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Special interests and the media: Theory and an application to climate change $\stackrel{\sim}{\sim}$



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ABSTRACT

A journalist reports to a voter on an unknown, policy-relevant state. Competing special interests can make claims that contradict the facts but seem credible to the voter. A reputational incentive to avoid taking sides leads the journalist to report special interests' claims to the voter. In equilibrium, the voter can remain uninformed even when the journalist is perfectly informed. Communication is improved if the journalist discloses her partisan leanings. The model provides an account of persistent public ignorance on climate change that is consistent with narrative and quantitative evidence.

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1. Introduction

The First Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 1990) crystallized a scientific consensus that the climate is warming and that the cause is at least partly anthropogenic. The subsequent decade saw an explosion of activity by conservative think tanks and other organizations attempting to persuade the public that "the scientific evidence for global warming is highly uncertain" (McCright and Dunlap, 2000). Much of this

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activity was directed at generating or influencing media coverage (Cushman, 1998).

Skeptical perspectives on climate change have been prominent in the US news media. As recently as the early 2000s the majority of articles in national newspapers and segments in nightly news broadcasts about climate change were "balanced" in the sense of giving "roughly equal attention" to both sides (Boykoff and Boykoff, 2004; Boykoff, 2008). National newspapers in the 2000s mentioned the top five skeptical scientists about one-fourth as often as their mainstream counterparts (Grundmann and Scott, 2014).

The news media are Americans' main source of climate-change information (Leiserowitz et al., 2010), so it is not surprising that Americans remain skeptical of the IPCC consensus, with only 52% reporting in 2010 that "most scientists believe that global warming is occurring" (Saad, 2013). The US Senate did not ratify the Kyoto Protocol or the Waxman-Markey Bill, and the US performs poorly among rich countries in international ratings of carbon dioxide emissions and abatement (Hsu et al., 2014).

As I argue below, efforts by special interests to influence media coverage, and "balanced" reporting that creates the impression of controversy, are central elements of important policy debates ranging from climate change and secondhand smoke to the links between tobacco and cancer and between vaccines and autism. In this paper,

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I present a model that incorporates these elements. I use the model to understand when public policy is likely to reflect the best scientific information, and to study the effect of the institutional design of the news media on the quality of reporting.

In the model there is a binary state of the world on which a Bayesian voter has a neutral prior. There is a set of facts relevant to the state, which may be either ambiguous (facts exist to support both sides) or unambiguous (only one side is well supported by the evidence). There are two informed special interests, one representing each state. A journalist possesses the extant facts and may report all or some of them to the voter, who then chooses a policy to try to match the state.

Two frictions may interact to prevent the journalist from reporting the full set of facts to the voter. First, each special interest can pay a cost to present a claim to the journalist that, if reported to the voter, is indistinguishable from a fact. This assumption reflects the idea that the voter is not able to judge the underlying science; hence a claim that temperatures have always fluctuated throughout human history may carry as much weight with the voter as a claim that the atmospheric concentration of carbon dioxide is now at its highest level in 800,000 years.

The second friction is a reputational concern on the part of the journalist. With some probability the journalist is a captured type who tries to manipulate the voter's policy choice. The report of a captured type is not informative about the true state. A non-captured journalist therefore maximizes the market value of her future reports by minimizing the perception that she is captured.

Together, these two frictions create a bias towards reporting that the evidence is ambiguous even when it is not. A captured journalist makes an unambiguous report, so making an ambiguous report allows a non-captured journalist to signal her type to the voter. Special interests exploit this reputational incentive by providing the journalist with claims that run counter to the truth, thus allowing the journalist to report both sides of the issue even when the underlying science favors only one side.

The model generates novel predictions about when special interests' activities distort public policy. As in canonical models of special interests (e.g., Grossman and Helpman, 1996), equilibrium policies are farther from the ideal the more motivated and effective are the special interests. More surprisingly, the gap between the equilibrium policy and the ideal policy is wider the greater is the likelihood that the facts are unambiguous, because special interests have an especially strong incentive to manufacture counter-claims in the face of unambiguous evidence.

The model also has implications for the design of journalistic institutions. Informative communication is partially restored by allowing the journalist to disclose her partisan leanings—say, her voting record or party affiliation. The reason is simple: a journalist with a convincing track record of Republican votes who reports unambiguously that climate change is real is unlikely to be thought captured by Greenpeace or the Sierra Club. Interestingly, many ethical guidelines for journalists explicitly advise against or prohibit disclosure of personal political leanings (e.g., New York Times, 2004a; Reporters Without Borders, 2014). In the model, such prohibitions can make reporting less informative. I also show that requiring "fair" reporting, as many countries do of their broadcasters, can be counterproductive in the presence of special interests.

Extensions to the baseline model yield additional implications for special interests' influence on policy. When the voter's prior favors one state over another, the more active special interest group is the one aligned with the favored state, and the voter never gets a report that fully contradicts that state. In this sense, special interests' incentives drive a form of "pandering," i.e., reports favoring the voter's prior. When special interests instead differ in their ability to manufacture evidence, the voter is better able to learn the state opposed by the weaker interest group. When the issue at hand is

"apolitical," in the sense that capture is unlikely, policy distortion vanishes, as it does when the journalist wishes to mimic an accurate type.

The paper also develops an extension in which the reporting language is not constrained by the set of available facts. In a model with a general discrete signal and message space, reputational concerns lead to an endogenous limit on the amount of information that the journalist can communicate in equilibrium. The reason is that a captured journalist wants to make a very informative report, which means that a journalist wishing to appear neutral avoids conveying a lot of information to the voter. This analysis shows that a concern for appearing neutral constrains the amount of information that a journalist can convey, outside of the particular communication structure assumed in the baseline model.

An empirical section argues that evidence from climate change and other issues is consistent with an important role for special interests and the media in determining public opinion and public policy. Differences in the public response to ozone depletion and global warming line up with differences in special interests' incentives. There is a surprisingly weak relationship between news media consumption and belief in global warming, but a very strong relationship between news media consumption and knowledge of uncontroversial facts. Public acceptance of climate change is greater in countries whose news media do not report skeptics' claims, and this relationship cannot be easily explained by reverse causality from beliefs to media coverage. These pieces of evidence are consistent with the setup and implications of the model.

A final section of the paper considers alternative explanations of the evidence, such as voters' ideological predispositions, the entertainment value of controversy, and journalists' uncertainty about the evidence. These forces are important, but on their own they fail to account for important facets of media coverage on issues like climate change. I stress, however, that the evidence I present is only suggestive in nature, and that the model I propose also fails to account for some aspects of the evidence.

An especially important caveat to the applicability of the baseline model is that, for a large range of parameters, the voter learns nothing in equilibrium. This clearly goes too far: Americans will eventually accept anthropogenic climate change just as they did the smoking-cancer link or the health effects of childhood lead exposure. The goal of the model is not to argue that such learning is impossible but to highlight some important forces that slow it down. In this respect, an important limitation of the static model in this paper is that it does not address how beliefs on a given issue evolve over time.

The paper makes three main contributions. First, the paper contributes a model of special interest competition via profit-driven media in which media institutions and voter beliefs are modeled explicitly. In an important antecedent, Yu (2005) models special interest influence on voter belief formation, but with no explicit signal structure or model of media institutions. Sobbrio (2011) adds an explicit model of the media, but models media as policymotivated. Stone (2011) models interest groups' strategic choice of both research and lobbying activity, but in a model without a media

¹ Classical economic models of special interests' influence on public policy treat the expenditure of resources to influence voter beliefs and information implicitly, either as part of a reduced-form function relating expenditures to votes or influence or as a motivation for politicians to seek campaign resources from interest groups (e.g., Stigler, 1971; Peltzman, 1976; Becker, 1983; Grossman and Helpman, 1994). Another class of models treats lobbying as a form of strategic information transmission from interest groups to legislators (e.g., Austen-Smith and Wright, 1992, Bennedsen and Feldmann, 2002).

² Strömberg (2001) studies lobbying by opposing groups of voters when media provide information about candidate platforms. Petrova (2012) and Germano and Meier (2013) study the effect of advertising profits on media bias with direct (Petrova, 2012) or indirect (Germano and Meier, 2013) incentives to provide favorable coverage to special interests.

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