

Statement of Research Interest

My research focuses on policy responsiveness and environmental degradation. I have three long-term goals for this research: 1) bring policy outcomes into our understanding of responsiveness and 2) establish how responsiveness varies by regime type and 3) political system level. To pursue these goals, I use research tools that have been developed in other disciplines and are seldom used in political science, such as spatial analysis, remote sensing data, and structural equation models (SEM's).

Scholars have examined responsiveness and feedback between public opinion and policy, but little is known about the role policy outcomes play in the connection. Consequently, there are two major gaps in our understanding of the public opinion-policy dynamic: 1) We do not know how substantively meaningful policy responsiveness is to the public, and 2) We do not know the extent to which public opinion reacts directly to policy as opposed to its outcomes. This is particularly true at the local level where outcomes are more evident to the public.

To address these gaps, I propose a model of policy responsiveness and feedback that builds on extant scholarship by explicitly incorporating outcomes. It applies to visible, high-importance policy areas—such as environmental issues—in which salience and the public's preference for more government action are closely correlated; I refer to public opinion in these issue areas as *public concern*. The model's responsiveness aspect posits that, 1) policy is responsive to public concern, and 2) there is an imperfect correspondence between policy and its intended outcomes. The first of these two hypotheses simply expresses the consensus view of the policy responsiveness literature. The second is consistent with the policy evaluation literature, which has found that some policies achieve their stated goals while others fail or are even counterproductive.

The feedback aspect of the model predicts that public concern reacts mainly to 3) outcomes at the local level and 4) policy change at higher levels. These hypotheses build on the thermostatic model literature, which has found only policy-based feedback at higher levels and has yet to examine the local level. The underlying logic of these hypotheses is that the public reacts primarily to the most convenient, seemingly reliable indicator of how well an issue is being addressed by the government. At the local level, people can often directly observe outcomes. Indeed, local outcomes can be nearly impossible to ignore in issue areas like air pollution. In such cases, the public can easily judge whether the government is doing enough to address an issue even without any direct knowledge of government policy. Above the local level, however, outcomes are normally distant from the general public, meaning that most people cannot rely on their own senses to gauge whether government is doing enough to address a given issue. Thus, people must rely on indirect sources of information, such as media reports of salient issues and the policies intended to address them.

To test my model, I have conducted studies that estimate the relationships between public concern, policy, and air pollution outcomes at the local and state/provincial levels in the United States and China. Government action and outcomes appear to be responsive to public concern in both countries, and there is evidence that feedback on public opinion is outcomes-based at the local level and policy-based at higher levels. My medium-term goal is to continue developing this model so that it accounts for differences in regime type and issue area. To this end, I intend to expand my analysis to cover more countries, such as Poland, India, and Mexico.

I also hope to examine other policy domains with outcomes that are visible to the local public. Compared to other issue areas, air pollution outcomes are unusually apparent to the public. Many domains, such as transportation and school performance, have observable outcomes but are less omnipresent than air pollution in people's day to day lives. It is therefore unclear whether the responsiveness and feedback dynamic I have found for air pollution should be expected to apply to other domains. Whatever the results, determining if and how this model applies across issue areas has major implications for democratic accountability; the importance of government transparency for accountability depends on the extent to which the public reacts directly to policy as opposed to outcomes.

I have employed a diverse set of methodological tools in my research that I will continue to develop. These include spatial analysis, working with remote sensing data, and SEM's. Spatial models have allowed me to account for wind direction and air pollution spillover between localities. Satellite data have been the source of my pollution measurements. I have used SEM's to correct for the error correlation and biased estimates that are often byproducts of feedback processes.

These tools have many more potential applications that I hope to leverage as my research progresses. Spatial models can be used to study an array of between-neighbor relationships. For instance, a region's deteriorating environmental conditions may affect public opinion and policy in its neighbors which may yield their own spillover effects on environmental conditions. Remote sensing data can be used to measure land use, urbanization, deforestation, and water levels in lakes. SEM's are a remarkably general-purpose methodological tool. They can, for example, be used to estimate difficult to observe latent concepts, such as *political engagement* and *government action*, from a series of indicators. Innovative use of these tools will allow me to continue developing my model by refining how I measure and analyze its key concepts.