WHEN CLIMATE SCIENCE SPEAKS, DO POLICYMAKERS RESPOND? A COMPUTATIONAL ANALYSIS

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This study examines whether policymakers' media interventions actually respond to scientists' calls on climate change in news coverage. Previous research offers ambivalent findings, often highlighting slow and scant political responses. Our article aims to clarify this question. Drawing on a novel pan-Canadian database of over 266,000 press articles from the country's 20 largest daily newspapers (spanning from 1978 to the present), we employ machine learning techniques—trained on more than 3,000 manual annotations— to detect monthly proportions of policy-actor interventions and scientific interventions, among other categories. By using the sentence as our unit of analysis, we are able to provide a higher level of precision than previous work; all articles were annotated for more than 40 categories (from distinct framings and interventions to specific actors) with F1 scores above 0.7. Building on attention theory, we propose that once scientific interventions peak, political discourse intensifies in response—indicating that policymakers do, in fact, respond to scientists. Our vector autoregression results reveal clear, repeated cycles: whenever scientists' framing and interventions surge, a subsequent rebound in policymakers' interventions and political framing follows, pointing to strong, bidirectional influences. We also observe a temporal sequence of "dominance" in framings and interventions: periods led by science give way to a reassertion of policymaker discourse, before pivoting back to science. This pattern reflects episodic dominance in media attention—today's phase, for instance, is characterized by a clear ascendancy of policymakers, but in a context where scientists are on the verge of regaining the upper hand. As one of the first study to track climate-related framings and actor-specific interventions with such precision, our findings challenge the idea that policymakers fail to respond to climate issues, at least in the public sphere.

Project Status

Database constructed and annotated.

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