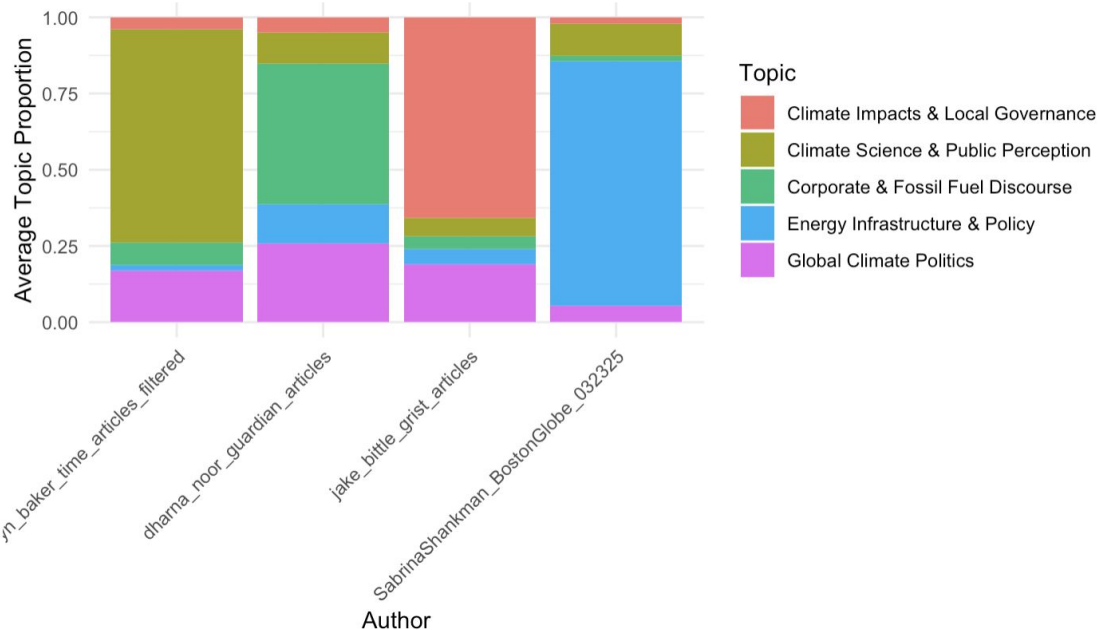
Investigating Environmental Terminology in News Discourse, Theoretical Framework

- Van Dijk's socio-cognitive discourse approach: macro/micro discourse structure
- Metaphor and framing theory (Lakoff, 2010; van Dijk, 2015)
- Modality and stance (Halliday, 2013)

Theoretical Framework - cont.



Topic Distribution by Author (Stacked Bar Chart)



Key Challenges in Environmental Journalism

- The inherent **complexity** of environmental topics and translating scientific concepts.
- Journalists are relying heavily on **scientific terminology** therefore journalism is the main arena where most environmental terms enter public discourse.
- Notions of **neutrality and objectivity** when covering urgent issues.
- The challenge of anti-environmental propaganda and misleading narratives.

Corpus design and composition

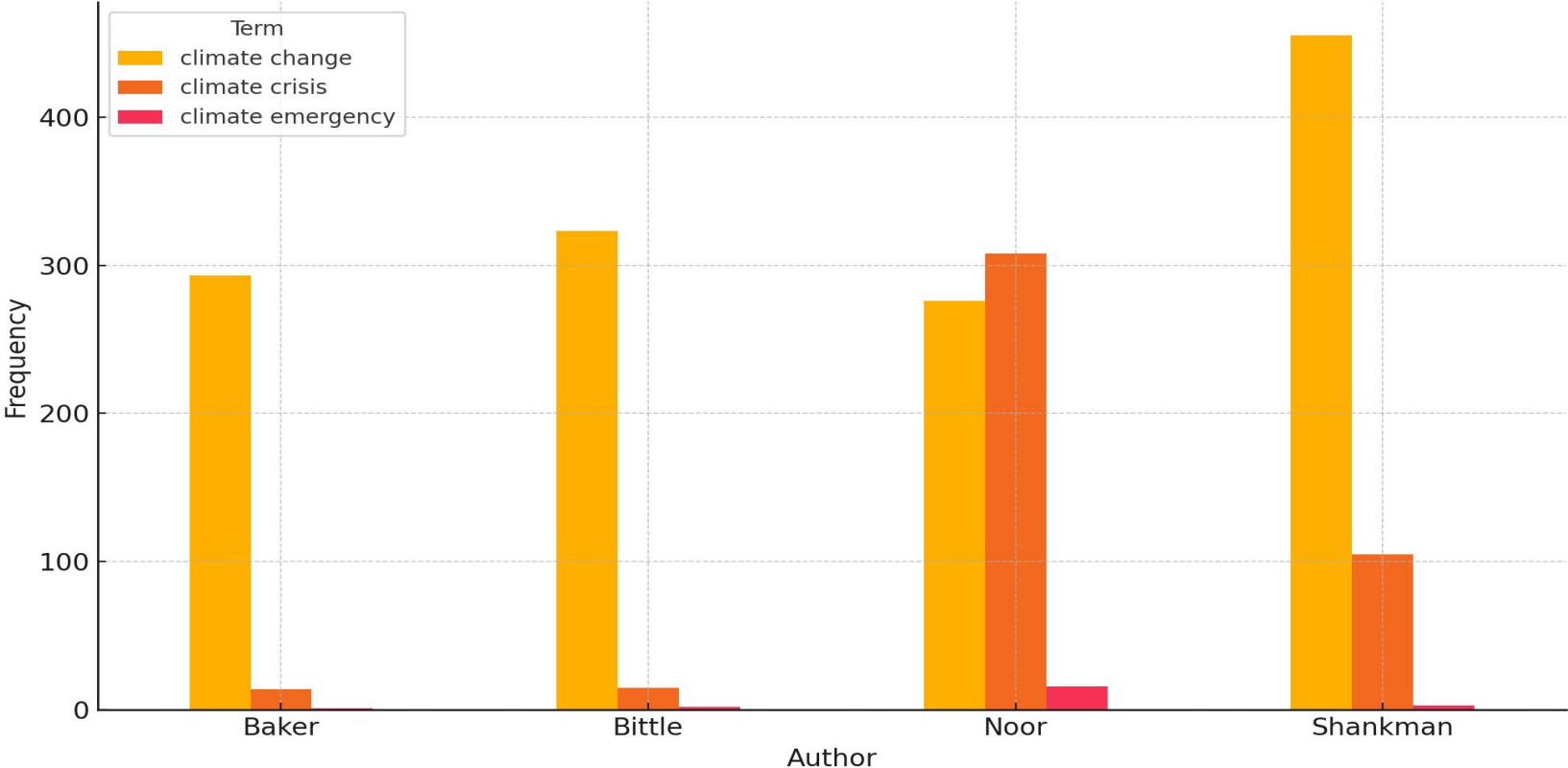
- Outlets: NYT, CNN, NPR, The Conversation, 200 articles each, 2021-2025
- Interviewed authors: Aryn Baker (Time), Beth Daley (The Conversation), Dharna Noor (Guardian), Erica Gies (book author), Jake Bittle (Grist) and Sabrina Shankman (Boston Globe)
- Authors whose works were analyzed in R: Noor (224 articles), Bittle (367 articles), Shankman (383 articles), Baker (125 articles)*
- 400,000+ tokens | Timeframe: 2021–2025
- Preprocessing: lemmatization, POS, stopwords, tokenization

Methods Overview

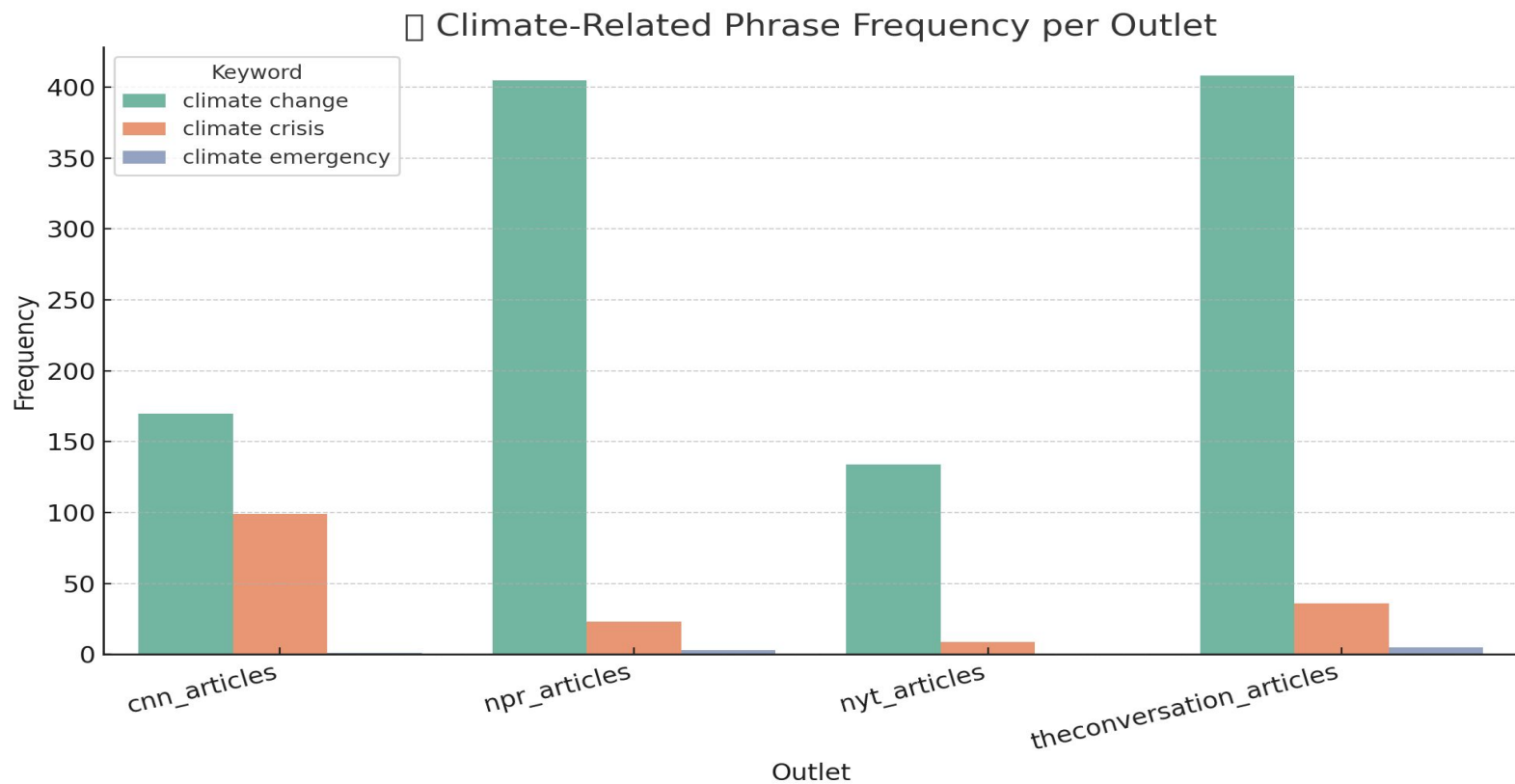
- Keyword frequency & phrase groups
- Bigrams, trigrams, collocations
- KWIC to capture framing patterns around core terms, to analyze metaphors & euphemisms.
- Modality and adjective extraction using spaCy to capture evaluative and epistemic language.

Keyword Frequencies

Frequency of Climate Change, Crisis, and Emergency by Author



Keyword Frequencies - cont.

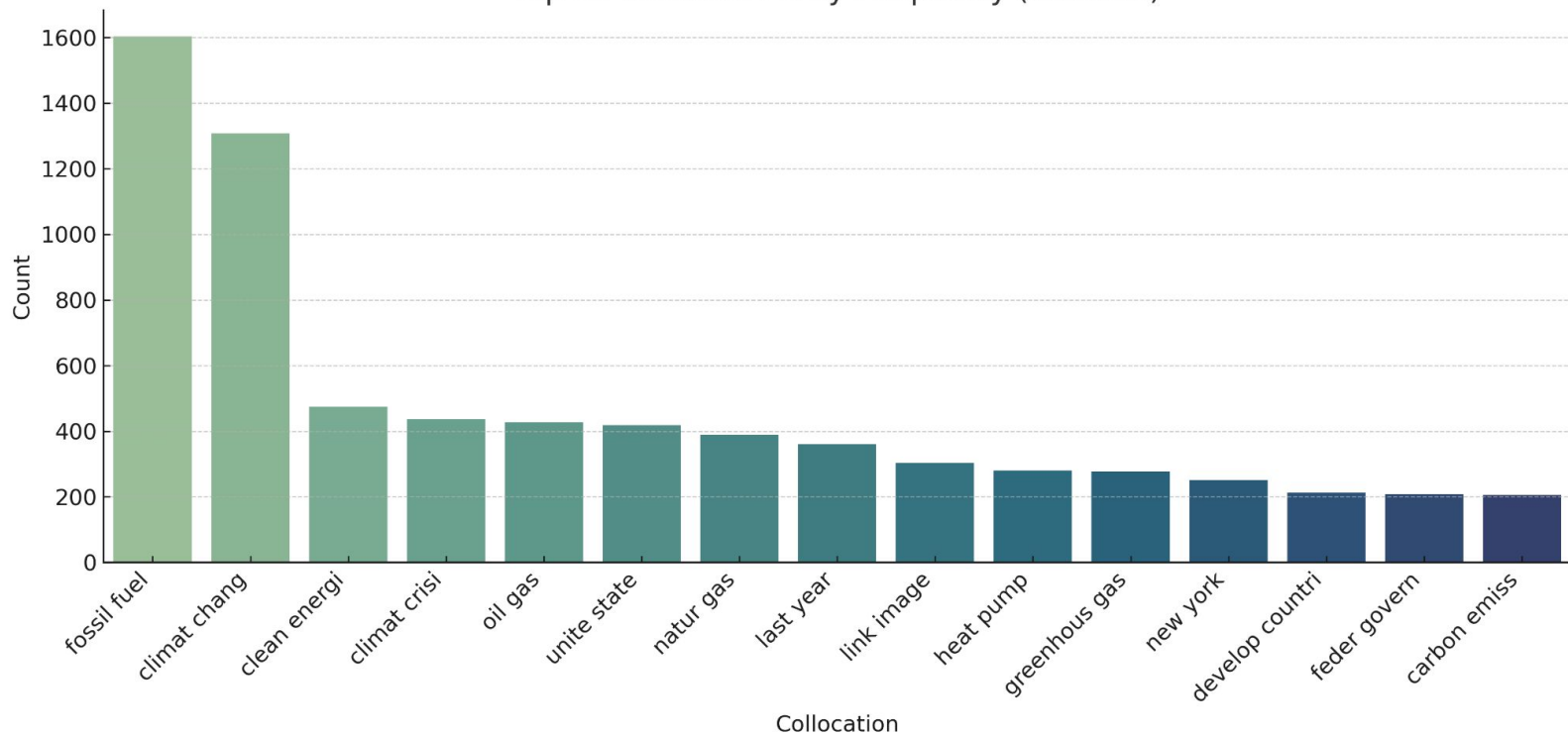


Euphemism & Framing: “You shall know an object by the company it keeps” (Firth, 1957)

- “Natural gas” vs. “fossil fuel”
- “Net-zero,” “carbon neutral,” “energy independence”
- KWIC shows promotional vs. critical stance

Collocations

Top 15 Collocations by Frequency (Cleaned)

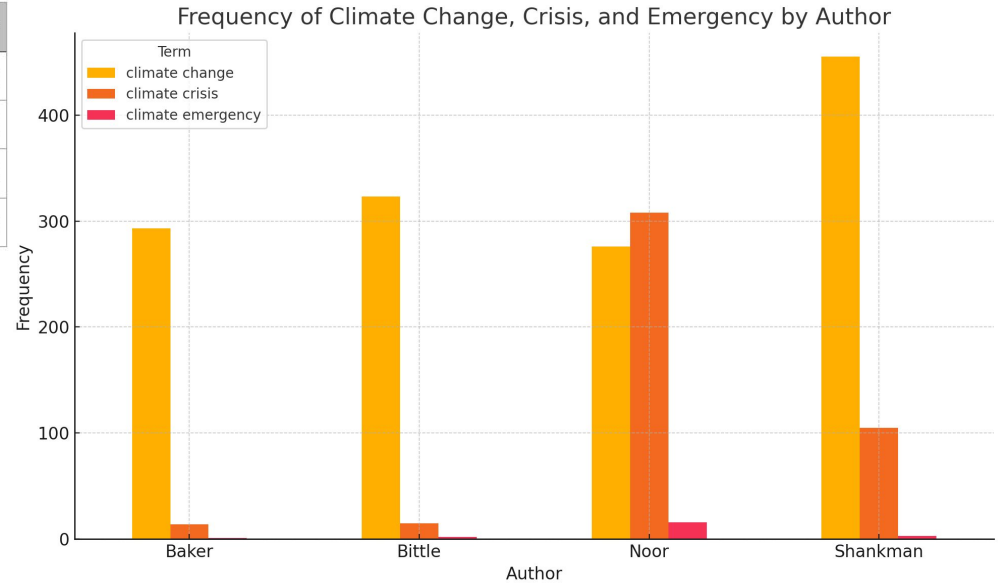


Reflections on Method

- Visualizations aid framing analysis
- Risks of over-automation
- Human interpretation remains central

Reflections on Method - cont.

Author	climate change	climate crisis	climate emergency
Shankman	9	6	0
Bittle	10	1	0
Noor	33	12	0
Conversation	34	0	0



Conclusion - Key Findings and Implications

- Environmental reporting is an interpretive and ideological process.
- Lexical framing is a core journalistic practice with significant impact.
- Discursive frames reflect and reinforce power structures.
- Collocational patterns and semantic prosody shape meaning.
- Journalists actively make meaning under various constraints.
- The journalistic lexicon profoundly influences public understanding and response to ecological crises.
- “Climate change” dominates legacy framing; “crisis” rising in progressive outlets
- Euphemisms and metaphors encode ideology
- AI tools enhance nuance detection, not just frequency

References:

Boykoff, M. T., & Boykoff, J. M. (2007). Climate change and journalistic norms: A case-study of US mass-media coverage. *Geoforum*, 38(6), 1190–1204. <https://doi.org/10.1016/j.geoforum.2007.01.008>

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