

The Centrist U.S. Press*

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Abstract

We propose a new method for measuring the relative ideological positions of newspapers, voters, interest groups, and political parties. The method uses data on ballot propositions. We exploit the fact that newspapers, parties, and interest groups take positions on these propositions, and the fact that citizens ultimately vote on them. We find that, on average, newspapers in the U.S. are located almost exactly at the median voter in their states. Newspapers also tend to be centrist relative to interest groups.

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1 Introduction

Are media in the U.S. biased? Recent surveys indicated that most Americans think they are. To take just one example, during the 2008 election only 10% of Republicans, 21% of independents, and 37% of Democrats said that most reporters tried to offer unbiased coverage of the campaign (Rasmussen Reports, July 21, 2008).

Charges of a liberal media bias have become particularly common among conservatives and Republicans. A Google search on “U.S. media” and “liberal bias” yields about 18,500 hits, while a search on “U.S. media” and “conservative bias” yields only about 2,000 hits. The authors of one of the most prominent articles on the subject (Groseclose and Milyo, 2005) are convinced that the media exhibit a leftward bias. Groseclose states, “I suspected that many media outlets would tilt to the left because surveys have shown that reporters tend to vote more Democrat than Republican... But I was surprised at just how pronounced the distinctions are”; while Milyo states, “there is a quantifiable and significant bias in that nearly all of them lean to the left”.¹

There is currently something of a cottage industry among social scientists attempting to estimate the size and direction of media bias. In addition to Groseclose and Milyo (2005), the set of recent studies includes Lott and Hassett (2004), Adkins Covert and Wasburn (2007), Larcinese et al. (2007), Peake (2007), Gentzkow and Shapiro (2008), Ho and Quinn (2008), Puglisi and Snyder (2008). Most of these papers provide novel and fairly convincing methods for locating newspapers relative to one another and relative to politicians. However, none of them provides a compelling way to locate media outlets relative to the public at large. Two studies attempt to estimate where the “median voter” or “representative citizen” lies relative to the media outlets (Groseclose and Milyo, 2005; Gentzkow and Shapiro, 2008), but in both cases the estimates rely on extremely strong assumptions. For example, the Groseclose and Milyo method relies on the assumption that the mean member of the U.S.

¹See <http://newsroom.ucla.edu/portal/ucla/Media-Bias-Is-Real-Finds-UCLA-6664.aspx>.

House of Representatives occupies the same policy position as the median U.S. voter.²

This paper offers a new and extremely simple method for placing newspapers, interest groups, political parties, and voters on the same scale. The method uses data on ballot propositions. We exploit the fact that newspapers, parties, and interest groups make endorsements for or against these propositions, and citizens ultimately vote on them. When an endorser disagrees with a majority of the voters on a proposition, the endorser has clearly taken a position that is to the left or right of the median voter. We average over these cases to create an index of conservatism for each newspaper, interest group and party.

Getting straight to the point, we find that on average newspapers are located *almost exactly at the median voter in their states*. In California, where we have the most data, newspapers are probably slightly to the *right* of the median voter. These results raise serious doubts about claims in Groseclose and Milyo (2005) and other work in the academic and journalistic literature.

Second, we find that newspapers are quite moderate relative to most interest groups and political parties. This is similar to results in Ho and Quinn (2008).

Third, we find that the space of newspaper endorsements appears to be more “multidimensional” than the space of interest group endorsements. When we scale newspapers and interest groups separately, the amount of variation explained by the first factor (or two or three) is much lower for newspapers than for interest groups. This is interesting because it suggests that newspapers are less ideological than groups, and instead present a more nuanced, in addition to a more moderate, set of positions. This is different from the findings in Ho and Quinn (2007), possibly because they focus on judicial decisions while we study ballot propositions.

Why should we care about these findings? Numerous theoretical papers show how media bias can affect voting and other decisions, including Gentzkow and Shapiro (2006), Bernhardt, et al. (2008), and Gelbach and Sonin (2008). Empirically, Gerber et al. (2006), Della

²See Gasper (2007) for other critiques.

Vigna and Kaplan (2007), Knight and Chiang (2008), and others find significant effects of media on voting patterns and public opinion. Ho et al. (2008) find evidence that perceptions of media bias affect political participation. Elite behavior is also likely to be affected. For example, Scott McClellan (2008) admits that he regularly and routinely lied to the media while serving as George W. Bush’s press secretary. He believes that journalists reported the lies at least in part because they were afraid of being accused of a liberal bias.

2 Method and Measures

2.1 General Idea

We exploit the fact that newspapers and interest groups routinely make endorsements on ballot propositions, and voters subsequently vote on these same propositions. The most straightforward – and relative non-parametric – estimator is defined as follows.

Consider a proposition on an issue for which the “yes” alternative (Y) is to the right of the “no” alternative (N). So, Y is the “conservative” position and N is “liberal.”

There are three cases, shown in Figure 1 below. In case (a), the median ideal point is at the “cut-point” between the Y and N alternatives. So, the Y and N alternatives both receive 50% of the vote. Any newspaper or group that endorses the Y alternative reveals itself to be more conservative than the median voter on the issue, while any newspaper or group that endorses the N alternative reveals itself to be more liberal than the median voter. We can use all endorsements in this case. In practice, we assume that case (a) covers all ballot measures where the vote percentage for the Y alternative lies between 48% and 52%.

In case (b) the median ideal point is noticeably to the right of the “cut-point” between the Y and N alternatives. So, the Y alternative receives noticeably more than 50% of the vote. Any newspaper that endorses the N alternative reveals itself to be more liberal than the median voter on the issue. However, a newspaper that endorses the Y alternative might be more conservative or more liberal than the median voter – newspapers with ideal points between $(N + Y)/2$ and M are more liberal than the median voter but still endorse Y . In

other words, in case (b) a “ N ” endorsement by a given newspaper is informative about its (relatively) liberal position, since a sizeable subset of citizens to the left of the median vote for the Y alternative but the newspaper endorses the opposite position. On the other hand, a “ Y ” endorsement is not informative, since many citizens both to the left and to right of the median voter take the same decision.

Case (c) presents the opposition situation to case (b). Now the median ideal point is noticeably to the left of the “cut-point” between the Y and N alternatives. So, the N alternative receives noticeably more than 50% of the vote. Any newspaper that endorses the Y alternative reveals itself to be more conservative than the median voter on the issue. However, a newspaper that endorses the N alternative might be more liberal or more conservative than the median voter – newspapers with ideal points between M and $(N + Y)/2$ are more conservative than the median voter but still endorse N .

To estimate the bias of a given newspaper, we simply average across all ballot propositions on which the newspaper made an endorsement. We can use all three cases, case (a) alone, or cases (b) and (c). We can also weight by newspaper size, or other variables, if desired.

Fortunately, most newspapers make endorsements on all or nearly all propositions, so sample-selection bias is not a significant problem. In addition, we can deal with the possibility that endorsements affect voter behavior by excluding the propositions that nearly pass or nearly fail, i.e. case (a).

In addition, we can estimate factor-analytic models analogous to those used to scale roll-call data. We apply the linear model proposed in Heckman and Snyder (1997).³ These rely much more heavily on specific functional form assumptions, but, as we will see, produce similar estimates and the same substantive conclusions.

³Ho and Quinn (2007) also use a scaling model, but take a Bayesian approach. See also Poole and Rosenthal (1997) for a description and applications of the influential Nominat model.

2.2 Specific Measures

We now provide more precise descriptions of the specific measures we use below. First, we need a bit of notation. Let S be the set of all states. For each state s , let N_s be the set of newspapers in s . Let N be the set of all newspapers in all states.

For each newspaper n , let P_n be the set of all propositions on which n endorsed. Let C be the set of propositions that pass or fail by a close margin – i.e., the vote percentage of the winning alternative is less than 52%; and let L be the complement of C . Let $c_{np} = 1$ if newspaper n endorsed the conservative position on proposition p and $c_{np} = -1$ if newspaper n endorsed the liberal position. Similarly, let $v_p = 1$ if voters adopted the conservative position on proposition p and $v_p = -1$ if voters adopted the liberal position.

We can then write the main quantity of interest as follows:

$$Right\ of\ Median = \frac{\sum_{s \in S} \sum_{n \in N_s} \sum_{p \in P_n} (c_{np} - v_p)}{2 \sum_{s \in S} \sum_{n \in N_s} \#\{p \in P_n | c_{np} \neq v_p\}}$$

Notice that *Right of Median* = +1 if newspaper endorsements are “entirely conservative” (when they disagree with the majority of voters), *Right of Median* = -1 if the newspaper endorsements in state s are “entirely liberal,” and *Right of Median* = 0 if newspaper endorsements, relative to the median voters in their respective states, “neutral” on average. This measure uses all endorsements by all newspapers.

We also study a modification of this variable after omitting the propositions that pass or fail by close margins, which corresponds to cases (b) and (c) in the previous section:

$$Right\ of\ Median = \frac{\sum_{s \in S} \sum_{n \in N_s} \sum_{p \in P_n \cap L} (c_{np} - v_p)}{2 \sum_{s \in S} \sum_{n \in N_s} \#\{p \in P_n \cap L | c_{np} \neq v_p\}}$$

Finally, we also examine the following measure for the propositions that pass or fail by close margins, which corresponds to case (a) in the previous section:

$$Conservative\ Position = \frac{\sum_{s \in S} \sum_{n \in N_s} \sum_{p \in P_n \cap C} c_{np}}{\sum_{s \in S} \sum_{n \in N_s} \#(P_n \cap C)}$$

Again, *Conservative Position* = +1 if newspaper endorsements on close propositions are “entirely conservative,” *Conservative Position* = -1 if newspaper endorsements on close

propositions are “entirely liberal”, and *Conservative Position* = 0 if newspaper endorsements on close propositions are, relative to the median voters in their respective states, on average “neutral.”

We can construct analogous measures for each newspaper, and for each state, simply by summing only over the appropriate subsets of propositions. For example, for each state s :

$$Right\ of\ Median_s = \frac{\sum_{n \in N_s} \sum_{p \in P_n} (c_{np} - v_p)}{2 \sum_{n \in N_s} \#\{p \in P_n | c_{np} \neq v_p\}}$$

For each newspaper n :

$$Right\ of\ Median_n = \frac{\sum_{p \in P_n} (c_{np} - v_p)}{2(\#\{p \in P_n | c_{np} \neq v_p\})}$$

We define the variables *Conservative Position_s* and *Conservative Position_n* analogously, averaging over close propositions.

To measure the degree to which a newspaper is extreme or moderate we use the absolute values of these last measures, and then average over newspapers. More precisely, we compute the following:

$$|Right\ of\ Median| = \frac{1}{\#N} \sum_{n \in N} |Right\ of\ Median_n|$$

and

$$|Conservative\ Position| = \frac{1}{\#N} \sum_{n \in N} |Conservative\ Position_n|$$

where N is the number of newspapers. These variables range from 0 to 1, with 0 representing the most moderate possible position and larger values represent more extremism. We also compute these variables for interest groups, in order to compare newspapers and groups.

2.3 What If Endorsements Influence Voters?

We are not too worried about the influence newspaper endorsements might have on voters, for three reasons. First, most previous studies that employ compelling research designs find that newspaper endorsements have only a small effect on voters’ decisions. Second, since even the largest newspaper in a state is read by only a minority of the state’s households, in

order for newspaper endorsements to influence the aggregate state outcome on a proposition it would have to be the case that several newspapers in the state endorse the same side on the proposition.

Third, if newspaper endorsements actually do have a significant impact on voting outcomes, then our main estimates will be biased toward finding that newspapers are even more extreme than they really are, in the direction of their true bias. Thus, we will be even less likely to place newspapers on the “wrong side” of voters relative to their true positions (compared to a world where endorsements do not influence voting outcomes).

Why is this? It is because we only include propositions where newspapers endorsed the position that a majority of voters did *not* support. We drop all propositions on which newspapers are “aligned” with the majority of voters. We therefore need only one assumption to sign the bias: Assume that “surprising” newspaper endorsements are more likely to influence voters than “expected” newspaper endorsements – i.e., a liberal endorsement by a conservative newspaper is more influential than a conservative endorsement by that newspaper, and a conservative endorsement by a liberal newspaper is more influential than a liberal endorsement by that newspaper. This seems quite natural, and Knight (20xx) finds strong evidence for this in his study of presidential endorsements.

The following example shows clearly how newspaper influence biases our measure of bias. Consider a newspaper n that is more conservative than voters. Suppose the probability that voters would support the conservative position on proposition p in the absence of an endorsement by n is $Prob(v_p = 1 | c_{np} = 0) = Q_v$. Suppose that if n endorses the conservative position on the proposition then it has no effect on Q_v (since this is the newspaper’s expected behavior); but if n endorses the liberal position then it reduces the probability that will voters support the conservative position on the proposition, to $Q_v - e$, where $e \in (0, Q_v)$ measures how strongly endorsements affect voters. That is, suppose $Prob(v_p = 1 | c_{np} = 1) = Q_v$ and $Prob(v_p = 1 | c_{np} = -1) = Q_v - e$. Finally, since the newspaper is conservative relative to voters, suppose the probability it endorses the conservative position is $Prob(c_{np} = 1) = Q_{np} >$

Q_v . Given that the newspaper makes an endorsement, there are four possible outcomes, with the following probabilities:

$$\begin{aligned} \text{Prob}(v_p = 1, c_{np} = 1) &= Q_v Q_{np} \\ \text{Prob}(v_p = 1, c_{np} = -1) &= (Q_v - e)(1 - Q_{np}) \\ \text{Prob}(v_p = -1, c_{np} = 1) &= (1 - Q_v)Q_{np} \\ \text{Prob}(v_p = -1, c_{np} = -1) &= (1 - Q_v)(1 - Q_{np}) \end{aligned}$$

We drop the first and last cases, where the majority of voters and the newspaper agree. Thus, newspaper n 's conservatism score will be a strictly monotonic function of

$$\Pi(e) = \text{Prob}(n \text{ is Right of Median}) = \frac{(1 - Q_v)Q_{np}}{(1 - Q_v)Q_{np} + (Q_v - e)(1 - Q_{np})}$$

Clearly, this is increasing in e . That is, the more influence newspaper n has on voting decisions, the more conservative it will appear. Note that if newspaper endorsements do not influence voters at all – i.e., if $e = 0$ – then $\text{Prob}(n \text{ is Right of Median})$ takes on its smallest possible value:

$$\Pi(0) = \text{Prob}(n \text{ is Right of Median}) = \frac{(1 - Q_v)Q_{np}}{(1 - Q_v)Q_{np} + Q_v(1 - Q_{np})}$$

Clearly, $\Pi(0) > 1/2$, since $Q_{np} > Q_v$ – that is, if newspaper endorsements do not influence voters then newspaper n is more likely to be observed to the right of voters than to the left of voters. As e increases from 0 toward Q_v , $\Pi(e)$ increases from $\Pi(0)$ toward 1.

3 Data

We have collected endorsement data for all states over the period 1996-2008. In section 4.1 below we use all of the available data. We currently have enough data to generate reasonable factor-analytic estimates for Arizona, California, Colorado, Florida, Oregon, and Washington. We focus on these states in section 4.2 below.⁴ The ballot propositions cover

⁴In future work we will expand the state-level analyses to include Georgia, Louisiana, and Texas; however, while these states have a large number of propositions many of them are quite non-controversial and/or deal with local issues.

a wide range of public policy issues – overall state taxes and spending, local taxes and spending, education policy, health policy, energy policy, labor policy, environmental policy, criminal justice, drugs, abortion, gay marriage, treatment of animals, gun control, campaign finance, election rules, and more.

We have collected endorsements for all newspapers with circulation over 20,000 plus a sample of smaller newspapers. We have also collected endorsements by state and county political party organizations, and by a large sample of interest groups. The sample of interest groups includes the major business, labor, environmental, public interest, and taxpayer groups, as well as some prominent blogs.

Currently our sample includes more than 17,000 endorsements; when finished we will have over 20,000. Table 1 shows a few summary statistics by state. We only include states with at least 5 ballot propositions and newspapers that made at least 5 endorsements. Thus we end up with data for 44 states.⁵

Most of the endorsements are not used in constructing the *Right of Median* measures, because in most instances the newspaper endorsement agrees with the position taken by a majority of voters. That is, most endorsements fall into cases (b) and (c) above. This is true for 65% of all endorsements. Recall also that we only use close propositions (i.e., those with a winning margin of 2% or less) when constructing the *Conservative Position* measures. Only 10% of propositions are close, accounting for 10% of endorsements. In the factor analyses, we drop newspapers or groups that made fewer than 10 endorsements, but we use all of the available endorsements for the included endorsers.

We employ two methods to infer whether the “Yes” or “No” alternative on a given proposition represents the conservative position. The most straightforward is to use the endorsements of political parties. If the Republican Party supports a proposition and the Democratic Party opposes it, then the “Yes” alternative is the conservative position, and

⁵The states excluded from the analysis are: Connecticut, Delaware, District of Columbia, Illinois, Kansas, Mississippi and Vermont.

when the opposite holds the “No” alternative is the conservative position.⁶

Unfortunately, in many states the parties rarely make clear recommendations on ballot propositions. An alternative is to use the endorsements of interest groups that are clearly identified as liberal or conservative. We classify labor unions, environmental groups, animal-rights groups, and self-identified progressive groups and blogs as liberal, and we classify business associations, taxpayer groups, and self-identified conservative groups and blogs as conservative. If at least 60% of the conservative groups support a proposition and at least 60% of the liberal groups oppose it, then the “Yes” alternative is the conservative position, and when the opposite holds the “No” alternative is the conservative position.⁷

In what follows we qualify our *Right of Median* and *Conservative Position* with a “1” or “2,” depending on the method used for determining which is the conservative alternative (yes or no) on each proposition. We add a “1” to a variable name when we use only political parties to classify propositions in constructing the variable, and we add a “2” to a name when we use both parties and interest groups to classify the propositions.

4 Results

4.1 Average Bias and Extremism

We begin with an overall assessment of newspapers. We also analyze California separately, since it accounts for more than half of the endorsements.

Table 2 shows each of the measures described above. We see immediately from the top half of the table that the ideological orientation of newspaper endorsements in the U.S. are, if anything, slightly to the right of the typical state median voter. This is clearly the case in California. In the remaining states the newspapers are approximately at the median typical state median voter. If anything, Table 2 shows that in the remaining states newspapers are

⁶In some cases the state party does not take a position but various county parties do. In these cases we use the recommendation made by a majority of the county parties.

⁷We only classify the propositions for which we have the endorsements of at least 2 liberal groups and at least 2 conservative groups.

slightly liberal only on *close* propositions.

The bottom half of Table 2 shows clearly that newspapers tend to be much more moderate than interest groups. On average, the absolute position of groups is about .80 or more, while the average for newspapers is only about .35 or less. So, groups are on average much closer to +1 and -1 than newspapers.

We might worry that $|Conservative\ Position\ 2|$ is biased for groups, since many of these groups are used both in the measure and also in determining which alternatives are conservative and which are liberal. However, $|Conservative\ Position\ 1|$ does not suffer from this potential bias, since we only use the parties to assign alternatives for this measure. (Note: parties are not included in either measure.) Since the results for California are quite similar for both measures, we are not too worried about this potential bias.

Table 3 shows, very roughly, how voters and newspapers locate on a number of salient issues. For voters, the numbers in the table give the fraction of propositions on each given issue for which a majority of voters supported the conservative position. For newspapers, the numbers give the fraction of endorsements on each issue for which the newspaper endorsed the conservative position.

On some issues newspapers appear clearly left of the median voter. Gay rights, especially gay marriage, is a conspicuous example in recent years. Between 1996 and 2008 there were 38 propositions clearly dealing with gay rights, many of them on gay marriage. A majority of voters supported the (conservative) anti-gay rights alternative on 92% of these. Newspapers, however, endorsed this alternative only 11% of the time. Another example is making English the official language and/or requiring that all classes in public schools be taught in English. Between 1996 and 2008 there were 10 propositions on this issue. A majority of voters supported the (conservative) pro-English language alternative on 70% of these. Newspapers, however, endorsed this alternative only 20% of the time.

On other issues, however, newspaper endorsements appear to be noticeably to the right of the median voter. This is especially true for propositions on the minimum wage, other

labor issues, health care, and regulation of smoking. For example, between 1996 and 2008 there were 14 propositions on the minimum wage. A majority of voters supported the (conservative) anti-minimum wage on 14% of these. Newspapers, however, endorsed this alternative 78% of the time.

Interestingly, on measures dealing with abortion, newspapers take the conservative position about as often as the median voter.

4.2 Relative Positions of Individual Newspapers and Groups

In Table 4 we list California-based interest groups, newspapers and voters, ordering them according to the first dimension in the factor analysis described at the end of section ???. We also include voters from the six largest counties. The endorsers are ordered from the most conservative to the most liberal. To help distinguish between the different types of endorsers, we use the following letters in column 2: N = newspapers, G = interest groups, P = political parties, V = the statewide median voter, C = various county median voters, and S = “specialty” newspapers.⁸ In addition, we use a normal font for interest groups and parties, a bold-faced font for newspapers and an italic font for voters. Column 3 shows the estimated first dimension positions from the factor analysis, while columns 4 and 5 show the *Right of Median 1* and *Right of Median 2* scores. We only report these scores for endorsers with at least 10 non-missing observations (recall that these are missing whenever an endorser agrees with the median voter on a proposition). Tables 5-8 present the estimates for Arizona, Colorado, Oregon, and Washington, respectively.

Inspection of Table 4 immediately reveals that newspapers in California are more moderate than interest groups: bold-faced fonts are concentrated in the middle of the table, with normal fonts at the top and at the bottom. Moreover, newspapers are on average located to the right of the overall California median voter. Based on the first dimension factor loadings, there are 36 newspapers to the right of the median voter, and only 17 to the left. In other

⁸The Daily Californian and the Monterey County Weekly are two “specialty” newspapers. The Daily Californian is the newspaper of the University of California at Berkeley.

words, the median newspaper in California is to the right of the median voter.

The table also reveals that newspapers based in a given county are typically more moderate than the median voter living in that county, at least in the largest counties. For example, Orange County voters are to the right of the Orange County Register, while Los Angeles County voters are located to the left of the Los Angeles Times. The same is true for San Francisco County voters *vs.* the San Francisco Chronicle, and Santa Clara County voters *vs.* the San Jose Mercury News. The only exception among the major counties is San Diego, where the median voter appears to be more moderate than the San Diego Union-Tribune. Note that the Tribune is the third most conservative paper in California according to our measure. Alameda is the only county for which the median voter and the largest newspaper are on opposite sides of the statewide median – the median voter in the county is to the left of the statewide median, while the Oakland Tribune is to the right.

According to our estimates, the Republican Party is the most conservative endorser in California, immediately followed by various taxpayers' associations. The Lodi News Sentinel is the most conservative newspaper. On the opposite side of the spectrum, the California Service Employees International Union (SEIU) is the most liberal endorser, while the Monterey County Herald is the most liberal newspaper. Among the most liberal interest groups one can find teachers' associations, environmentalist groups such as the Sierra Club, and of course the California Democratic Party, which is the sixth most liberal endorser.

Finally, it is interesting note that the Los Angeles Times is one of the most moderate endorsers in the state, essentially indistinguishable from the state median voter.

The patterns in the other four states are similar. In all states it is clear that most of the newspapers are more moderate than most of the interest groups.

In Washington most newspapers seem clearly to the right of the median voter, and only one is clearly to the left. In Arizona, Colorado, and Oregon the safest conclusion is that the median newspaper is pretty much at the same location as the median voter. In Arizona, 2 newspapers are quite close to the median voter (the East Valley Tribune and the Tri-Valley

Dispatch), 2 newspapers are to the left, and 3 are to the right. In Colorado, 3 newspapers are close to the median voter (the Grand Junction Daily Sentinel, the Denver Rocky Mountain News, and the Longmont Daily Times-Call), 8 are to the right, and 8 are to the left. In Oregon, 2 papers are indistinguishable from the median voter (Portland Oregonian and the Salem Statesman Journal), 5 newspapers are to the right and 6 to the left. So, in all three of these states the median newspaper is, pretty much, at the median voter.

4.3 Multidimensional newspapers, Ideological Groups?

Our data also suggest that the space of newspaper endorsements is more multidimensional than the space of interest group endorsements. This can be seen from the factor analysis, in two ways. Table 9 summarizes the evidence.

First, when we scale newspapers and interest groups together, we find that newspapers tend to have higher absolute scores on factors 2-5 than interest groups. That is, newspaper endorsements “tap into” these higher dimensions more than group endorsements. This is shown in the first two columns of the table. Note that the average absolute loadings for newspapers are about 25-35 percent larger than those for groups, except in Oregon.

Second, when we scale newspapers and interest groups separately, we find that the first factor accounts for a much larger share of the total variation in the endorsing behavior of groups than in the endorsing behavior of newspapers. This is shown in columns 3 and 4 of the table. The pattern is reversed for dimensions 2-5, as shown in columns 5 and 6. Dimensions 2-5 account for a noticeably larger share of the variance in the endorsing behavior of newspapers compared to groups.

Thus, overall, interest groups appear more one-dimensional, or “ideological”, than newspapers.

5 Concluding remarks

In this paper we propose and apply a new, simple method to locate voters, newspapers, interest groups, and parties in the same ideological space. This method exploits the fact that newspapers, interest groups and parties routinely take positions on ballot propositions, and voters ultimately vote on them. By tracing out where newspapers are located with respect to political parties and the median voter on the different propositions, we are able to put into perspective the claims about how biased the U.S. media are. Our findings casts strong doubts on the claim that U.S. newspapers exhibit an overall leftward bias: on the contrary, we find that newspapers do not appear to be very biased relative to the median voter.

It is worth emphasizing that the data and the method employed here allow us to place the *editorial* sections of newspapers relative to voters. To complete the picture, in future work we will locate the news sections of each newspaper relative to its editorial section using one of the existing methods, such as that in Gentzkow and Shapiro (2006), which is based on language similarity.

On the extensive margin, our method can be readily extended to locate individual politicians on the same ideological space where we have placed interest groups and newspapers. This is feasible, to the extent that a given politician publicly states her position regarding various ballot propositions.

Our analysis also shows that newspapers are noticeably more centrist than interest groups, and that their “bliss points” are probably located in a policy space that is more multidimensional than the one spanned by interest groups. From this point of view, newspapers appear to endorse in a different manner than interest groups, as they seem to enjoy more degrees of freedom in a spatial sense, but at the same time not to tilt too much in any given direction. To the extent that this is due to the fact that they have have different goals and incentives than interest groups proper, it is probably a mistake to treat them as just

another type of interest group.

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Table 1: Summary Statistics					
State	# Props	# News	State	# Props	# News
Alabama	57	13	Nevada	61	3
Alaska	38	3	New Hampshire	8	2
Arizona	33	3	New Jersey	24	13
Arkansas	84	8	New Mexico	65	6
California	155	55	New York	9	12
Colorado	88	21	North Carolina	12	10
Florida	53	32	North Dakota	41	6
Georgia	53	8	Ohio	25	14
Hawaii	24	3	Oklahoma	49	3
Idaho	23	6	Oregon	140	13
Indiana	9	10	Pennsylvania	10	16
Iowa	7	8	Rhode Island	47	1
Kentucky	8	7	South Carolina	31	8
Louisiana	89	8	South Dakota	46	5
Maine	82	2	Tennessee	6	11
Maryland	19	12	Texas	98	25
Massachusetts	22	12	Utah	34	5
Michigan	26	18	Virginia	21	12
Minnesota	7	5	Washington	66	14
Missouri	44	10	West Virginia	10	8
Montana	40	4	Wisconsin	8	13
Nebraska	48	3	Wyoming	27	2

Table 2: Overall Averages			
Item	All States	California	Non-Calif
Newspapers			
All Propositions			
Right of Median 1	–	0.20 (788)	–
Right of Median 2	0.02 (2308)	0.03 (1186)	0.01 (1122)
Non-Close Propositions			
Right of Median 1	–	0.27 (675)	–
Right of Median 2	0.03 (1929)	0.07 (1013)	-0.02 (916)
Close Propositions			
Conservative Position 1	–	0.05 (251)	–
Conservative Position 2	-0.03 (803)	0.05 (383)	-0.09 (420)
Newspapers			
Right of Median 1	–	0.33 (52)	–
Right of Median 2	0.32 (138)	0.28 (54)	0.35 (84)
Conservative Position 1	–	0.23 (55)	–
Conservative Position 2	0.32 (218)	0.23 (55)	0.35 (163)
Interest Groups			
Right of Median 1	–	0.90 (37)	–
Right of Median 2	0.85 (102)	0.86 (40)	0.84 (62)
Conservative Position 1	–	0.79 (42)	–
Conservative Position 2	0.81 (163)	0.75 (42)	0.83 (121)

Values are missing for cells with too few observations for a reliable estimate.

Table 3: Fraction Conservative on Various Issues			
Issue	Voters	Newspapers	Difference
Gay Rights, Marriage	0.92 (38)	0.11 (221)	0.81
Affirmative Action	0.67 (6)	0.14 (92)	0.53
English Language	0.70 (10)	0.20 (64)	0.50
Term Limits	0.80 (30)	0.45 (140)	0.35
Crime	0.58 (12)	0.47 (306)	0.11
Taxes	0.45 (82)	0.36 (653)	0.09
Abortion	0.15 (13)	0.22 (188)	-0.07
Education	0.22 (32)	0.37 (468)	-0.16
Animal Rights	0.33 (33)	0.53 (225)	-0.20
School Choice, Vouchers	0.10 (10)	0.37 (78)	-0.27
Marijuana	0.41 (22)	0.69 (113)	-0.28
Labor Relations	0.27 (15)	0.58 (199)	-0.32
Health Care	0.29 (31)	0.61 (480)	-0.32
Smoking	0.00 (8)	0.32 (75)	-0.32
Environment, Pollution	0.22 (23)	0.56 (236)	-0.34
Minimum Wage	0.14 (14)	0.78 (108)	-0.63

Table 4: Conservative vs. Liberal Endorsers in California

Endorser	Type	F-A Loading	R of Med 1	R of Med 2
CA Republican Party	P	1.00	1.00	0.71
Contra Costa Taxpayers Assoc	G	0.95	0.79	0.71
Howard Jarvis Taxpayer Assoc	G	0.93	0.88	0.90
CA Taxpayers Assoc	G	0.93	1.00	0.88
CA Farm Bureau	G	0.92	1.00	0.92
Alameda Co Taxpayer Assoc	G	0.90	1.00	1.00
CA Manuf and Technology Assoc	G	0.87	0.80	0.83
Citizens For A Better America	G	0.86	0.90	0.91
Orange Co Taxpayers Assoc	G	0.86	0.76	0.45
Lodi News-Sentinel	N	0.80	0.62	0.50
Placerville Mountain Democrat	N	0.78	.	0.57
San Diego Union-Tribune	N	0.78	0.48	0.41
<i>Orange County Voters</i>	C	0.76	1.00	1.00
Torrance Daily Breeze	N	0.75	0.50	0.47
Orange County Register	N	0.73	0.72	0.69
Santa Barbara News Press	N	0.72	0.43	0.29
Los Angeles Daily News	N	0.71	0.66	0.59
Long Beach Press-Telegram	N	0.71	0.59	0.49
Inland Valley Daily Bulletin	N	0.70	0.29	0.24
CA Chamber of Commerce	G	0.69	0.60	0.60
CA Libertarian Party	G	0.69	0.70	0.60
National Taxpayers Union	G	0.63	1.00	1.00
Chico Enterprise Record	N	0.60	0.33	0.13
Riverside Press-Enterprise	N	0.57	0.14	0.16
Redding Record Searchlight	N	0.57	0.20	0.20
San Bernardino County Sun	N	0.55	0.33	0.22
North County Times	N	0.52	0.43	0.25
Natl Federation of Indep Business	G	0.52	.	.
<i>San Diego County Voters</i>	C	0.51	1.00	1.00
Pasadena Star-News	N	0.46	0.23	0.18
Hayward Daily Review	N	0.45	0.45	0.12
Whittier Daily News	N	0.45	0.17	0.20
San Mateo County Times	N	0.44	0.09	0.07
Alameda Times-Star	N	0.44	0.45	0.18
Pleasanton Tri-Valley Herald	N	0.43	0.54	0.00
Fremont-Newark Argus	N	0.43	0.40	0.07
San Gabriel Valley Tribune	N	0.35	0.25	0.00
Oakland Tribune	N	0.34	0.29	0.18
Woodland Daily Democrat	N	0.34	.	0.00

Table 4 (continued)				
Endorser	Type	F-A Score	R of Med 1	R of Med 2
San Ramon Valley Times	N	0.28	.	.
Contra Costa Times	N	0.28	0.17	0.11
Gilroy Dispatch	N	0.26	0.27	0.14
Bakersfield Californian	N	0.22	0.27	0.04
Santa Cruz Sentinel	N	0.21	0.00	-0.20
Madera Tribune	N	0.20	.	.
Vallejo Times-Herald	N	0.18	0.20	-0.08
San Luis Obispo Tribune	N	0.16	.	.
Palm Springs Desert Sun	N	0.06	-0.33	-0.14
Vacaville Reporter	N	0.04	0.00	-0.18
League of California Cities	G	0.02	.	.
Los Angeles Times	N	0.00	-0.20	-0.26
Red Bluff Daily News	N	-0.01	0.20	0.27
<i>Voters</i>	V	-0.02	.	.
Lompoc Record	N	-0.06	.	-0.17
San Francisco Examiner	N	-0.06	.	-0.41
Eureka Times-Standard	N	-0.07	0.00	-0.36
Santa Rosa Press Democrat	N	-0.10	-0.11	-0.26
Ventura County Star	N	-0.15	-0.11	-0.31
Visalia Times-Delta	N	-0.18	0.00	-0.09
Merced Sun-Star	N	-0.19	.	-0.38
Modesto Bee	N	-0.19	-0.10	-0.31
Sonoma Index-Tribune	N	-0.22	.	-0.33
San Jose Mercury News	N	-0.26	-0.33	-0.41
Pacific Sun	N	-0.30	.	-0.50
Sacramento Bee	N	-0.31	-0.22	-0.23
Fresno Bee	N	-0.33	-0.25	-0.39
San Francisco Chronicle	N	-0.34	-0.40	-0.50
Stockton Record	N	-0.35	.	.
Daily Californian	S	-0.42	.	-0.69
<i>Los Angeles County Voters</i>	C	-0.46	.	.
<i>Santa Clara County Voters</i>	C	-0.46	.	.
Salinas Californian	N	-0.51	-0.20	-0.24
CA Peace and Freedom Party	G	-0.64	-0.41	-0.43
Monterey County Herald	N	-0.72	-0.54	-0.65
<i>Alameda County Voters</i>	C	-0.73	-1.00	-1.00
CA League of Conservation Voters	G	-0.77	.	.
CA Green Party	G	-0.83	-0.71	-0.81
Monterey County Weekly	S	-0.86	-0.82	-0.79

Table 4 (continued)				
Endorser	Type	F-A Score	R of Med 1	R of Med 2
CA Teachers Assoc	G	-0.88	-1.00	-1.00
CA Church Impact	G	-0.89	-0.76	-0.79
<i>San Francisco County Voters</i>	C	-0.92	-1.00	-0.90
CA AFSCME	G	-0.94	.	-0.82
CA Nurses Assoc	G	-0.95	-1.00	-0.86
Ballot Initiative Strategy Center	G	-0.96	.	-1.00
Calitics	G	-0.96	.	-1.00
CA Sierra Club	G	-0.97	.	-0.80
Speak Out California	G	-0.98	.	.
Friends Comm On Legislation	G	-0.99	-0.88	-0.93
CA Democratic Party	P	-1.00	-1.00	-1.00
CA Labor Federation	G	-1.02	-1.00	-0.93
San Francisco Bay Guardian	S	-1.03	-0.78	-0.87
CA League of Women Voters	G	-1.04	-1.00	-1.00
CA Federation of Teachers	G	-1.05	-1.00	-1.00
CA SEIU	G	-1.09	-1.00	-1.00

Table 5: Conservative vs. Liberal Endorsers in Arizona

Endorser	Type	F-A Loading	R of Med 1	R of Med 2
National Taxpayers Union	G	1.08	.	.
AZ Farm Bureau	G	1.05	.	0.79
AZ Federation of Taxpayers	G	1.03	.	.
Arizona Conservative	G	0.99	.	0.82
AZ Libertarian Party	G	0.95	.	0.27
AZ Chamber of Commerce	G	0.85	.	.
Prescott Daily Courier	N	0.75	.	0.62
Yuma Sun	N	0.62	.	0.20
East Valley Tribune	N	0.24	.	0.00
Tri-Valley Dispatch	N	0.24	.	0.11
<i>Voters</i>	V	0.17	.	.
Phoenix Arizona Republic	N	-0.39	.	-0.09
Flagstaff Arizona Daily Sun	N	-0.57	.	.
Tucson Arizona Daily Star	N	-0.77	.	-0.41
AZ AFL-CIO	G	-0.85	.	-1.00
AZ Sierra Club	G	-0.91	.	.
AZ Education Assoc	G	-0.92	.	.
AZ League of Conservation Voters	G	-0.93	.	.
Tucson Citizen	N	-0.95	.	-0.73
AZ Democratic Party	P	-1.02	.	.
AZ Green Party	G	-1.09	.	-1.00
Blog For Arizona	G	-1.10	.	-1.00
Ballot Initiative Strategy Center	G	-1.17	.	.

Table 6: Conservative vs. Liberal Endorsers in Colorado

Endorser	Type	F-A Loading	R of Med 1	R of Med 2
CO Republican Party	P	1.40	.	.
CO Union of Taxpayers	G	1.39	.	.
Peoples Press Collective	G	1.34	.	.
Rocky Mountain Right	G	1.30	.	.
Colorado Conservative	G	1.27	.	.
National Taxpayers Union	G	1.22	.	.
Colorado Index	G	1.21	.	.
Colorado Springs Gazette	N	1.12	.	0.41
CO Libertarian Party	G	1.11	.	0.27
Pueblo Chieftain	N	0.97	.	0.37
Lakewood Sentinel	N	0.93	.	.
Wheat Ridge Transcript	N	0.93	.	.
Arvada Press	N	0.92	.	.
Golden Transcript	N	0.92	.	.
Rocky Mountain Family Council	G	0.85	.	.
Citizens For A Better America	G	0.82	.	.
CO Farm Bureau	G	0.77	.	.
Sterling Journal-Advocate	N	0.66	.	.
CO Assoc of Commerce and Industry	G	0.61	.	.
Loveland Daily Reporter-Herald	N	0.38	.	.
Grand Junction Daily Sentinel	N	0.30	.	.
<i>Voters</i>	V	0.25	.	.
Denver Rocky Mountain News	N	0.24	.	0.18
Longmont Daily Times-Call	N	0.17	.	.
Boulder Daily Camera	N	-0.17	.	-0.50
Denver Chamber of Commerce	G	-0.19	.	.
Denver Post	N	-0.25	.	-0.25
Steamboat Pilot	N	-0.62	.	.
Fort Collins Coloradoan	N	-0.68	.	-0.60
Greeley Daily Tribune	N	-0.74	.	.
Aurora Sentinel	N	-0.81	.	.
CO AFL-CIO	G	-0.85	.	.
Ballot Initiative Strategy Center	G	-0.89	.	.
Durango Herald	N	-0.89	.	.
Colorado Springs Independent	S	-0.94	.	-0.83
Cortez Journal	N	-0.95	.	.
Progress Now	G	-1.00	.	.
CO Environmental Coalition	G	-1.01	.	.
CO Democratic Party	P	-1.06	.	.
CO Progressive Coalition	G	-1.12	.	.
CO Education Assoc	G	-1.13	.	.

Table 7: Conservative vs. Liberal Endorsers in Oregon				
Endorser	Type	F-A Loading	R of Med 1	R of Med 2
OR Republican Party	P	1.69	.	.
Victoria Taft	G	1.52	.	1.00
National Taxpayers Union	G	1.32	.	1.00
Albany Democrat-Herald	N	1.29	.	0.45
OR Taxpayers United	G	1.19	.	1.00
OR Farm Bureau	G	1.12	.	.
Assoc Oregon Industries	G	0.78	.	.
Roseburg News-Review	N	0.69	.	.
Klamath Falls Herald and News	N	0.60	.	.
Portland Progressive	G	0.31	.	.
Yamhill Valley News Register	N	0.31	.	.
Corvallis Gazette Times	N	0.26	.	.
Portland Oregonian	N	0.14	.	-0.07
Salem Statesman Journal	N	0.05	.	-0.14
<i>Voters</i>	V	0.03	.	.
Ecumenical Ministries of OR	G	-0.31	.	.
Bend Bulletin	N	-0.43	.	.
Medford Mail-Tribune	N	-0.47	.	.
OR Business Assoc	G	-0.61	.	.
Pacific Green Party of OR	G	-0.65	.	-1.00
OR Sierra Club	G	-0.70	.	.
Daily Astorian	N	-0.84	.	.
OR League of Conservation Voters	G	-0.87	.	.
East Oregonian	N	-0.99	.	.
Eugene Register-Guard	N	-1.05	.	.
OR Democratic Party	P	-1.06	.	.
Gresham Outlook	N	-1.07	.	.
Ballot Initiative Strategy Center	G	-1.14	.	.
Northwest Progressive Inst Advoc	G	-1.14	.	.
Our Oregon	G	-1.16	.	.
OR Education Assoc	G	-1.19	.	.
OR AFSCME	G	-1.20	.	.
OR League of Women Voters	G	-1.24	.	.
OR AFL-CIO	G	-1.24	.	-1.00
OR SEIU	G	-1.25	.	.
OR Federation of Teachers	G	-1.47	.	.
Defend Oregon	G	-1.50	.	.

Table 8: Conservative vs. Liberal Endorsers in Washington

Endorser	Type	F-A Loading	R of Med 1	R of Med 2
National Taxpayers Union	G	1.20	.	.
Kent South County Journal	N	1.16	.	0.67
Centralia Chronicle	N	1.16	.	.
WA Eagle Forum	G	1.12	.	1.00
Assoc of Wa Business	G	1.11	.	0.50
Sound Politics	G	1.06	.	.
Bellevue East Side Journal	N	1.03	.	0.60
WA Republican Party	P	0.78	.	.
Vancouver Columbian	N	0.77	.	0.38
Greater Seattle Chamber of Commerce	G	0.73	.	.
Yakima Herald-Republic	N	0.73	.	0.33
Spokane Spokesman Review	N	0.70	.	0.43
Seattle Times	N	0.47	.	0.25
Bellingham Herald	N	0.44	.	0.40
Lewiston Tribune	N	-0.01	.	.
Kitsap Sun	N	-0.02	.	0.17
Olympia Olympian	N	-0.05	.	.
Tacoma News Tribune	N	-0.22	.	0.25
<i>Voters</i>	V	-0.23	.	.
Seattle Post-Intelligencer	N	-0.52	.	-0.27
Municipal League of King Co	G	-0.60	.	.
The Stranger	S	-0.75	.	.
WA Education Assoc	G	-0.82	.	.
WA League of Women Voters	G	-0.91	.	.
WA State Labor Council	G	-0.94	.	-0.80
WA Democratic Party	P	-1.02	.	.
Lindas Guide	G	-1.08	.	.
Ballot Initiative Strategy Center	G	-1.11	.	.
Northwest Progressive Inst Advoc	G	-1.11	.	.

Table 9: Dimensionality of Newspapers vs. Interest Groups						
	Avg. $ Loadings $ on Factors 2-5		Variance Share from 1st Factor		Variance Share from Factors 2-5	
State	Newspapers	Groups	Newspapers	Groups	Newspapers	Groups
California	0.21	0.15	0.17	0.51	0.31	0.26
Arizona	0.27	0.21	0.32	0.66	0.54	0.29
Colorado	0.27	0.21	0.35	0.54	0.46	0.34
Oregon	0.28	0.25	0.36	0.43	0.48	0.41
Washington	0.25	0.22	0.26	0.56	0.47	0.34

