

Making and Unmaking a Toxic World: Corporate Strategy, Organizational Spillovers, and the Regulation of Environmental Exposures

Gabriel Lévesque

Department of Sociology, McGill University

Extended abstract – SSHA conference 2026

In recent decades, toxic risks have tremendously grown, and their regulation has become a major concern for exposed communities and states. Facing uncertainty about these emerging risks, their management has become more complex, with implications we seldom are able to foresee (Boudia et al. 2022). Yet, many of our current concerns over toxic exposure have a long history. Toxic producing industries have often successfully obstructed scientific and regulatory processes (Hess 2016), and many problems of industrially induced exposures have in turn been left unaddressed. Extant research shows how corporations and corporate lobbies influence policy preferences (Farrell 2016) and media visibility of environmental issues (Wetts 2020), but mechanisms through which preferences of a given organization are adopted by others are rarely studied. Moreover, while the influence of corporations on the culture of political institutions is increasingly recognized (Li 2023), ways in which their ideas are developed and diffused in research and policy remain unclear. So far, data accessibility and secrecy around corporate practices has limited our understanding of the *pathways through which industrials coalesce and cohesively act to influence environmental regulations*.

In this paper, I seek to answer three research questions: 1) How do corporate strategies of influence spill over between corporations? 2) How do they spill over between individual cases of toxic exposure, and 3) How do changes in policies and regulations impact corporate strategies of influence? By looking at spillover of communication strategies between corporate actors, I reveal the organizational sources of environmental ideas, and how those ideas then affect environmental research and policy.

To answer these questions, I make use of the groundbreaking Toxic Docs database. These data, hosted at the Columbia University School of Public Health, comprise millions of pages of previously classified corporate documents spanning the 20th century. They provide unprecedented insight into corporate behavior that is not distorted by public-facing strategies. Their size and time coverage (1900-2009) make them especially suitable for computational analyses. I exploit the full database of 8 cases and make use of word embeddings to measure linguistic convergence through cosine similarity (Nussbaum n.d.). I use this measure as a proxy for shifting ideas and communication strategies, and model temporal changes throughout the 20th century. Using these methods significantly broadens the temporal and cross-sectional scope in our understanding of toxic substance controversies. I analyze both cases that are prominently studied (e.g., asbestos) and those are less often engaged with (e.g., PFAS). This allows for insight about the shifting strategies of industries in “old” and “new” exposures.

Three major findings emerge from the analyses. First, I find that corporate strategies around old toxics have provided the playbook for the defense of new toxics later on. Second, I find that early adopters of those strategies have been better able to sustain their business activities in a given industry and were more successful in jumping to new industries. Third, I find that change in policies and regulations provide the impetus for the selection of corporate strategies and for growing cohesion among corporate actors. Overall, I show that corporate ideas about environmental regulation spill over through time between organizations and between cases as well as organizations to strategically adapt to new policy settings.

This paper contributes to better understanding environment-society interactions in a long-term trajectory, which has drawn considerable interest in recent years (Derickson 2025; McNeill and Vrtis 2017; Rea and Frickel 2023). This in turn provides historical context to some of our current exposures and shed light onto how environmental health problems develop. This paper also narrows the gap between the questions sociologists ask about social-environmental change and questions scholars in related fields (e.g., environmental and public health history) have traditionally asked. Recent scholarly

discussions on this question have centered on political and economic obstacles faced in enacting environmental solutions (Stokes 2020). Using novel corporate data of unprecedented scale and quality, this paper proposes a rigorous analysis of how those barriers are established, how they adapt in time to different policy and regulatory contexts, and how they are displaced.

References

- Boudia, Soraya, Angela N. H. Creager, Scott Frickel, Emmanuel Henry, Nathalie Jas, Carsten Reinhart, and Jody A. Roberts. 2022. *Residues. Thinking through Chemical Environments*. New Brunswick: Rutgers University Press.
- Brulle, Robert J., J. Timmons Roberts, and Miranda C. Spencer. 2024. *Climate Obstruction Across Europe*. Oxford: Oxford University Press.
- Derickson, Alan. 2025. *Fighting Toxic Ignorance*. Ithaca: Cornell University Press.
- Farrell, Justin. 2016. “Corporate Funding and Ideological Polarization about Climate Change.” *Proceedings of the National Academy of Sciences* 113(1):92–97. doi:10.1073/pnas.1509433112.
- Frickel, Scott, and Michelle Edwards. 2014. “Untangling Ignorance in Environmental Risk Assessment.” Pp. 215–33 in *Powerless Science? Science and Politics in a Toxic World*, edited by S. Boudia and N. Jas. New York: Berghahn.
- Hess, David J. 2016. *Undone Science. Social Movements, Mobilized Publics, and Industrial Transitions*. Cambridge, MA: MIT Press.
- Li, Wendy Y. 2023. “Regulatory Capture’s Third Face of Power.” *Socio-Economic Review* 21(2):1217–45. doi:10.1093/ser/mwad002.
- McNeill, J. R., and George Vrtis, eds. 2017. *Mining North America. An Environmental History since 1522*. Berkeley: University of California Press.
- Nussbaum, Zach. n.d. “Nomic Embed: Training a Reproducible Long Context Text Embedder.”

Rea, Christopher M., and Scott Frickel. 2023. “The Environmental State: Nature and the Politics of Environmental Protection.” *Sociological Theory* 41(3):255–81.

doi:10.1177/07352751231184462.

Stokes, Leah. 2020. *Short Circuiting Policy. Interest Groups and the Battle Over Clean Energy and Climate Policy in the American States*. Oxford: Oxford University Press.

Wetts, Rachel. 2020. “In Climate News, Statements from Large Businesses and Opponents of Climate Action Receive Heightened Visibility.” *Proceedings of the National Academy of Sciences* 117(32):19054–60. doi:10.1073/pnas.1921526117.

Wetts, Rachel. 2023. “Money and Meaning in the Climate Change Debate: Organizational Power, Cultural Resonance, and the Shaping of American Media Discourse.” *American Journal of Sociology* 129(2):384–438. doi:10.1086/726747.