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a targeted bed net subsidy program. However, this intuition is flawed and the correct answer depends on whether the average neighborhood subsidy rate under the proposed subsidy program would be higher or lower than the average neighborhood subsidy rate observed in the data used to estimate the parameters of interest.

¹ J. Cohen and P. Dupas, "Free Distribution or Cost Sharing? Evidence from a Randomized Malaria Experiment," NBER Working Paper No. 14406, October 2008, and Quarterly Journal of Economics, 125 (1), (February 2010), pp.1–45.

² P. Dupas, "What matters (and what does not) in households' decisions to invest

in malaria prevention?" and American Economic Review P&P, 99(2), (May 2009), pp. 224–30.

³ N. Ashraf, J. Berry, and J. Shapiro. "Can Higher Prices Stimulate Product Use? Evidence from a Field Experiment in Zambia," NBER Working Paper No. 13247, July 2007, and American Economic Review 100(5) (December 2010) pp. 2383–413.

⁴ J. Meredith, J. Robinson, S. Walker, and B. Wydick. "Keeping the Doctor Away: Experimental Evidence on Investment in Preventive Health Products," forthcoming in Journal of Development Economics.

⁵ P. Dupas, "Short-run Subsidies and Long-run Adoption of New Health Products: Evidence from a Field Experiment," NBER Working Paper No.

16298, August 2010.

⁶ J. Cohen, P. Dupas, and S. Schaner, "Price Subsidies, Diagnostic Tests, and Targeting of Malaria Treatment: Evidence from a Randomized Controlled Trial," NBER Working Paper No.17943, March 2012.

⁷ D. Bhattacharya and P. Dupas, "Inferring Welfare Maximizing Treatment Assignment under Budget Constraints," NBER Working Paper No. 14447, October 2008, and Journal of Econometrics, 167(1), (March 2012), pp. 168–96.

⁸ D. Bhattacharya, P. Dupas, and S. Kanaya, "Estimating the Impact of Means-tested Subsidies under Treatment Externalities with Application to Anti-Malarial Bednets," NBER Working Paper No. 18833, February 2013.

Ideology in the News Media

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In many traditional models of politics, such as the pioneering work of Anthony Downs, voters lack private incentives to become informed.¹The news media therefore play a crucial role in any democracy, amortizing the costs of gathering and filtering news across many citizens, lowering the costs of acquiring political information, and strengthening private incentives to become informed.

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Their Profiles appear later in this issue.

Democracy might function poorly without the news media, but the special role of the media in providing information relevant to voting and other political decisions also endows it with significant power to shape how events are perceived. Anecdotal evidence suggests that the news media do, indeed, exercise significant discretion in how they present events. Consider, for example, the following three reports on a December 2, 2003 battle in the Iraqi city of Samarra:²

Fox News: "In one of the deadliest reported wildfires in Iraq since the fall of Saddam Hussein's regime, U.S. forces killed at least 54 Iraqis and captured eight others while fending off simultaneous convoy ambushes."

New York Times: "American commanders vowed Monday that the killing of as many as 54 insurgents in this cen-

tral Iraqi town would serve as a lesson to those fighting the United States, but Iraqis disputed the death toll and said anger against America would only rise."

Al Jazeera: "The U.S. military has vowed to continue aggressive tactics after saying it killed 54 Iraqis following an ambush, but commanders admitted they had no proof to back up their claims. The only corpses at Samarra's hospital were those of civilians, including two elderly Iranian visitors and a child."

These accounts are based on the same facts. But through selective omission, choice of words, and varying credibility ascribed to the primary source, they convey very different impressions of what transpired.

What drives the variation we see in how a given event is presented by different news outlets? Does the diversity of perspectives reflected in the quotes

above strengthen democracy, or undermine it? We have explored these questions in a series of theoretical and empirical papers about the role of ideology in the news media.

Theories of Media Bias

The model of media bias we develop was motivated by three empirical observations.³ First, consumers tend to choose news outlets whose slant agrees with their own political beliefs. Second, they do not perceive themselves to be trading off quality in doing so, but rather judge these like-minded outlets to be more accurate and trustworthy than those they disagree with. Third, media firms appear to cater to this demand for like-minded news.

Our model begins with the observation that a Bayesian consumer, who is uncertain about the quality of an information source, will infer that the source is of higher quality when its reports conform to the consumer's prior expectations. A consumer who sees the headline, "Elvis spotted in Manhattan," in a newspaper at the supermarket checkout counter will rationally infer that the paper has low journalistic standards; this is far more likely than the alternative hypothesis that Elvis is in fact alive. By the same logic, a consumer who believes strongly that American troops never target civilians, or that humans are responsible for global warming, will rationally question the quality of a news source that suggests otherwise.

We use this fact as a foundation for a model in which consumers are rational, and media firms seek to develop a reputation for accuracy. Reputational concerns lead to a temptation to slant reports to the prior beliefs of customers, which can make all participants worse off. In the model, bias is lessened if the truth is likely to be learned after the media outlet makes its report. Competition provides such a verification mechanism and therefore can reduce bias.

This work builds on early theoretical contributions that identified two

broad sources of media bias: supply-side factors, such as the objectives of governments,⁴ owners⁵, and journalists⁶, and demand-side factors, such as voters' preferences for confirmatory information⁷ and information-theoretic motives for coarsening information⁸. Our paper provides an additional rationale for consumer-driven bias.

Empirical Evidence on Media Bias

The fast-developing theoretical literature on media bias has created opportunities for empirical testing. Building on earlier work⁹, we develop a text-based index of media slant based on whether a news outlet's language is more similar to that of a congressional Republican or Democrat.¹⁰ The measure is built in an automated and scalable way, making it portable to other settings.

We use this measure to study the empirical forces determining the political slant of U.S. daily newspapers in 2005. Using zip code-level circulation data, we estimate a model of newspaper demand that explicitly incorporates slant, confirming an economically significant demand for like-minded news.

We then ask whether newspapers' choice of slant appears consistent with readers' preferences. We find that a meaningful portion of newspaper slant could be attributed to catering to consumer ideology, whereas factors like the identity of the newspaper's owner and the party affiliation of incumbent politicians matter much less.

A major limitation of this study is that most U.S. daily newspapers do not face head-to-head competition. This makes it difficult to study the effects of competition, a serious limitation because much of the policy directed at media markets is specifically oriented toward maintaining competition and ideological diversity.

To remedy this lack of recent data on newspaper competition, we turn to America's past. In the early twentieth century, the United States had hun-

dreds of cities with competing daily newspapers. We use extant directories of U.S. newspapers to construct a cross-section of newspaper markets in 1924. The fact that newspapers at that time routinely declared explicit political affiliations meant that we did not need to resort to textual analysis to classify newspapers by ideology, although we did collect some quantitative content metrics to validate newspaper affiliations as a measure of ideology and to test some richer hypotheses about newspaper content.

We supplement our data on newspaper markets with detailed, town-level circulation data from 1924, supplied by the Audit Bureau of Circulations (and newly digitized), as well as anonymous cost and revenue data for a small sample of newspapers.

We use these data to build and estimate an economic model in which households demand like-minded news and newspapers compete for readers' subscription dollars and for advertising revenues.¹¹ We use the model to evaluate the role of competition in determining political affiliations, and to study the effects of various policies, both real and hypothetical.

We find that economic competition enhances ideological diversity; that the market undersupplies diversity; and that incorporating the two-sidedness of the news market is critical to evaluating the effect of public policy.

Our historical data collection efforts also let us delve deeper into the connections between the media and the state. We use a panel of U.S. states from 1869–1928 to test for any effect of incumbent party transitions on the affiliations of entering and exiting newspapers.¹² Interestingly, despite anecdotal evidence that political patronage was an important source of newspaper funding in this period, we find little evidence that patronage resulted in distortions to the composition or content of the media. The only exception is during the Reconstruction South, when the return of Democrats to power is associated with a dramatic collapse in the importance of Republican newspapers.

The Effect of Newspaper Entry and Exit on Electoral Politics

America's past also offers a rich laboratory for studying the effects of newspapers on elections. We use the thousands of entries and exits of newspapers to estimate the effect of newspapers on voter turnout, voting patterns, and incumbency advantage.¹³ We find that newspapers increase turnout, an effect driven mainly by the difference between having a newspaper and having no newspaper, rather than the difference between having a newspaper and having multiple competing papers. Interestingly, we also find that the effects on turnout in presidential elections die out with the emergence of radio and television, whereas newspapers remain important in stimulating turnout in congressional elections right up to the present. This finding is consistent with earlier work¹⁴ showing that television was a better substitute for newspapers in national politics than in local politics.

We find no evidence that the political orientation of entering and exiting newspapers affects how local citizens vote. And, we find no clear evidence that newspapers systematically help or hurt incumbents. Thus, at least for the average newspaper, its primary effect is to stimulate political participation, rather than to help or hurt a particular political constituency.

Ideological Segregation Online and Offline

Motivated by concerns that the Internet is polarizing the electorate, we study the extent to which Internet news audiences are segregated along ideological lines.¹⁵ We obtain detailed data on online news consumption, matched to data on household ideology. We define segregation using a standard metric which mea-

sures the extent to which conservatives are consuming news on the same news sites as other conservatives.

Our quantitative findings are surprising. We find that the average conservative's news diet consists of sources about as conservative as *usatoday.com*; the average liberal's diet is about as liberal as *CNN.com*. We also find that conservatives visit liberal sites and vice versa. For example, a visitor to *rushlimbaugh.com* is considerably more likely than the average Internet news consumer to visit *nytimes.com* in the same month.

The segregation of Internet news is higher than that of most (though not all) offline news media, but substantially lower than the segregation of face-to-face interactions with neighbors, co-workers, or family members.

We find no evidence that the Internet is becoming more segregated over time, despite an increasing proliferation of options.

¹ A. Downs, *An Economic Theory of Democracy*, New York: Harper & Row, 1957, pp. 238–59.

² M.A. Gentzkow and J.M. Shapiro, "Media Bias and Reputation," NBER Working Paper No. 11664, October 2005, and *Journal of Political Economy*, 114 (April 2006), pp. 35–71.

³ *Ibid.*

⁴ T.J. Besley and A. Prat, "Handcuffs for the Grabbing Hand? Media Capture and Government Accountability," *American Economic Review*, 96(3) (June 2006), pp. 720–36.

⁵ D.J. Balan, P. DeGraba, and A.L. Wickelgren, "Ideological Persuasion in the Media," *Journal of Economic Behavior and Organization*, (August 2009), pp. 1–44.

⁶ D.P. Baron, "Persistent Media Bias,"

Journal of Public Economics, 90(1-2) (January 2006), pp. 1–36.

⁷ S. Mullainathan and A. Shleifer, "The Market for News," *American Economic Review*, 95(4) (September 2005), pp. 1031–53.

⁸ W. Seun, "The Self-Perpetuation of Biased Beliefs," *The Economic Journal*, 114(495) (April 2004), pp. 377–96.

⁹ T.J. Groseclose and J. Milyo, "A Measure of Media Bias," *Quarterly Journal of Economics*, 120(4) (November 2005), pp. 1191–1237.

¹⁰ M.A. Gentzkow and J.M. Shapiro, "What Drives Media Slant? Evidence from U.S. Daily Newspapers," NBER Working Paper No. 12707, November 2006, and *Econometrica*, 78(1) (January 2010), pp. 35–71.

¹¹ M.A. Gentzkow, J. M. Shapiro, and M. Sinkinson, "Competition and Ideological Diversity: Historical Evidence from US Newspaper," NBER Working Paper No. 18234, July 2012.

¹² M.A. Gentzkow, N. Petek, J.M. Shapiro, and M. Sinkinson, "Do Newspapers Serve the State? Incumbent Party Influence on the US Press, 1869–1928," NBER Working Paper No. 18164, June 2012.

¹³ M.A. Gentzkow, J.M. Shapiro, and M. Sinkinson, "The Effect of Newspaper Entry and Exit on Electoral Politics," NBER Working Paper No. 15544, November 2009, and *American Economic Review*, 101(7) (December 2011), pp. 2980–3018.

¹⁴ M.A. Gentzkow, "Television and Voter Turnout," *Quarterly Journal of Economics*, 122(3) (August 2006), pp. 931–72.

¹⁵ M.A. Gentzkow and J.M. Shapiro, "Ideological Segregation Online and Offline," NBER Working Paper No. 15916, April 2010, and *Quarterly Journal of Economics*, 126(4) (November 2011), pp. 1799–1839.