

Supporting Information

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SI Text

Prosocial Words Dictionary.

Development and validation. Previous researchers (1) developed the dictionary following the standard protocols detailed at www.liwc.net/howliwcworks.php#index5. Three researchers collected a large pool of candidate words from existing dictionaries, thesaurus searches, and brainstorming. Next, they reduced the list, using a two-thirds majority-vote rule. Third, they performed multiple psychometric evaluations of the dictionary and found ample support for its content validity. The original dictionary (1) had 146 words. To restrict content to prosocial words for the present analyses, we removed 19 antisocial words from the original dictionary (abus*, bigot*, cruel*, discriminat*, disease*, dishonest*, divers*, harm*, hurt*, injust*, irresponsib*, pollution, poor*, poverty, sacrific*, suffer*, unfair*, violen*, and wound*). Scores from the longer and shorter dictionaries correlate at $r = 0.99$ in this dataset. The long dictionary yielded very similar results to those reported.

Convergence with human judges. LIWC analyses using the dictionary converged with those of human coders, $r = 0.67$ (1).

Responsiveness to situational demands. When asking people to describe goals that involve helping others (vs. ordinary goals), more than three times the prosocial word density emerges, $d > 0.96$ (1). That is, people can change their prosocial word density from ~1% to ~4% in response to a simple request to talk about helping others.

News Media Mediation, Additional Analyses. In a follow-up analysis, we statistically remove the effects of the six control variables in Table 1 before testing whether positive media coverage explains the link between Congressional language and public approval. In this analysis, the independent pathway (Congressional language → positive media → public approval) became nonsignificant: $B = 0.43$, 95% CI = [-0.74, 3.09]. Including any single one or combination of four variables (President's prosocial language, country's unemployment, economic expectations, partisan conflict in the House), renders the media pathway nonsignificant. We note several methodological and theoretical issues that render this result ambiguous.

First, we interpret these findings as a product of a somewhat noisy positive media variable. Judges read and coded the valence of 196 editorials written between 1996 and 2014. Over this time span, however, our search turned up ~29,000 editorials, meaning that the coded dataset captured just 0.7% of the full set. This

likely resulted in a noisy media valence variable, which may, in turn, be causing a false negative statistical analysis.

Second, we include this analysis for the sake of thoroughness and transparency. However, we also note that controlling for other factors in the mediation analysis is theoretically questionable.

And third, we note that the direct (C-SPAN viewing) pathway remains a viable and parsimonious explanation for how Congressional language influences public opinion.

Public Approval of Congress, the President, and the Country. We tested whether the language of Congress and that of the President predict approval of Congress, the President, and the direction of the country.

Measures.

Public satisfaction with the United States. Gallup regularly polls the US public with the following question: "In general, are you satisfied or dissatisfied with the way things are going in the United States at this time?" (2). Data were available for 82% (187) of 227 mo in the study. Public satisfaction was 36% on average (SD = 16%).

Public approval of the President. Gallup regularly polls the US public regarding whether they "approve or disapprove of the way [first & last name] is handling his job as President?" (3). Data were available for 100% (227) of 227 mo in the study. We averaged all polls within a given month. Public approval was 51% on average (SD = 12%).

Results and Discussion

Approval of Congress, the President, and the country were strongly intercorrelated, $r_s = 0.78$ – 0.90 , $P_s < 0.001$ (Table S1), meaning that approval of Congress is likely tapping into a more general "government approval" variable. The President's prosocial language predicted his public approval, albeit not significantly, $r(180) = 0.10$, $P = 0.17$, and public satisfaction with the country, $r(145) = 0.29$, $P < 0.001$. Some possible explanation for weaker associations between Presidential language and his approval is that (i) fewer Americans listen to news briefings than they do to floor debates of Congress, (ii) the public judges the President and Congress using different information, and/or (iii) our measure of Presidential language was less reliable than that of Congress (the corpus of Congressional language had 56 times more words in it).

1. Frimer JA, Schaefer NK, Oakes H (2014) Moral actor, selfish agent. *J Pers Soc Psychol* 106(5):790–802.
2. Gallup (2014) Satisfaction with the United States. Available at www.gallup.com/pol/1669/general-mood-country.aspx.

3. The American Presidency Project (2014) Presidential job approval. Available at www.presidency.ucsb.edu/data/popularity.php.

Table S1. Correlations among all of the variables under study

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-------------------------------------|-----------|-----------|-----------|----------|----------|-----------|----------|-----------|-----------|-----------|
| 1) Congress prosocial language | | | | | | | | | | |
| 2) Public approval of Congress | 0.55**** | | | | | | | | | |
| 3) Partisan conflict in the House | -0.42*** | -0.48**** | | | | | | | | |
| 4) Bills passed in the House | 0.07 | -0.12* | -0.12* | | | | | | | |
| 5) Presidential vetoes | 0.06 | 0.04 | -0.12 | 0.16** | | | | | | |
| 6) President's prosocial language | 0.13 | 0.30**** | -0.13* | -0.03 | 0.06 | | | | | |
| 7) President's public approval | 0.45**** | 0.78**** | -0.33**** | -0.16** | -0.05 | 0.10 | | | | |
| 8) Public satisfaction with country | 0.54**** | 0.90**** | -0.45**** | -0.20*** | 0.05 | 0.29**** | 0.82**** | | | |
| 9) Country economic expectations | 0.50**** | 0.63**** | -0.35**** | -0.18*** | 0.13** | 0.23*** | 0.48**** | 0.83**** | | |
| 10) Country unemployment | -0.36**** | -0.54**** | 0.30**** | 0.14** | -0.22*** | -0.31**** | -0.14** | -0.61**** | -0.75**** | |
| 11) Positive media coverage | 0.22*** | 0.26**** | -0.09 | -0.02 | 0.11 | 0.13 | 0.12* | 0.24*** | 0.26**** | -0.30**** |

* $P < 0.10$, ** $P < 0.05$, *** $P < 0.01$, **** $P < 0.001$.