Bias or Accuracy?
How News Media Consumption Responds to Higher Stakes

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News media consumption is inextricably linked to the acquisition of information: we consume news, among other reasons, to gather information that helps us make better decisions. This applies to economic decisions – the choice of vehicle depends upon what I know about car brands – as well as to political decisions – the choice between two candidates depends upon what I know about their policy platforms.

Yet, the demand for accurate information is not necessarily the only motivation for news consumption. Models of media bias (Mullainathan-Shleifer 2006, Gentzkow-Shapiro 2006, Sobbrio 2014) often assume consumers care about how the news aligns with their ideological priors or preferences. Sometimes consumers can perceive this as being compatible with their demand for accuracy: Bayesian agents will attribute higher quality to news sources that confirm their priors (Gentzkow-Shapiro 2006). In other cases, however, a trade-off may arise between confirmatory bias and accuracy so that individuals may choose like-minded but less accurate sources.

When such a tension emerges, one would expect the willingness to trade off accuracy for alignment to react to the potential return from holding accurate information. Indeed, models such as Mullainathan-Shleifer (2006) predict that a "conscientious reader" (i.e. someone who demands accurate information) can benefit from consuming a more diverse media diet, and a "high-stakes" consumer may have a stronger incentive to become such a reader. Put simply, if acquiring truthful information is more valuable, consumers should be more likely to learn from more diverse sources even if this involves challenging their initial views.

Our project will examine empirically how the value of accurate information affects media consumption. Specifically, we look at the acquisition of information for decisions in three domains: i) healthcare, ii) product recalls, and iii) political advertising. Each module exploits different sources of variation in the value of accurate information, and plans to use various types of data from Nielsen.

1. Healthcare

One of the most salient topics in US policy debates in recent years has been healthcare reform. Ever since President Barack Obama was elected in 2008, the debate over what came to be the Affordable Care Act (ACA) of 2010 has become a signature issue in American politics, and has attracted enormous news coverage. Importantly for our purposes, the policies involved have been very controversial along ideological lines, potentially introducing a substantial dimension of ideological preferences in the demand for news coverage of the topic. Accordingly, there has been substantial variation across different news sources in their coverage of the ACA.

Just as crucially, the design of the US healthcare system introduces a potential break in the value of accurate information regarding the consequences of reform. Since eligibility for Medicare coverage begins at age 65, reaching that age implies that the impact of the ACA (or its repeal) is sharply reduced. As a result, information about the ACA individual markets is much more important for a 62-year-old than for a 65-year-old. Given this, our key hypothesis is that individuals under 65 (with high stakes) will have a more ideologically diverse pattern of news media consumption than individuals aged 65 and above.[1]

Our empirical strategy will also exploit the fact that the salience of healthcare in news coverage increased greatly upon the election of Barack Obama. We can then compare the news media consumption patterns of over- and under-65 groups, before and after that shock. To test these hypotheses, we plan to use information on news media consumption, on both broadcast and cable TV, by age or age group, from Nielsen Basic TV ratings.[2]

We also plan to use data on minute-by-minute ratings disaggregated by age group and other individual characteristics, available from Nielsen Advanced TV ratings. This information would allow us to examine whether high-stakes viewers are more likely to tune in to ideologically distant news sources precisely in coincidence with news coverage of healthcare reform. This could be achieved by matching the audience data with detailed information on the content and timing of each news story covered on major US TV channels (available from the Vanderbilt Television News Archive). In addition, the longitudinal nature of the data on Nielsen panelists would allow us to examine whether individuals change their media consumption upon reaching age 65, and whether that is more likely to occurs at times when healthcare is a salient issue.

In addition to these key data sources, we also aim to exploit information on consumption of health-related products, in general, and prescription drugs in particular. Indeed, to the extent that the consumption of prescription drugs is associated with worse health, data on this aspect would allow us to identify, among those under 65, individuals with particularly high stakes in healthcare reform and related discussions. The information on drug consumption at the local market level included in the Nielsen Scarborough survey would be ideal to allow us to test whether any break in patterns of diversity in news consumption is being driven by those markets where those under 65 spend relatively more in healthcare consumption.

Finally, an alternative way of gauging what segments of the population have higher stakes in healthcare-related news would be to identify markets where pharmaceutical companies, and other providers or health-related products and services, advertise the most. The detailed information on spending for direct-to-consumer advertising by company, market, and medium included in the Nielsen Advertising Intelligence data would be extremely useful in this regard. Ideally this information could be combined with data on direct-to-physician advertising from the "Dollars to Docs" dataset available from ProPublica.

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[1] Of course, turning 65 is not an unpredicted shock, so one would expect the diversity in news media consumption to decline smoothly, along with the stakes, as one approaches 65. Our prediction is that there would be a trend break in that decline upon reaching 65, enabling us to tell it apart from pure age effects.

[2] As a comparison, we could also study the separate experiment offered by Medicare Part D, enacted in December 2003 and introduced in January 2006. In this case, it is people over 65 that would constitute the "high-stakes" group. Reproducing the same fact but in reverse would be another way of establishing a causal relationship between value of information and news media consumption. This would involve using TV ratings back to at least 2003.

2. Product Recalls

In the second module of our project, we investigate this issue by looking at the case of consumer safety recalls. Acquiring accurate information regarding consumer goods is especially important when such information involves consumer safety. In other words, when major product defects are discovered, the benefit from accuracy is likely to overcome the possible cost to consumers of receiving negative information about familiar brands or products, possibly altering their news consumption choices.

We will focus on car safety recalls. Specifically, we intend to examine whether, when a vehicle is recalled for safety reasons, owners are more likely to actively seek recall-related news, including that from ideologically distant sources that they would normally neglect. Our empirical analysis will consider car safety recalls issued in the U.S. over the past 15 years, for which comprehensive data is available from the National Highway Traffic Safety Administration.

The first step of our analysis would involve identifying personal characteristics (place of residence, age, education, income, etc.) that best predict vehicle ownership (make and model). To do so, we plan to use data from the Nielsen Scarborough survey, which contains detailed information on respondents' automotive consumption (as well as news consumption). In the case of car seats, we would also use information on family structure (presence and age of children) to predict exposure to the recall episodes.

In the second part, we will identify all news related to each recall featured on the main U.S. cable and broadcast television networks by applying a series of automated keyword searches to daily news transcripts available from the Vanderbilt Television News Archive. Finally, combining information on the exact timing of recall-related news stories with minute-by-minute rating data disaggregated by viewers' personal characteristics (available from Nielsen Advanced TV ratings), we will assess to what extent certain segments of the population are disproportionately more likely to watch recall-related news on certain outlets than their profile, and their usual news consumption habits, would indicate. To further test the hypothesis that the value of information boosts demand for accuracy, we will also distinguish between recalls that involve the risk of deadly accidents from less serious ones for which the stakes, and hence the impact on news consumption choices, should plausibly be less pronounced.

3. Political Advertising

For this third issue, we examine the extent to which exposure to political advertising depends on the individual-specific stakes of the elections. That is, are voters more likely to watch ads from different candidates – including ideologically distant ones – if they perceive the election to be important to them?

To examine this issue we plan to combine data on minute-by-minute audience from the Nielsen Advanced TV ratings with comprehensive information on the timing and content of political TV ads aired in the largest media markets during national elections campaigns, available from the

Wisconsin Advertising Project (for the 2000, 2002, 2004, and 2008 elections) and the Wesleyan Media Project (for the 2010, 2012, 2014, and soon for the 2016 elections).[3]

Using these data, and comparing ratings during an ad to ratings during the preceding minute, we can estimate which types of viewers tuned away from each ad.[4] In particular, this approach will allow us to study how viewers' reaction to an ad depends on the ideological distance from the candidate and how this relationship varied with the importance of the electoral race.

To proxy for viewer ideology, we will rely on demographics (age, race, gender, etc.), as well as geography.[5] We will also employ several possible measures of the importance of the electoral race to the individual. First, assuming that sufficient information is available in media markets spanning multiple states, we can examine whether likely Republican viewers are more likely to dodge ads by Democratic candidates running for office in other states, and whose election is thus less likely to affect them directly. Second, we can explore whether viewers are less likely to avoid ads on issues that are closer to their interests even when they are sponsored by ideologically distant candidates. For example, are individuals over age 65 more likely to watch ads about Social Security and Medicare? Are women more likely to watch ads focusing on gender-specific issues, such as abortion or women's health? Are parents more likely to watch ads related to childcare or early schooling?

Available and Expected Resources

Collectively, the authors can commit to providing at least $10,000 from university research accounts and a full-time research assistant from Brown University for one year, and it is possible that these amounts can be increased in the coming years.

References

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[3] Using these data, we could also investigate the supply side of advertising by candidates, parties, and special interest groups. Do candidates target ads towards those least likely to tune out? Do they target ads in order to mobilize core supporters or to persuade swing voters? How does this differ between Presidential and midterm years, when turnout tends to be much lower? Do they tend to air ads focused on Social Security and Medicare on television programs (and time slots) disproportionately watched by age 65+ viewers?

[4] This strategy is similar to that used by Knight and Tribín (2016), who measure viewer responses to government propaganda using data from Nielsen on television viewership in Venezuela.

[5] Standard political surveys, such as the American National Election Survey, will allow us to predict ideology in this way.