

Review of FCC Media Study no.9 by Simon P. Anderson, Commonwealth Professor of Economics, University of Virginia

“A theoretical analysis of the impact of local market structure on the range of viewpoints provided”

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The study provides an analysis of the incentives to withhold information in the context of politically motivated media outlets with preferred agendas in influencing choice of voters / readers. As such, it contributes to the economics of media bias through suppression of information by interested parties, namely, in the current application, the owners of media who have preferences over political outcomes.

This is important because of documented cases where information was suppressed, and the suggestion that such behavior can affect voting outcomes (Anderson and McLaren provide several examples of information suppression, and more are given in the Discussion Paper version; Enikolopov, Petrova and Zhuravskaya document the influencing of electoral outcomes in Russia; and DellaVigna and Kaplan find empirical evidence documenting the size of the Fox News effect in the US in affecting voter turn-out and voting patterns).

The paper also usefully extends existing literature by looking at broader strategies (garbling stories to introduce confusion) and the influence of competition on the incentives to declare known information. Finally, the paper provides experimental evidence testing the theories proposed.

The models described in the paper are based on suppression of information unfavorable to the media owners' political agenda. Knowing the incentives of the owners, rational readers update their priors on a bad state once they find no information declared: either no information was available or else it was willfully suppressed because it was unfavorable. Introducing the possibility that there was no news enables the potential for misleading rational consumers (though, as shown in Anderson and McLaren, this strategy can backfire when there truly was no news and the media magnate suffers from the “suspicion effect” that bad news was actually suppressed, even if such were not the case).

In addition to the recent literature on media bias per se, the key literatures that are relevant are in political science and the recent literature on product information disclosure in Industrial Organization and Marketing. Three prominent recent papers are Sun (2010), Guo and Zhao

(2009), and Board (2009). Sun deals with both horizontal product information (using the classic linear city model, with a monopolist of unknown location) and a quality dimension: first quality is assumed known, and then it is assumed unknown, although in the latter case she assumes that the firm must disclose either all information or none at all -- she does not allow the decisions to be split up. Guo and Zhao (2009) address duopolists' incentives to reveal quality information, under the assumption that each is ignorant of the other's quality; Board (2009) does similarly assuming that they know each other's quality. Key early works are Milgrom's work on the Persuasion Game, and Grossman's work on the same theme, and Jovanovic's extension to deal with disclosure costs.

As a reference point, Anderson and McLaren model information suppression by considering a situation in which two media outlets with diverse preferences can disclose information on the state of the world relevant to voting. The information is detrimental to the political aims of one of them, and favorable to the other ("horizontal" information), so in equilibrium the truth will be revealed. Under media monopoly, there is an incentive to hide information detrimental to the cause by pretending (pooling with the no-information state) that it was not available. Understanding the media outlet's incentives, rational consumers update by revising their probability the state was observed and averse to the outlet's desires. However, the media monopoly may still be able to manipulate voting behavior through strategic information suppression if the "suspicion effect" (that information is being withheld) is weak enough. Hence duopoly can be preferred to monopoly. The paper does not allow for interference with another outlet's information revelation, nor for competition between more media outlets. These themes are addressed in this paper.

The situation described in Model I in this paper is closer to the quality unraveling scenario in Milgrom (1981) for product quality disclosure. Specifically, there are two media outlets, each with a preference for a different political party. Each outlet can only observe the "quality" of its own preferred party (so this information is "vertical" -- quality is known as "valence" in the political science literature), and has the option of either communicating this truthfully, or not declaring it at all. In the latter case, media consumers, knowing the preferences of the media outlet, update their beliefs about the quality.

The median voter's (horizontal) preference is a random variable and is augmented by the perceived qualities of the two parties, so that the probability a party is elected increases in its own perceived quality and decreases in that of the rival. If there is no chance that the media outlets have no information about qualities, then Milgrom's unraveling result holds and the only equilibrium is truthful revelation. However, if there is a chance that the outlets do not know quality, they will withhold low enough quality signals even when they have the information,

relying on consumer inference to give a higher expected quality than the true one. No experiments are run for this case because existing work by Forsythe et al. (1989) has already covered similar cases – a review of their results would give a useful perspective though.

Model II dispenses with the possibility that information is not known, and instead introduces a cost of withholding it. This is reminiscent of the extension by Jovanovic of the Milgrom analysis (in product markets, a cost of communicating information leads low quality types to pool on non-disclosure and so provides a lower bound to unraveling). In addition, the authors allow for outlets to “garble” their rivals’ information (again at a cost). Such garbling, which is a novel contribution to this paper, negates the information provided by the other outlet, so the reader (it is assumed the reader sees the reports from both outlets) is left with her priors. Because the contribution here is novel, it would be useful to think of more detailed micro-underpinnings for the story.

First, if indeed (as per the first model, and indeed as one might expect from repeated interactions) the consumers know the media outlets’ preferences, then they know to trust the one reporting the quality of the cause it champions, and that the other is garbling, and so should be ignored. Thus garbling would be completely ineffective. Second, providing negative information about a rival cause is common in the political arena with “negative” political advertising. Might one think of multiple performance (quality) dimensions, with the ability of either outlet to reveal them? There is an interesting potential parallel here with comparative advertising in product markets, which involves the joint revelation of relative strengths. Third, here the costs of garbling or withholding are motivated by appealing to reputation costs, although these are black-boxed: see Li and Mylovannov for an explicit model of reputation and media.

Incidentally, the experiments have subjects simultaneously deciding whether to transmit or withhold the information (so each has veto power); the description in the text has the opponent decide whether to garble only after seeing the first party decide to transmit it.

Model III gets at the crucial question of the effects of further competition. Model II left us with the conclusion that outlets will transmit information above a threshold, but their rivals will garble it above another threshold, leaving the information received by the reader as an intermediate range in which it is neither blocked nor withheld. In the current extension, there are multiple media outlets of each type. (The garbling option appears to have disappeared, but there are obvious free-rider and coordination issues with allowing it when several media outlets have the same political preferences: existing experiments on such public goods contributions themes could be usefully referred to.)

Competition is introduced here by allowing for multiple outlets of the same type. A strong incentive to providing information is injected by allowing the outlets of a same viewpoint to get

a larger payoff by transmitting more information (i.e., in more states) than a rival. It is assumed – and this is a strong assumption – that the consumer is aware of the information cut-off strategy played by each outlet. Thus the outlet promising more information will make all the sales. Consequently, there is a “race to the top” insofar as all outlets of the same viewpoint will transmit all information. The result, and the mechanism, are strongly reminiscent of the “travelers’ dilemma” which has basically the same incentive to stealing a march on a rival. The experimental results here could be usefully compared to experiments run on the travelers’ dilemma.

Notice that, in the spirit of search cost models (the search” cost in the model here is the parameter  $\epsilon$ ), if the consumers do not observe that an outlet has deviated, then we would have a “Diamond paradox” result that information would remain at the monopoly level and so competition would have no effect. Perhaps again “reputation” could come to the rescue to deliver the desired result that the truth will out under competition.

I appreciate how much work the authors have done in so short a time. Still, the paper could benefit from spell-checking, and a few more apostrophes. At some points (e.g., when there’s a capital letter in the middle of a sentence) I wondered whether an important part of a sentence had gone astray. Nonetheless, the message came across in the important parts, with a couple of exceptions where I think some symbol hasn’t loaded. Namely, in the development of model II the authors keep referring to media outlet  $i, j$  and I couldn’t figure out what was meant (likewise with the notation for the reaction functions). Luckily, the experimental instructions are very clear and I figured out what they want to say from there. My discussion is therefore based on that reading.

I also didn’t have any references, though perhaps I didn’t look in the right place.

In summary, the authors have delivered models in which media outlets can be intrinsically biased, and the equilibrium incentives to provide information depend on the competitive environment. Overall, more competition gives better information. Model predictions are supported from experimental tests. The focus of the study is on information revelation; though this also needs to be melded with the desire of the media consumers to actually absorb the information, and also the financial incentives for the media to transmit it (alongside their political agendas).

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