The Balanced 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. To complete the picture, we use two existing methods of measuring bias and show that the news and editorial sections of newspapers have almost identical partisan positions.

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), Peake (2007), Ho and Quinn (2008), Gentzkow and Shapiro (2010), Gasper (2011), Larcinese et al. (2011), Puglisi (2011), and Puglisi and Snyder (2011).[2] 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, 2010), but in both cases the estimates rely on extremely strong assumptions. For example, the Groseclose and Milyo method relies on the assumption that

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

[2]See Prat and Stromberg (2011) for an excellent review of this literature.

the mean member of the U.S. House of Representatives occupies the same policy position as the median U.S. voter.[3]

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 moderate relative to interest groups and political parties. That is, although newspapers exhibit a non-negligible amount of dispersion, they tend to be much closer to the median voter than most interest groups. This is similar to results in Ho and Quinn (2008).

Third, we find interesting differences across issue areas. In particular, it appears that newspapers are more liberal than voters on social and cultural issues such as gay marriage, but they tend to be more conservative on economic issues such as the minimum wage.

Fourth, we find some evidence that the space spanned by newspaper endorsements is more "multidimensional" than the space spanned by 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

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[3]See Gasper (2011) for other critiques.

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.

The results outlined above apply to the editorial pages of newspapers, where endorsements appear. However, one might be more concerned about the partisan bias of the *news* section, since editorials are explicitly devoted to expressing a (subjective) opinion, while news should consist in objective reporting about real world events. In fact – using two existing methods of measuring bias – we show that, on average, *the news and editorial sections of newspapers have almost identical ideological/partisan positions*. From this it follows that on average both the news sections and the editorial sections of the newspapers are balanced around the state median voter.

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 Gehlbach and Sonin (2011). Empirically, Della Vigna and Kaplan (2007), Gerber et al. (2009), Knight and Chiang (2011), 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.[4] 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 Method

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 essentially non-parametric – estimator is defined as follows.

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[4]See DellaVigna and Gentzkow (2010) for a survey of the literature on media persuasion.

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 f 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 45% and 55% (5 percent margin) or between 47% and 53% (3 percent margin).

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 con- servative 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).

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, and let L be the complement of C. In the analysis below we report results for two different thresholds for defining a "close" outcome, 53% and 55%; the results are similar for other thresholds.

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 absolute deviations – i.e., for each bias measure, we take the absolute value of the measure for each newspaper, and then average over newspapers:

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

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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.

In addition to the relatively non-parametric measures above, we can also estimate factor-analytic models analogous to those used to scale roll-call data. We apply the linear model proposed in Heckman and Snyder (1997).[5] We call the estimated ideological positions based on this approach *Linear Factor Scores.* These rely much more heavily on specific functional form assumptions, but, as we will see, produce similar estimates and the same substantive conclusions. We compute these scores only for California, where the number of endorsements is sufficiently large to have confidence in the estimates.

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 many newspapers in the state endorse the same alternative on the proposition – or, more accurately, that a large fraction of voters in the state read newspapers endorsing the same alternative.

Third, if newspaper endorsements actually do have a significant impact on voting outcomes, then our main estimates are most likely to be biased toward finding that newspapers are even more extreme than they really are, in the direction of their true bias. Thus, we will

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[5]An alternative to the linear model is Poole and Rosenthal's (1997) Nominate model. Ho and Quinn (2007) also use a scaling model, but take a Bayesian approach.

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? Because we only include cases 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. That is, assume that 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 and Chiang (2011) find strong evidence for this in their study of presidential endorsements.

The following example shows 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 $Prob\left(v_p = 1 \mid c_{np} = 0\right) = Q_v$. 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 $Prob\left(v_p = 1 \mid c_{np} = 1\right) = Q_v$ and $Prob\left(v_p = 1 \mid c_{np} = -1\right) = Q_v - e$. Finally, since the newspaper is conservative relative to voters, suppose the probability it endorses the conservative position is $Prob\left(c_{np} = 1\right) = Q_{np} > Q_v$. Given that the newspaper makes an endorsement,

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there are four possible outcomes, with the following probabilities:

$$Prob\,(v_p\!=\!1, c_{np}\!=\!1) = Q_v Q_{np}$$

$$Prob\,(v_p\!=\!1, c_{np}\!=\!-1) = (Q_v\!-\!e)(1\!-\!Q_{np})$$

$$Prob\,(v_p\!=\!-1, c_{np}\!=\!1) = (1\!-\!Q_v)Q_{np}$$

$$Prob\,(v_p\!=\!-1, c_{np}\!=\!-1) = (1\!-\!Q_v)(1\!-\!Q_{np})$$

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:

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

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, so $e = 0$, then $\Pi(e)$ takes on its smallest possible value:

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

Clearly, $\Pi(0) > 1/2$, since $Q_{np} > Q_v$ – that is, if newpaper 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. A symmetric argument holds for newspapers that are more liberal than voters.

3 Data

We have collected endorsement data for all states over the period 1996-2010. In section 4.1 below we use all of the available data. We have enough data to conduct state-by-state analyses for Arizona, California, Colorado, Florida, Oregon, and Washington. We focus on these states in section 4.3 below.[6] The ballot propositions cover a wide range of public policy

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[6]We also considered expanding the state-level analyses to include Georgia, Louisiana, and Texas. However, while these states have a large number of propositions many of them are not controversial and/or deal with local issues; as a result, there are relatively few propositions on which prominent interest groups take positions.

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.

Our sample includes nearly 23,000 endorsements. 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.[7]

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 percentage less than 53% or 55% – when constructing the *Conservative Position* measures. Only 10% of propositions are close, accounting for 10% of endorsements. In the factor analysis, 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 when the opposite holds the "No" alternative is the conservative position. We call this the "Party-Based" classification.

Unfortunately, in many states the parties rarely make clear recommendations on ballot

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

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.[8] We call this the "Group-Based" classification.

4 Results

4.1 Average Bias and Extremism

We begin with an overall assessment of newspapers in all states in our sample. We also analyze California separately, since it accounts for nearly half of the endorsements.

Table 2 presents our main estimates of the average bias among newspapers. The first column shows results for all states pooled, the second is for California alone, and the third pools all states excluding California. Each row presents the figures for a different measure of bias or a different sample. Each cell contains three numbers: the measure itself, the standard error of the measure (in parentheses), and the number of observations – i.e., endorsements – used to compute the measure (in brackets).[9]

Examining the table we see immediately that none of the point estimates are statistically different from zero at the .05 level; in fact, none of the point estimates are significant even at the .20 level. The second row is the most comprehensive, since it is employs the Group-Based classification of propositions and it uses *all* endorsements for which *Right of Median* is not missing. According to this row, the average ideological orientation of newspaper

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

[9]The standard errors are clustered both by newspaper and proposition (see Cameron et al., 2011). We compute the standard errors this way because it seems likely that the error terms across endorsements are correlated within newspaper and also within proposition.

endorsements relative to voters is 0.03 – essentially zero. Thus, on average newspapers in the U.S. are very close to the median voters in their states. There is no evidence of a large and systematic liberal or conservative bias. If anything, newspapers tend to be very slightly on the conservative side of the median.[10]

In California we can use both the Party-Based and Group-Based classifications of propositions. Using the Party-Based classification, newspapers in California appear to be somewhat conservative relative to the state median voter (top row of Table 2). However, the estimate is not statistically different from zero.

In rows 3-6 of Table 2 we keep only propositions that won or lost by a non-negligible margin. In these cases it is very unlikely that any individual endorsement – or even a coordinated collection of endorsements – would change the outcome of the vote. Again, none of the estimates is statistically significant, and newspaper endorsement positions are, on average, very close to the median voters in their states.

Finally, in rows 7-10 of the Table we focus on propositions that won or lost by a small margin. In these rows the bias measure is *Conservative Position*. Recall that this is computed using *all* endorsements, even those that are on the same side of the median voter. In these cases newspapers appear to be slightly to the left of the median voter, although again the point estimates are not significantly different from zero even at the .20 level.

Table 3 presents the main estimates of the average absolute deviation in bias, for both newspapers and groups. The format is similar to that in Table 2, although in this table the units of observation are endorsers rather than endorsements.[11]

The table shows clearly that newspapers tend to be much more moderate than interest groups. On average, the absolute position of groups is about 0.80, while the average for newspapers is only about 0.30. So, groups are on average much closer to the theoretical

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[10]Throughout the discussion of our results, we use the term "the median voter." We do not literally mean a single individual who is the median voter on all propositions. Rather, we are referring to a hypothetical "average median voter" – a composite of actual median voters that probably vary from issue to issue and election to election – to whom endorsers are compared.

[11]Thus, the standard errors in this table are not clustered.

boundaries of our measures (-1 and +1) than newspapers.

We might worry that the measures based on the Group-Based classification method are 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, the Party-Based measure does not suffer from this potential bias, since we only use political parties to identify the conservative and liberal side of each proposition.[12] As Table 3 shows, for California the Party-Based and Group-Based measures of absolute deviation are quite similar. In fact, the Party-Based measure is slightly *larger* than the Group-Based measure, which is the opposite of what we would expect if the bias due to the "double use" of groups was a large problem. Thus, we are not too worried about this potential bias.

We might also worry that the measures in Table 3 are biased for interest groups because groups endorse selectively. Consider, for example, an environmental group that endorses on environmental propositions – consistently taking the liberal position – but does not endorse on most social or education or healthcare propositions. The membership and governing board of the group might be more divided on social, education, and healthcare issues, and its endorsements on these propositions – if it made them – might be mixed. Since we do not observe these non-endorsements, we would conclude that the group is more extreme, overall, than it really is. To address concern this we can restrict attention to groups that are not so selective in their endorsements. For example, if we limit the sample to the set of groups that endorse, on average, on at least 2/3 of the propositions, then the sixth row of Table 3 – showing the Group-Based |*Right of Median*| averages – would be .82, .83, and .81, respectively, rather than .82, .82 and .82 as in the table. Thus, even groups that endorse broadly across propositions most are extreme relative to newspapers.

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[12]Note, parties are not treated as endorsers when computing any of the measures.

4.2 Variation in Bias Across Issues

Table 4 shows how voters and newspapers locate on a number of salient issues. For voters, the first number in each cell is the fraction of propositions on each issue for which a majority of voters supported the conservative position. The number in parenthesis is the number of propositions on the issue. For newspapers, the first number in each cell is the fraction of endorsements on each issue for which the newspaper endorsed the conservative position, and the number in parentheses is the total number of endorsements on the issue.

On some issues newspapers appear clearly to the left of the median voter. Gay rights, especially gay marriage, is a conspicuous example in recent years. Between 1996 and 2010 there were a number of propositions clearly dealing with gay rights. A majority of voters supported the (conservative) anti-gay rights alternative on nearly 90% of these. Newspapers, however, endorsed this alternative only 10% of the time. Another example is making English the official state language and/or requiring that all classes in public schools be taught in English. A majority of voters supported the (conservative) pro-English language alternative on 70% of these propositions. Newspapers, however, endorsed the conservative alternative less than 20% of the time.

On other issues, however, newspaper endorsements appear to be to the right of the median voter. This is especially true for propositions on the minimum wage, health care, smoking, and the environment. For example, a majority of voters supported the (conservative) anti-minimum wage position on only 14% of the propositions, while newspapers endorsed this alternative almost 80% of the time.

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

It is tempting to speculate on these patterns. Overall, newspapers appear to be relatively liberal on social/cultural issues, but relatively conservative on issues with a salient economic component. This is consistent with a world in which newspaper owners allow their editors and journalists – who tend to be liberal – to take a liberal stance on social/cultural issues,

but not on economic issues, on which the owners themselves and advertisers may have a larger stake.[13]

4.3 Relative Positions of Individual Newspapers and Groups

In Figure 2, and Appendix Table A.1, we show California-based interest groups, newspapers, and voters. Note that we include voters from the six largest counties, treating each county as a single "endorser." In Figure 1 the endorsers are divided into 7 groups based on their Group-Based *Right of Median* scores. The figure is divided into two panels, with interest groups, parties, and county median voters on top, and newspapers on the bottom.

In Table A.1 the endorsers are ordered according to their *Linear Factor Scores* (the first dimension in the factor analysis described at the end of section 2.1), from the most conservative to the most liberal. To help distinguish between the different types of endorsers, we use the following letters in the second column: N = newspapers, G = interest groups, P = political parties, V = the statewide median voter, C = various county median voters, and S = "specialty" newspapers.[14] 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 *Linear Factor Scores*, while columns 4 and 5 show the Party-Based and Group-Based *Right of Median* scores, respectively. We only report these scores for endorsers with at least 25 non-missing observations (recall that these are missing whenever an endorser agrees with the median voter on a proposition).

Inspection of Figure 2 immediately reveals that newspapers in California are more moderate than interest groups – the groups tend to be located in the most extreme bins, while newspapers are concentrated in the intermediate bins. Even newspapers, however, exhibit

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[13]This is similar in spirit to Baron's (2006) model of supply-driven media bias, which is based on the following exchange: the owners of media outlets permit journalists to publish news stories that are slanted toward their ideological positions, and in turn the journalists accept lower wages. We thank Bob Erikson for suggesting this interpretation.

[14]We classify the *Daily Californian*, *Metro Silicon Valley*, *Monterey County Weekly*, and *San Francisco Bay Guardian* as "specialty" newspapers. For example, the *Daily Californian* is the newspaper of the University of California at Berkeley.

a bi-modal distribution, with more moderately liberal and moderately conservative than centrist newspapers.

Table A.1 shows a similar pattern: endorsers with 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.

According to the *Right of Median* scores, the press in California is extremely balanced, with 26 newspapers to the right of the median voter and 24 to the left. The *Linear Factor Scores* suggest instead a conservative bias. Based on this measure, the median newspaper in California is evidently to the right of the median voter: 30 newspapers have *Linear Factor Scores* to the right of the median voter's score, while only 23 newspapers have scores to the left.

Interestingly, Figure 2 and Table A.1 also suggest that newspapers based in a given county tend to be more moderate than the median voter living in that county, at least for the largest counties. For example, in Figure 1 the Orange County median voter is to the right of the *Orange County Register* and the San Diego County median voter is to the right of the *San Diego Union-Tribune*, while the San Francisco County median voter is to the left of both the *San Francisco Chronicle* and *San Francisco Examiner*. Also, the Alameda County median voter is more extreme than the *Oakland Tribune* and *Alameda Times-Star*, although both newspapers are on the opposite side of the statewide median (the median voter in the county is to the left of the statewide median, while the two newspapers are to the right).[15]

Two counties that appear in Table A.1 are missing from Figure 1 – Los Angeles County and Santa Clara County. They are missing because there was not a single proposition in our sample for which the majority of voters in these counties disagreed with the majority of voters in the state, so we cannot compute their *Right of Median* scores. Based on their

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[15]There is only one case where the conclusion based on *Right of Median* scores differs from that based on the *Linear Factor Scores*. According to the *Linear Factor Scores*, the median voter in San Diego County is more moderate than the *San Diego Union-Tribune*.

Linear Factor Scores, however, we see that the Los Angeles County median voter is located to the left of the *Los Angeles Times*, and the Santa Clara County median voter is (very slightly) to the left of the *San Jose Mercury News*.

Figure 3 is analogous to Figure 2, presenting the estimates for Arizona, Colorado, Florida, Oregon, and Washington. To condense the presentation, we combine the states in one figure – recall, however, that the estimates for each state are computed separately, and for each state the positions of the endorsers are always relative to the state's median voter. In the Appendix there is a separate table for each state – Tables A.2 to A.6. These have the same format as Table A.1 except that they do not have a column for the Party-Based *Right of Median* measure.

Overall, the patterns for the five other states are similar to those for California. In all states it is clear that most of the newspapers are more moderate than most of the interest groups. In fact, the pooled distribution of newspapers is more centrist than in California, exhibiting a uni-modal rather than a bimodal distribution. Note that the mode is slight right of center, however, and there is still a substantial amount of dispersion.

Turning briefly to the state-by-state tables in the Appendix, we see the following. Recall that we focus exclusively on the Group-Based *Right of Median* scores for these states, since there are relatively few endorsements in each state. In Oregon more newspapers are clearly to the left of the median voter than to the right – 4 newspapers have *Right of Median* scores below zero and 1 has a score above zero. In Arizona and Colorado there is also a slight bias to the left. In Arizona, 4 newspapers have negative scores and 3 have positive scores, while in Colorado the numbers are 6 and 4, respectively. In Florida and Washington, on the other hand, the newspapers display a conservative bias. In Florida, only 2 newspapers have negative *Right of Median* scores but 17 have positive scores. In Washington, only 1 newspaper has a negative score, while 11 have positive scores.

4.4 Multidimensional Newspapers, Ideological Groups?

Finally, our data also suggest that the space of newspaper endorsements is more multidimensional than the space of interest group endorsements, at least in California. This can be seen from the factor analysis, in two ways.

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. The average absolute score on factors 2-5 for groups in California is 0.15, while the average for newspapers is 0.22 – this is, nearly 50% larger.

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. For interest groups, the first factor accounts for 53% of the variance, while for newspapers the first factor only explains 16%. The pattern is reversed for dimensions 2-5: for interest groups, these factors account for an additional 25% of the variance, while for newspapers these factors account for an additional 33%.

Thus, overall, interest groups appear more one-dimensional, or "ideological", than newspapers. In the case of newspapers, even using five factors we are only able to explain 50% of the total variance in endorsements. For interest groups, five factors account for nearly 80% of the total variance in endorsements.

5   Editorial Sections vs. News Sections

The estimates above apply specifically to the editorial pages of newspapers, since endorsements only appear in the editorial section. What about the news pages? Here we show that, on average, *the news and editorial sections of newspapers have almost identical ideological/partisan positions.* Putting this together with the results from the previous section, we

conclude that on average both the news sections and the editorial sections of the newspapers in each state are balanced around the state median voter. This is important because journalists appear to be more liberal than newspaper editors and owners, and critics complain that the journalists mainly influence what appears in the news section, not the editorial section, of newspapers.

We use two measures from previous work, one based on the relative propensity to use phrases used more by Democratic or Republican congressmen proposed by Gentzkow and Shapiro (2010), and one based on the relative propensity to cover scandals involving Democratic or Republican politicians proposed by Puglisi and Snyder (2011). We refer to these as the "GS" and "PS" measures, respectively. In both cases, we find that the mean and median positions of news sections are approximately the same as the mean and median positions of the editorial sections of the corresponding newspapers. If anything, the measures indicate that the news sections are slightly more conservative than the editorial sections.

For the measure based on Gentzkow and Shapiro (2010), we use the 300 two-word and three-word phrases (150 for each party) with the greatest power to discriminate between Democratic and Republican congressmen.[16] Since the phrases were found by analyzing the *Congressional Record* of 2005, we examine newspapers over the period 2004-2006. Let n index newspapers, and let $i \in \{news, editorial\}$ index sections. Let R_n^i be the total number of stories in section i of newspaper n containing one or more of the phrases used more by Republicans than Democrats, and let D_n^i be the total number of stories in section i of newspaper n containing one or more of the phrases used more by Democrats than Republicans.[17] Then the estimated pro-Republican bias of section i of newspaper n is simply:

$$R \; Bias \; GS_n^i = \frac{(R_n^i - D_n^i)}{(R_n^i + D_n^i)}$$

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[16]These are the phrases with the highest values of Pearson's χ^2 statistic. See Gentzkow and Shapiro (2010) for details.

[17]We count each stories for each different phrase, so, for example, if a story includes k different Republican phrases it will be counted k times. We do not count multiple instances of the same phrase.

The degree of pro-Republican bias of the news section relative to the editorial section is

$$R\ Bias\ Diff\ GS_n = R\ Bias\ GS_n^{news} - R\ Bias\ GS_n^{editorial}.$$

For the measure based on Puglisi and Snyder (2011), we use all scandals covered in their dataset – this consists of 13 scandals involving Democratic politicians and 19 involving Republican politicians over the period 1997-2007.[18] Let R_n^i be the total number of stories in section i of newspaper n that discuss scandals involving Republicans, and let D_n^i be the total number of stories in section i of newspaper n that discuss scandals involving Democrats. Then the estimated pro-Republican bias of section i of newspaper n is:

$$R\ Bias\ PS_n^i = \frac{(D_n^i - R_n^i)}{(D_n^i + R_n^i)}$$

Note that a newspaper has more of a pro-Republican bias if it publishes relatively more stories about Democratic scandals. The degree of pro-Republican bias of the news section relative to the editorial section is

$$R\ Bias\ Diff\ PS_n = R\ Bias\ PS_n^{news} - R\ Bias\ PS_n^{editorial}.$$

For the PS measure, the sample of newspapers is the same as in Puglisi and Snyder (2011), except we drop newspapers for which the total number of hits across all scandals on either the editorial or news page is less that 20. For the GS measure, the sample consists of all newspapers searchable online via Newslibrary.com.[19] We drop newspapers for which the total number of hits across all phrases on either the editorial or news page is less that 30.

We are mainly interested in the mean and median values of and *R Bias Diff GS* and *R Bias Diff PS*.[20] Table 5 presents the results. For each measure, the first column show the

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[18]See Puglisi and Snyder (2011) for a list of the scandals.

[19]We also added *The New York Times* using Factiva.com, the *Chicago Tribune*, and the *Los Angeles Times*, using ProQuest.com.

[20]Note, neither of these measures can be used to estimate the *absolute* bias of any section of any newspaper, because we have no way of knowing what value the measures would be for "neutral" newspapers. Zero is *not* a "neutral" position. For example, since members of the majority party probably have more impact on public policy outcomes than members of the minority party – e.g., proposals by majority members are more

results for the full sample of all available newspapers, and the second column shows results for the subsample of newspapers for which we also have five or more endorsements on ballot propositions. For both measures, and for both subsamples, the mean and median values of *R Bias Diff* are small but positive. Thus, there is no evidence that the news sections of newspapers are noticeably more liberal or pro-Democratic than the editorial sections.

Interestingly, not only are the overall levels of bias in news and editorial sections similar, they strongly and positively correlated across newspapers. In the full samples, the correlation between R *Bias* GS^{news} and R *Bias* $GS^{editorial}$ is 0.50, and the correlation between R *Bias* PS^{news} and R *Bias* $PS^{editorial}$ is 0.77. Thus, overall the news and editorial sections of newspapers track each other fairly closely – newspapers with relatively conservative (liberal) editorial pages also tend to have relatively conservative (liberal) news.[21]

6   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 accurately assess previous claims about the degree and direction of media bias in the United States. To complete the picture we locate the news section of each newspaper relative to its editorial section, using two existing methods, and find that on average the news and editorial

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likely to become law than those proposed by minority members – and since Republicans were the majority party in congress during 2004-2006, we might expect that even a neutral newspaper would devote more coverage to Republican congressmen, quoting Republican speeches, discussing Republican proposals, and so on. Thus, it could easily be argued that the neutral value of *R Bias GS* for the period 2004-2006 is positive rather than zero. Similarly, since there were more scandals involving Republicans – perhaps simply because there were more Republicans in congress than Democrats for most of the years under study – it is likely that the neutral value of *R Bias PS* is negative. In fact, it is not clear how to define a "neutral" position.

[21]The correlation is noticeably higher for the PS measure. This is driven in part by the fact that newspapers print more stories of all types – news, editorial and letters to the editor – about local and in-state scandals, and there is considerable variation across newspapers in the degree to which local scandals involve Democrats or Republicans.

sections of newspapers have very similar ideological positions.

Overall, our findings casts strong doubts on the claim that U.S. newspapers exhibit an overall leftward bias. On the contrary, we find that newspapers appear to be distributed symmetrically around the median voter.

Our analysis also shows that newspapers are 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. This suggests that the considerations underlying newspaper endorsements differ from those that drive groups. To the extent that newspapers have different goals and face different incentives than interest groups, it is probably a mistake to treat the press simply as another type of interest group.

One interesting extension would be to use our method to locate individual politicians on the same ideological space where we have placed interest groups and newspapers. This is feasible for the subset of politicians who take clear public positions on enough ballot propositions.

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State	# Props	# News	State	# Props	# News
Alabama	62	13	Nebraska	51	3
Alaska	43	3	Nevada	65	3
Arizona	95	8	New Hampshire	8	2
Arkansas	36	3	New Jersey	26	13
California	175	56	New Mexico	74	6
Colorado	97	22	New York	11	12
Florida	59	33	North Carolina	13	10
Georgia	59	8	North Dakota	43	6
Hawaii	26	3	Ohio	30	16
Idaho	27	6	Oklahoma	60	4
Indiana	10	10	Oregon	151	14
Iowa	9	8	Pennsylvania	10	16
Kansas	6	6	Rhode Island	51	1
Kentucky	8	7	South Carolina	35	8
Louisiana	119	8	South Dakota	50	5
Maine	97	2	Tennessee	7	11
Maryland	22	12	Texas	109	25
Massachusetts	25	13	Utah	38	5
Michigan	28	18	Virginia	24	12
Minnesota	7	5	Washington	77	18
Missouri	50	11	West Virginia	10	8
Montana	44	4	Wisconsin	8	13

Table 1: Summary Statistics

Measure	All States	California	Non-Calif
Table 2: Average Bias of Newspapers			
All Propositions			
Right of Median (Party-Based)		0.14 (0.16) [994]	
Right of Median (Group-Based)	0.03 (0.08) [2954]	0.03 (0.13) [1405]	0.04 (0.08) [1536]
Non-Close Props, 5% Marg			
Right of Median (Party-Based)		0.21 (0.20) [530]	
Right of Median (Group-Based)	0.05 (0.09) [1835]	0.12 (0.16) [814]	0.00 (0.09) [1010]
Non-Close Props, 3% Marg			
Right of Median (Party-Based)		0.22 (0.17) [788]	
Right of Median (Group-Based)	0.05 (0.08) [2386]	0.09 (0.14) [1152]	0.01 (0.09) [1223]
Close Props, 5% Margin			
Conserv. Posit. (Party-Based)		-0.04 (0.14) [1012]	
Conserv. Posit. (Group-Based)	-0.04 (0.07) [2391]	0.00 (0.11) [1311]	-0.09 (0.08) [1068]
Close Props, 3% Margin			
Conserv. Posit. (Party-Based)		-0.14 (0.22) [497]	
Conserv. Posit. (Group-Based)	-0.10 (0.10) [1265]	-0.07 (0.18) [618]	-0.12 (0.10) [637]

Notes: Each row presents the figures for a different measure of bias or a different sample. Each cell contains three numbers: the measure itself, the standard error of the measure (in parentheses), and the number of endorsements used to compute the measure (in brackets). The standard errors are clustered both by newspaper and proposition.

Measure	All States	California	Non-Calif
Table 3: Absolute Deviation of Bias, Newspapers and Groups			
Newspapers			
|Right of Med.| (Party-Based)		0.32 (0.03) [53]	
|Right of Med.| (Group-Based)	0.31 (0.02) [161]	0.28 (0.02) [55]	0.32 (0.02) [106]
|Conserv. Pos.| (Party-Based)		0.24 (0.02) [56]	
|Conserv. Pos.| (Group-Based)	0.29 (0.01) [236]	0.23 (0.02) [56]	0.31 (0.02) [180]
Interest Groups			
|Right of Med.| (Party-Based)		0.87 (0.03) [43]	
|Right of Med.| (Group-Based)	0.82 (0.02) [144]	0.82 (0.04) [45]	0.82 (0.03) [99]
|Conserv. Pos.| (Party-Based)		0.76 (0.03) [46]	
|Conserv. Pos.| (Group-Based)	0.79 (0.02) [213]	0.73 (0.04) [46]	0.81 (0.02) [167]

Notes: Each row presents the figures for a different measure of absolute deviation of bias. Each cell contains three numbers: the measure itself, the standard error of the measure (in parentheses), and the number of endorsers used to compute the measure (in brackets).

Table 4: Fraction Conservative on Various Issues					
Issue	Voters		Newspapers		Difference
Gay Rights, Marriage	0.89	(38)	0.10	(258)	0.79
English Language	0.70	(10)	0.17	(80)	0.52
Affirmative Action	0.60	(5)	0.15	(85)	0.45
Term Limits	0.77	(30)	0.39	(183)	0.37
Crime	0.71	(17)	0.49	(365)	0.22
Taxes	0.46	(85)	0.38	(759)	0.08
Abortion	0.15	(13)	0.23	(211)	-0.07
Education	0.34	(32)	0.49	(529)	-0.15
Labor Relations	0.30	(20)	0.53	(252)	-0.23
Animal Rights	0.32	(22)	0.58	(199)	-0.26
Marijuana	0.41	(22)	0.68	(145)	-0.27
School Choice, Vouchers	0.10	(10)	0.37	(94)	-0.27
Environment, Pollution	0.26	(23)	0.55	(310)	-0.28
Health Care	0.32	(31)	0.61	(510)	-0.29
Smoking	0.00	(8)	0.30	(82)	-0.30
Minimum Wage	0.14	(14)	0.79	(122)	-0.64

Notes: In the Voters column the first number in each cell is the fraction of propositions on each issue for which a majority of voters supported the conservative position, and the number in parenthesis is the number of propositions on the issue. In the Newspapers column, the first number in each cell is the fraction of endorsements on each issue for which the newspaper endorsed the conservative position, and the number in parentheses is the total number of endorsements on the issue.

Table 5: News Sections vs. Editorial Sections		
Item	Full Sample	Endorsement Subsample
Gentzkow-Shapiro Measure		
R Bias Diff – Mean	0.06	0.05
R Bias Diff – Median	0.06	0.06
R Bias Diff – Std Dev	0.19	0.12
R Biases – Correlation	0.52	0.57
# Observations	758	169
Puglisi-Snyder Measure		
R Bias Diff – Mean	0.05	0.07
R Bias Diff – Median	0.02	0.03
R Bias Diff – Std Dev	0.19	0.18
R Biases – Correlation	0.77	0.78
# Observations	235	104

Notes: For each measure, the Full Sample column show results for the sample of all available newspapers for each measure, and the Endorsement Subsample column shows results for the sub-sample of newspapers for which we also have five or more ballot proposition endorsements. The Correlation in R Biases rows show the correlation between $R\ Bias^{news}$ and $R\ Bias^{editorial}$ for each measure.

Table A.1: Conservative vs. Liberal Endorsers in California

Endorser	Type	Linear Factor Score	Party-Based Right of Med	Group-Based Right of Med
CA Republican Party	P	1.13	1.00	0.89
CA Taxpayers Assoc	G	1.10	1.00	0.91
Howard Jarvis Taxpayer Assoc	G	1.09	0.90	0.90
Alameda Co Taxpayer Assoc	G	1.07	1.00	1.00
CA Farm Bureau	G	1.06	0.83	0.88
Contra Costa Taxpayers Assoc	G	1.03	0.81	0.81
CA Manuf and Technology Assoc	G	1.03	0.83	0.86
Orange Co Taxpayers Assoc	G	0.97	0.76	0.43
Orange County Voters	C	0.95	1.00	1.00
Placerville Mountain Democrat	N	0.95	0.85	0.60
Torrance Daily Breeze	N	0.90	0.43	0.44
Santa Barbara News Press	N	0.86	0.43	0.25
Inland Valley Daily Bulletin	N	0.86	0.33	0.27
Citizens For A Better America	G	0.86	0.91	0.52
Natl Taxpayers Union	G	0.86	1.00	1.00
Long Beach Press-Telegram	N	0.86	0.59	0.53
Orange County Register	N	0.83	0.77	0.67
San Diego Union-Tribune	N	0.82	0.48	0.32
CA Libertarian Party	G	0.82	0.76	0.63
Lodi News-Sentinel	N	0.82	0.67	0.54
CA Chamber of Commerce	G	0.80	0.48	0.56
Los Angeles Daily News	N	0.80	0.46	0.45
Chico Enterprise Record	N	0.77	0.29	0.14
Riverside Press-Enterprise	N	0.74	0.17	0.26
Redding Record Searchlight	N	0.70	0.24	0.24
San Diego County Voters	C	0.68	1.00	1.00
North County Times	N	0.67	0.43	0.25
San Bernardino County Sun	N	0.67	0.29	0.22
Pasadena Star-News	N	0.67	0.33	0.30
Alameda Times-Star	N	0.62	0.43	0.20
San Mateo County Times	N	0.62	0.14	0.05
Hayward Daily Review	N	0.62	0.38	0.16
Whittier Daily News	N	0.62	0.33	0.38
Fremont-Newark Argus	N	0.59	0.27	0.06
Pleasanton Tri-Valley Herald	N	0.59	0.47	0.04
Oakland Tribune	N	0.53	0.29	0.23
San Gabriel Valley Tribune	N	0.49	0.33	0.11

Endorser	Type	Linear Factor Score	Party-Based Right of Med	Group-Based Right of Med
Contra Costa Times	N	0.42	0.08	0.17
Woodland Daily Democrat	N	0.40	0.56	-0.07
Gilroy Dispatch	N	0.34	0.30	0.11
Bakersfield Californian	N	0.30	-0.05	-0.09
Santa Cruz Sentinel	N	0.30	-0.14	-0.16
Madera Tribune	N	0.27	.	.
San Luis Obispo Tribune	N	0.25	.	0.25
Voters	V	0.15	.	.
Vallejo Times-Herald	N	0.13	0.00	-0.14
Palm Springs Desert Sun	N	0.09	-0.38	-0.20
Vacaville Reporter	N	0.08	-0.25	-0.20
Red Bluff Daily News	N	0.07	0.27	0.17
Los Angeles Times	N	0.07	-0.23	-0.22
League of California Cities	G	0.04	.	-0.08
Santa Rosa Press Democrat	N	-0.07	-0.30	-0.26
Ventura County Star	N	-0.10	-0.25	-0.31
Stockton Record	N	-0.10	.	-0.33
Merced Sun-Star	N	-0.12	0.00	-0.26
La Prensa San Diego	N	-0.13	0.07	-0.15
Eureka Times-Standard	N	-0.14	0.00	-0.33
Visalia Times-Delta	N	-0.15	0.00	-0.09
Lompoc Record	N	-0.15	0.00	-0.38
Modesto Bee	N	-0.16	-0.13	-0.24
San Francisco Examiner	N	-0.18	-0.60	-0.50
Sonoma Index-Tribune	N	-0.19	-0.14	-0.33
Pacific Sun	N	-0.25	-0.33	-0.60
Fresno Bee	N	-0.26	-0.38	-0.38
San Jose Mercury News	N	-0.26	-0.50	-0.44
Sacramento Bee	N	-0.27	-0.31	-0.20
San Francisco Chronicle	N	-0.28	-0.52	-0.48
Santa Clara County Voters	C	-0.29	.	.
Los Angeles County Voters	C	-0.32	.	.
Metro Silicon Valley	S	-0.45	-0.50	-0.70
Salinas Californian	N	-0.47	-0.12	-0.26
Daily Californian	S	-0.57	-0.25	-0.37
Alameda County Voters	C	-0.68	-1.00	-1.00
Monterey County Herald	N	-0.70	-0.60	-0.68

Endorser	Type	Linear Factor Score	Party-Based Right of Med	Group-Based Right of Med
CA Teachers Assoc	G	-0.88	-1.00	-0.86
Monterey County Weekly	S	-0.88	-0.82	-0.78
CA Church Impact	G	-0.89	-0.82	-0.89
CA League of Conservation Voters	G	-0.91	-1.00	-0.75
CA AFSCME	G	-0.95	-1.00	-0.90
San Francisco County Voters	C	-0.97	-1.00	-0.92
CA Nurses Assoc	G	-0.98	-0.90	-0.83
Calitics	G	-0.99	-1.00	-1.00
Speak Out California	G	-1.01	.	.
CA Democratic Party	P	-1.03	-1.00	-1.00
Natl Organization For Women	G	-1.03	-1.00	-1.00
Friends Comm On Legislation	G	-1.04	-0.91	-0.94
Ballot Initiative Strategy Center	G	-1.05	-1.00	-1.00
CA League of Women Voters	G	-1.07	-1.00	-1.00
San Francisco Bay Guardian	S	-1.07	-0.85	-0.90
CA Sierra Club	G	-1.07	-1.00	-1.00
CA Federation of Teachers	G	-1.10	-1.00	-1.00
CA SEIU	G	-1.10	-1.00	-1.00
CA Labor Federation	G	-1.10	-1.00	-0.95

Table A.1 (continued)

Table A.2: Conservative vs. Liberal Endorsers in Arizona		
Endorser	Type	Group-Based Right of Med
Natl Taxpayers Union	G	1.00
Arizona Conservative	G	0.88
AZ Farm Bureau	G	0.83
AZ Chamber of Commerce & Industry	G	0.82
AZ Federation of Taxpayers	G	0.56
Prescott Daily Courier	N	0.53
Yuma Sun	N	0.22
AZ Libertarian Party	G	0.17
Flagstaff Arizona Daily Sun	N	0.11
Tri-Valley Dispatch	N	0.06
East Valley Tribune	N	-0.04
Phoenix Arizona Republic	N	-0.08
Tucson Arizona Daily Star	N	-0.50
Tucson Citizen	N	-0.53
AZ AFL-CIO	G	-0.70
AZ Green Party	G	-0.79
AZ Advocacy Network	G	-1.00
AZ Democratic Party	P	-1.00
Ballot Initiative Strategy Center	G	-1.00
Blog For Arizona	G	-1.00

Table A.3: Conservative vs. Liberal Endorsers in Colorado		
Endorser	Type	Group-Based Right of Med
Natl Taxpayers Union	G	1.00
CO Farm Bureau	G	0.60
Colorado Springs Gazette	N	0.60
Pueblo Chieftain	N	0.52
Wheat Ridge Transcript	N	0.40
CO Libertarian Party	G	0.38
Denver Rocky Mountain News	N	0.37
Grand Junction Daily Sentinel	N	0.29
Fort Morgan Times	N	0.11
Golden Transcript	N	0.08
Arvada Press	N	0.00
Denver Post	N	0.00
Greeley Daily Tribune	N	0.00
Lakewood Sentinel	N	0.00
Longmont Daily Times-Call	N	-0.10
Summit Daily News	N	-0.14
Fort Collins Coloradoan	N	-0.18
Loveland Daily Reporter-Herald	N	-0.25
Boulder Daily Camera	N	-0.45
Durango Herald	N	-0.47
Steamboat Pilot	N	-0.50
Colorado Springs Independent	S	-0.67
Progress Now Co	G	-1.00

Table A.4: Conservative vs. Liberal Endorsers in Florida		
Endorser	Type	Group-Based Right of Med
FL Chamber of Commerce	G	1.00
James Madison Institute	G	1.00
Jacksonville Florida Times-Union	N	0.85
Jupiter Courier	N	0.60
David Osborne	G	0.50
Fort Pierce Tribune	N	0.45
Vero Beach Press Journal	N	0.38
Fort Lauderdale Sun Sentinel	N	0.38
Stuart Treasure Coast News	N	0.38
FL Libertarian Party	G	0.33
Naples Daily News	N	0.33
Fort Myers News Press	N	0.29
Melbourne Florida Today	N	0.23
Orlando Sentinel	N	0.20
Ocala Star-Banner	N	0.17
Pensacola News Journal	N	0.12
Tampa Tribune	N	0.12
Lakeland Ledger	N	0.09
Bradenton Herald	N	0.08
Miami Herald	N	0.06
Tallahassee Democrat	N	0.05
Sarasota Herald-Tribune	N	0.00
Daytona Beach News-Journal	N	-0.05
FL League of Women Voters	G	-0.17
Palm Beach Post	N	-0.18
St. Petersburg Times	N	-0.38
FL Consumer Action Network	G	-1.00

Table A.5: Conservative vs. Liberal Endorsers in Oregon		
Endorser	Type	Group-Based Right of Med
Christian Coalition of OR	G	1.00
Natl Taxpayers Union	G	1.00
OR Libertarian Party	G	1.00
OR Taxpayers United	G	1.00
Parents Education Assoc	G	1.00
Taxpayers Assoc of OR	G	1.00
Victoria Taft	G	1.00
OR Farm Bureau	G	0.88
Assoc Oregon Industries	G	0.80
Albany Democrat-Herald	N	0.27
Baker City Herald	N	0.25
Klamath Falls Herald and News	N	0.25
Salem Statesman Journal	N	0.00
Portland Oregonian	N	-0.09
Corvallis Gazette Times	N	-0.11
Medford Mail-Tribune	N	-0.29
Gresham Outlook	N	-0.40
OR Business Assoc	G	-0.50
Willamette Week	S	-0.64
Pacific Green Party of OR	G	-0.69
Eugene Register-Guard	N	-0.76
Eugene Weekly	S	-0.76
Daily Astorian	N	-0.78
Ecumenical Ministries of OR	G	-0.83
OR AFL-CIO	G	-1.00
OR AFSCME	G	-1.00
OR Education Assoc	G	-1.00
OR Federation of Teachers	G	-1.00
OR SEIU	G	-1.00
Oregon Action	G	-1.00

Table A.6: Conservative vs. Liberal Endorsers in Washington		
Endorser	Type	Group-Based Right of Med
Centralia Chronicle	N	1.00
Natl Taxpayers Union	G	1.00
Sound Politics	G	1.00
WA Eagle Forum	G	1.00
Kent South County Journal	N	0.67
Bellevue East Side Journal	N	0.60
Assoc of WA Business	G	0.57
Greater Seattle Chamber of Commerce	G	0.50
Longview Daily News	N	0.50
Spokane Spokesman Review	N	0.50
WA Research Council	G	0.45
Yakima Herald-Republic	N	0.43
Vancouver Columbian	N	0.41
Bellingham Herald	N	0.40
Kitsap Sun	N	0.25
Seattle Times	N	0.20
Tacoma News Tribune	N	0.20
Olympia Olympian	N	0.07
Lewiston Tribune	N	-0.25
Seattle Post-Intelligencer	N	-0.38
The Stranger	S	-0.50
WA State Labor Council	G	-0.86
Lindas Guide	G	-1.00
WA Education Assoc	G	-1.00

Figure 1

(a)

N   (N+Y)/2   Y
             = M

(b)

N   (N+Y)/2   M   Y

(c)

N   M   (N+Y)/2   Y
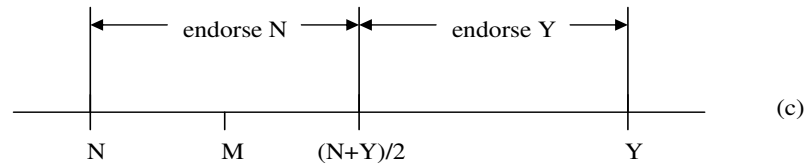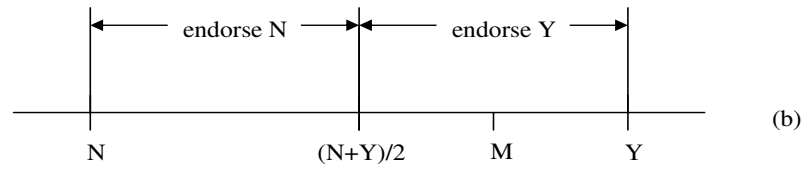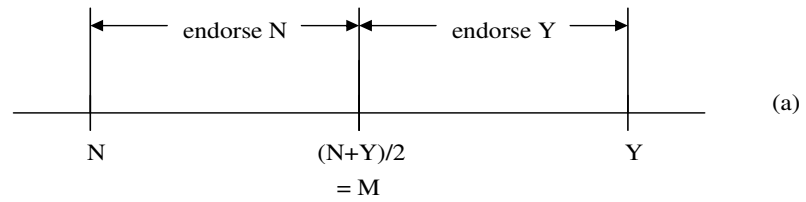
Figure 2

California Endorsers and Voters

Monterey Co. Weekly
SF Bay Guardian
CA Democ Party
Alameda Co. Labor Council
Ballot Init Strategy Ctr
CA AFSCME
CA Church Impact
CA Fed of Teachers
CA Green Party
CA Labor Fed
CA Leag of Conserv Voters
CA Leag of Women Voters
CA Nurses Assn
CA SEIU
CA Sierra Club
CA Teachers Assn
Calitics
Courage Campaign
Friends Comm on Legislation
Natl Org for Women
ALAMEDA CO. VOTERS   Metro Silicon Valley
SF CO. VOTERS   CA Peace & Freedom Pty

Monterey Co. Herald
Pacific Sun
SF Chronicle
SF Examiner
S. Jose Mercury News

Eureka Times-Standard
Fresno Bee
La Prensa S. Diego
Lompoc Record
LA Times
Merced Sun-Star
Modesto Bee
Palm Springs Desert Sun
Sacramento Bee
Salinas Californian
S. Cruz Sentinel
S. Rosa Press Democ
Sonoma Index-Trib
Stockton Record
Vacaville Reporter
Vallejo Times-Herald
Ventura Co. Star

Bay Area Council
League of CA Cities   Daily Californian

Alameda Times-Star
Chico Enterprise Record
Contra Costa Times
Hanford Sentinel
Hayward Daily Rev
Inland Valley Daily Bulletin
North Co. Times
Oakland Trib
Pasadena Star-News
Red Bluff Daily News
Bakersfield Californian
Fremont-Newark Argus   Redding Record Srchl
Gilroy Dispatch   Riverside Press-Enterp   Lodi News-Sentinel
Tri-Valley Herald   S. Bernardino Co. Sun   Long Beach Press-Tel
S. Gabriel Valley Trib   S. Diego Union-Trib   LA Daily News
S. Mateo Co. Times   S. Luis Obispo Trib   Orange Co. Register
Visalia Times-Delta   S. Barbara News Press   Mountain Democ
Woodland Daily Democ   Whittier Daily News   Torrance Daily Breeze

CA Repub Party
Alameda Co. Taxpay Assn
CA Farm Bureau
CA Manuf & Technology Assn
CA Taxpay Assn
Contra Costa Taxpay Assn
Howard Jarvis Taxp Assn
CA Ch of Commerce Natl Fed Indep Business
CA Libertarian Party   CA Natl Taxpay Union
Citiz for Better Amer   ORANGE CO. VOTERS
Orange Co. Taxp Assn   S. DIEGO CO. VOTERS

-1   -.5   0   .5   1
Right of Median Score

0

Figure 3

Endorsers in AZ, CO, FL, OR, WA

AZ Ch of Commerce & Ind
AZ Farm Bureau
AZ Conservative
AZ Natl Taxpay Union
CO Natl Taxpay Union
FL Ch of Commerce
James Madison Institute
Assn OR Industries
Christian Coalition of OR
OR Natl Taxpay Union
OR Farm Bureau
OR Libertarian Party
OR Taxpay United
Parents Educ Assn
Taxpay Assn of OR
Victoria Taft
WA Natl Taxpay Union
Sound Politics
WA Eagle Forum

AZ Fed of Taxpay
CO Farm Bureau
David Osborne
Assn of WA Business
Seattle Ch of Commerce
WA Research Council

AZ Libertarian Party
CO Libertarian Party
FL Libertarian Party

Prescott Daily Courier
CO Springs Gazette
Pueblo Chieftain
Ft Pierce Trib
Jupiter Courier
Bellingham Herald Bellevue East Side Journal
Klamath Falls Hld & News
Kitsap Sun   Kent South Co. Journal
Seattle Times   Longview Daily News
Tacoma News Trib Spokesman Review
Vancouver ColumbianYakima Herald-Republic

Yuma Sun
Rocky Mountain News
Grand Jct. Daily Sentinel
Wheat Ridge Transcript
Ft Lauderdale Sun Sentinel
Ft Myers News Press
Melbourne FL Today
Naples Daily News
Ocala Star-Banner
Orlando Sentinel
Stuart News
Vero Beach Press J
Albany Democ-Herald
Baker City Herald
Tallahassee Democ
Tampa Trib

East Valley Trib
Flagstaff AZ Daily Sun
AZ Republic
Tri-Valley Dispatch
Arvada Press
Denver Post
Ft Morgan Times
Golden Transcript
Greeley Daily Trib
Lakewood Sentinel
Longmont Daily Times-Call
Bradenton Herald
Daytona Beach News-J
Lakeland Ledger
Miami Herald
Pensacola News J
Sarasota Herald-Trib
Corvallis Gazette Times
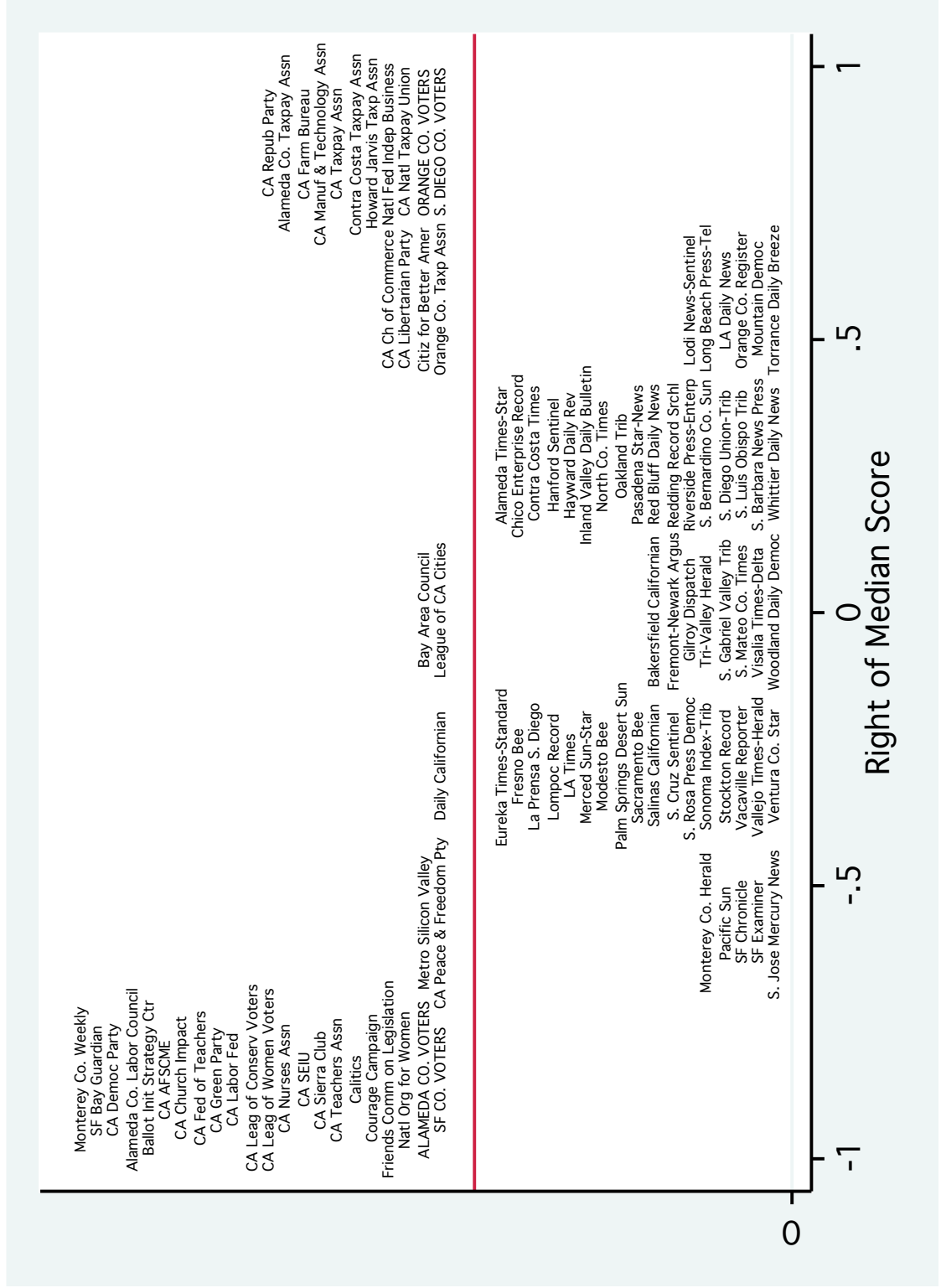Portland Oregonian
Statesman Journal
Olympia Olympian

FL Leag of Women Vot.

AZ AFL-CIO
CO Springs Indep
Willamette Week
OR Business Assn
Pacific Green Party of OR
The Stranger

AZ Democ Party
AZ Advocacy Network
AZ Green Party
Ballot Init Strategy Ctr
Blog for AZ
Progress Now CO
FL Consumer Action Network
Eugene Weekly
Ecumenical Ministries of OR
OR AFL-CIO
OR AFSCME
OR Educ Assn
OR Fed of Teachers
OR SEIU
OR Action
Lindas Guide
WA Educ Assn
WA State Labor Council

FL Times-Union
Centralia Chronicle

Ft Collins Coloradoan
Loveland Daily Rprtr-Hld
Summit Daily News
Palm Beach Post
St. Petersburg Times
Gresham Outlook
Medford Mail-Trib
Lewiston Trib
Seattle Post-Intelligencer

AZ Daily Star
Tucson Citizen
Boulder Daily Camera
Durango Herald
Steamboat Pilot

Daily Astorian
Eugene Register-Guard

-1   -.5   0   .5   1

Right of Median Score

0