Online Method Appendix

In this appendix we include additional procedural details, the experimental stimuli, fixed effects regression models for study 1 that include control variables, and details about the robustness tests for study 1's indirect effects analyses.

Additional Procedural Details

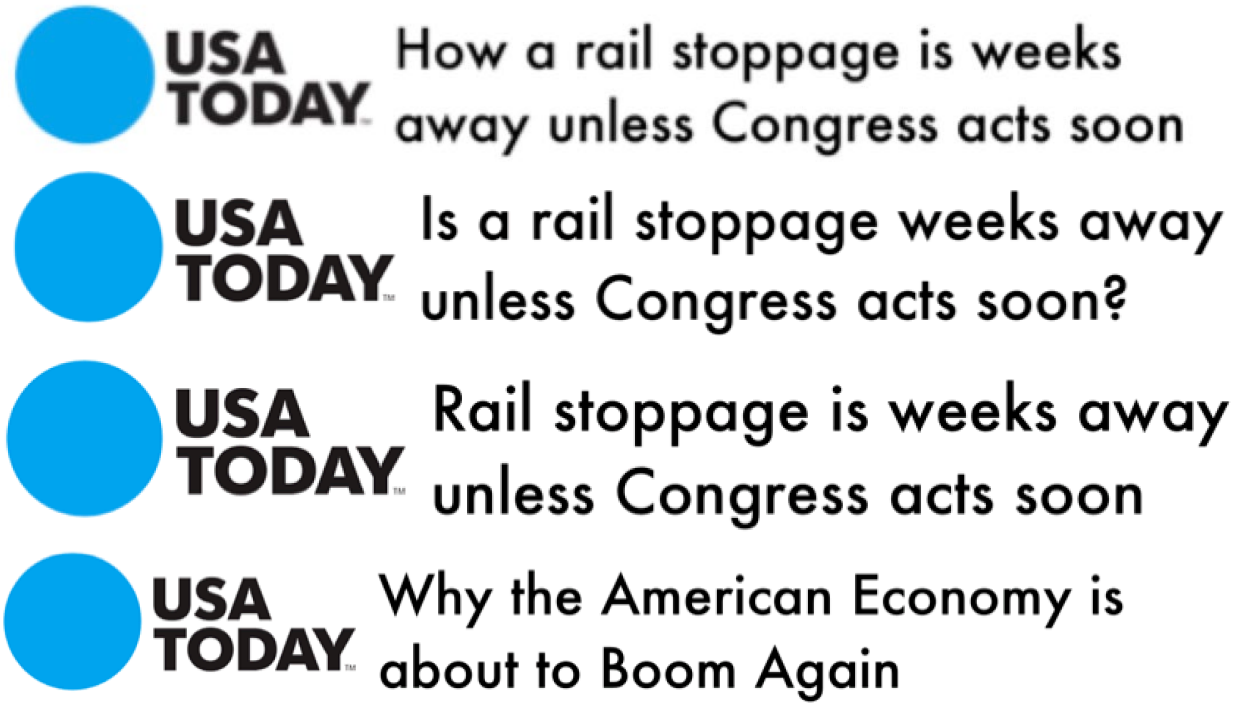
The three news sources included *USA Today* (a nonpartisan news source), *Buzzfeed* (a digital news source), and either Fox News or MSNBC (an oppositional partisan news source where Democrats in the study were assigned Fox News and Republicans were assigned MSNBC). The three issues included the economy, immigration, and dissatisfaction with Congress, which were the top three most important problems in the United States identified in Gallup's polling just before the launch of the experiment.

There were three levels for all experimental variables, so we needed to dummy code the variables for the fixed effects regression analyses. We used summary as the reference group for the headline type (with summary coded as 0 and forward reference and question both coded as 1), immigration as the reference group for the issue (with immigration coded as 0 and economy and dissatisfaction with Congress both coded as 1), and nonpartisan as the reference group for the news source (with nonpartisan coded as 0 and partisan and digital both coded as 1).

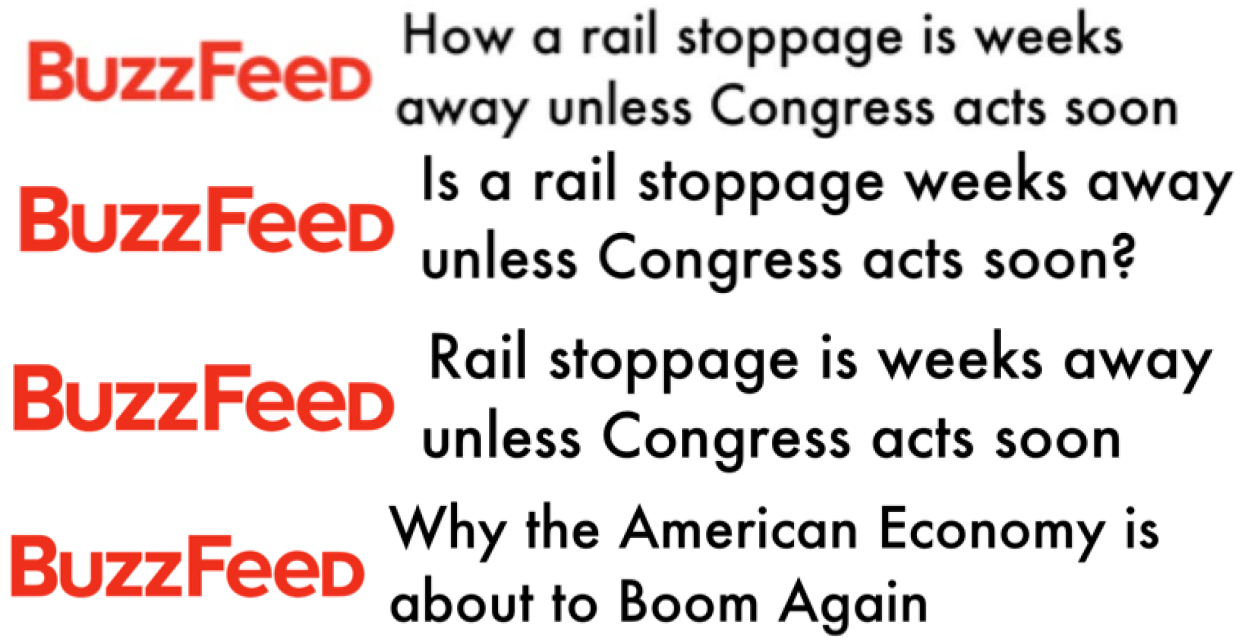
Experimental Stimuli

All headlines created for the experiment are included in this section. Participants were randomly assigned three of these headlines, only viewing each headline type, issue, and source one time.

USA Today Headlines



Buzzfeed Headlines



BuzzFeed Is the American Economy about to Boom Again?

BuzzFeed American Economy about to Boom Again

BuzzFeed Why Speaker Ryan won't move on immigration reform

BuzzFeed Will Speaker Ryan move on immigration reform?

BuzzFeed Speaker Ryan Won't Move on Immigration Reform

Partisan News Headlines (Either Fox News or MSNBC)

FOX NEWS How a rail stoppage is weeks away unless Congress acts soon

FOX NEWS Is a rail stoppage weeks away unless Congress acts soon?

FOX NEWS Rail stoppage is weeks away unless Congress acts soon

FOX NEWS Why the American Economy is about to Boom Again

Is the American Economy about to Boom Again?

American Economy about to Boom Again

Why Speaker Ryan won't move on immigration reform

Will Speaker Ryan move on immigration reform?

Speaker Ryan Won't Move on Immigration Reform

How a rail stoppage is weeks away unless Congress acts soon

Is a rail stoppage weeks away unless Congress acts soon?

Rail stoppage is weeks away unless Congress acts soon

Why the American Economy is about to Boom Again

Is the American Economy about to Boom Again?

American Economy about to Boom Again

Why Speaker Ryan won't move on immigration reform

Will Speaker Ryan move on immigration reform?

Speaker Ryan Won't Move on Immigration Reform

Study 1 Fixed Effects Regressions with Controls

The tables presented in the main text only include the main variables of interest for the study. We did, however, include the source and issue in the models as controls to ensure that the headline types had effects above and beyond other news variables. Table 1 presents the main effects of each variable and control variable. Table 2 presents the interaction effects between headline type and source and headline type and issue.

Appendix Table 1. Study 1 Fixed Effects Linear Regression Models with Controls

	Model 1 Headline Information Adequacy B(SE)	Model 2 Article Expectations B(SE)	Model 3 Anticipated Engagement B(SE)
Digital Source (*Buzzfeed*)	-0.14*** (0.03)	-0.18*** (0.03)	-0.08*** (0.02)
Incongruent Partisan Source	-0.18*** (0.03)	-0.25*** (0.03)	-0.14*** (0.02)
Nonpartisan Source (Reference; *USA Today*)	--	--	--
Economy Issue	0.003 (0.03)	0.04+ (0.03)	0.13*** (0.02)
Congress Issue	-0.21*** (0.02)	-0.10*** (0.03)	-0.08*** (0.02)
Immigration Issue (Reference)	--	--	--
Forward Reference Headline	-0.06* (0.03)	-0.05+ (0.03)	-0.01 (0.02)
Question Headline	-0.18*** (0.03)	-0.11*** (0.03)	-0.03* (0.02)
Summary Headline (Reference)	--	--	--
Adj. R	0.30	0.36	0.74

Note. + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Appendix Table 2. Study 1 Fixed Effects Linear Regression Models with Controls and Interactions

	Model 1 Headline Information Adequacy B(SE)	Model 2 Article Expectations B(SE)	Model 3 Anticipated Engagement B(SE)
Digital Source	-0.11+ (0.06)	-0.16** (0.06)	-0.04 (0.04)
Incongruent Partisan Source	-0.21*** (0.06)	-0.27*** (0.06)	-0.10** (0.04)
Nonpartisan Source (Reference)	--	--	--
Economy Issue	-0.01 (0.06)	0.11* (0.06)	0.15*** (0.04)
Congress Issue	-0.13* (0.07)	-0.12 (0.06)	-0.08* (0.04)
Immigration Issue (Reference)	--	--	--
Forward Reference Headline	-0.03 (0.08)	0.01 (0.08)	0.03 (0.05)
Question Headline	-0.13 (0.08)	-0.03 (0.08)	0.02 (0.05)
Summary Headline (Reference)	--	--	--
Digital Source X Forward Reference Headline	-0.04 (0.09)	-0.005 (0.09)	-0.06 (0.06)
Incongruent Source X Forward Reference Headline	0.01 (0.09)	0.06 (0.09)	-0.06 (0.06)
Digital Source X Question Headline	-0.07 (0.09)	-0.05 (0.09)	-0.06 (0.06)
Incongruent Source X Question Headline	0.09 (0.09)	0.01 (0.09)	-0.06 (0.06)
Economy X Forward Reference Headline	0.003 (0.09)	-0.15+ (0.09)	-0.03 (0.06)
Congress X Forward Reference Headline	-0.08 (0.09)	-0.08 (0.09)	0.02 (0.06)
Economy X Question Headline	0.03 (0.09)	-0.08 (0.09)	-0.04 (0.06)
Congress X Question Headline	-0.18+ (0.09)	-0.14 (0.09)	-0.01 (0.06)
Adj. R	0.30	0.36	0.74

Note. + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Study 1 Indirect Effects Robustness Tests: Source and Issue

In addition to the MEMORE indirect effects tests detailed in the main paper, we ran a series of robustness tests related to the control variables of source and issue. The MEMORE program allows for repeated measures interaction effects but does not allow for the addition of control variables. Thus for the robustness tests, we separated individuals' reactions to the headlines by source and issue, then ran between-group indirect effects tests using Hayes' (2013) PROCESS macro (model 6) to determine whether the headline type still predicted behaviors when focusing on only one source or issue at a time. The results of these tests are presented in Table 3. As with the MEMORE analyses, the difference between summary and forward reference headlines was generally not significant at the 95% confidence level. The difference between summary and question headlines was much more robust. In four of the six robustness tests, the question headline significantly decreased engagement through perceptions of headline information adequacy. The findings support the MEMORE analysis with two caveats. First, changing the type of headline did not affect engagement when that headline was from an oppositional source or if that headline was about immigration. Second, the full model (headline type leads to changes in engagement through both headline information adequacy and expectations of article information adequacy) was only significant in two of the robustness models: Buzzfeed and the economy. Even in these instances, however, the forward reference or question headlines do not significantly increase engagement with the news. Importantly, these models do not take full advantage of the repeated-measures design (i.e. there are no controls for individual differences or the order in which individuals receive the headlines), but they do add more evidence to suggest that curiosity headlines, at best, are no better than summary headlines and, at worst, decrease engagement due to perceptions of headline information adequacy.

Appendix Table 3a. Between-Groups Indirect Effects Tests for Forward Reference v. Summary Headlines

	USA Today B, SE, (95% CI)	Buzzfeed B, SE, (95% CI)	Opposition B, SE, (95% CI)
Headline Type → Headline Info. Adequacy → Engagement	n.s.	n.s.	n.s.
Headline Type → Expectations of Article Info. Adequacy → Engagement	n.s.	n.s.	n.s.
Headline Type → Headline Info. Adequacy → Expectations of Article Info. Adequacy → Engagement	n.s.	n.s.	n.s.
	Immigration B, SE, (95% CI)	Economy B, SE, (95% CI)	Congress B, SE, (95% CI)
Headline Type → Headline Info. Adequacy → Engagement	n.s.	n.s.	n.s.
Headline Type → Expectations of Article Info. Adequacy → Engagement	n.s.	-0.02 (0.01) [-.0452, -.0071]	n.s.
Headline Type → Headline Info. Adequacy → Expectations of Article Info. Adequacy → Engagement	n.s.	n.s.	n.s.

Appendix Table 3b. Between-Groups Indirect Effects Tests for Question v. Summary Headlines

	USA Today B (SE) [95% CI]	Buzzfeed B (SE) (95% CI)	Opposition B (SE) (95% CI)
Headline Type → Headline Info. Adequacy → Engagement	-0.05 (0.02) [-.0798, -.0189]	-0.04 (0.01) [-.0759, -.0204]	n.s.
Headline Type → Expectations of Article Info. Adequacy → Engagement	n.s.	n.s.	n.s.
Headline Type → Headline Info. Adequacy → Expectations of Article Info. Adequacy → Engagement	n.s.	-0.01 (0.01) [-.0323, -.0041]	n.s.
	Immigration B, SE, (95% CI)	Economy B, SE, (95% CI)	Congress B, SE, (95% CI)
Headline Type → Headline Info. Adequacy → Engagement	n.s.	-0.05 (0.01) [-.0787, -.0222]	-0.05 (0.02) [-.0960, -.0186]
Headline Type → Expectations of Article Info. Adequacy → Engagement	n.s.	-0.01 (0.01) [-.0424, -.0100]	n.s.
Headline Type → Headline Info. Adequacy → Expectations of Article Info. Adequacy → Engagement	n.s.	-0.02 (0.01) [-.0294, -.0010]	n.s.

Note. No direct effect paths are listed here because none were significant. All tests used 5000 bias-corrected bootstrapped 95% confidence intervals. An "n.s." label indicates that the path was not significant.

Study 1 Robustness Tests: *Intent to Read* Engagement Variable

In Study 1, the outcome variable for engagement was measured using a variety of anticipated engagement activities, including reading the article, Liking or Favoriting the article via a social media site, leaving a comment in the comment section, talking to someone about the article, or paying a small fee for the article. In Study 2, the outcome variable for engagement was much narrower: page views on news articles. Thus, for a robustness test, we ran the indirect effects tests using only participants reported *intent to read the article* ($M = 3.38$; $SD = 0.94$). The results are presented in Table 4. The indirect effects are stronger and more consistent when using only the *intent to read* measure as an outcome variable. Comparing summary headlines to both forward reference headlines and to question headlines indicated that the headline type had indirect effects through both headline information adequacy and expectations of article information adequacy, such that summary headlines increased participants' reported desire to read an article by prompting more headline information adequacy and more expectations of article information adequacy.

Appendix Table 4. Indirect Effects Tests with Intent to Read Outcome Variable

Forward Reference v. Summary Headlines	Effect Coefficient	Bootstrapped S.E.	95% Confidence Interval
Headline Type → Read	.0137	.0264	(-.0380, .0655)
Headline Type → Headline Info. Adequacy → Read	**-.0128**	**.0067**	**(-.0266, -.0001)**
Headline Type → Expectations of Article Info. Adequacy → Read	-.0082	.0073	(-.0224, .0060)
Headline Type → Headline Info. Adequacy → Expectations of Article Info. Adequacy → Read	**-.0102**	**.0053**	**(-.0205, -.0001)**
Question v. Summary Headlines	Effect Coefficient	Bootstrapped S.E.	95% Confidence Interval
Headline Type → Read	.0353	.00255	(-.0170, .0832)
Headline Type → Headline Info. Adequacy → Read	**-.0353**	**.0076**	**(-.0508, -.0213)**
Headline Type → Expectations of Article Info. Adequacy → Read	-.0015	.0079	(-.0169, .0142)
Headline Type → Headline Info. Adequacy → Expectations of Article Info. Adequacy → Read	**-.0324**	**.0064**	**(-.0459, -.0207)**

Note. The bolded paths are significant.

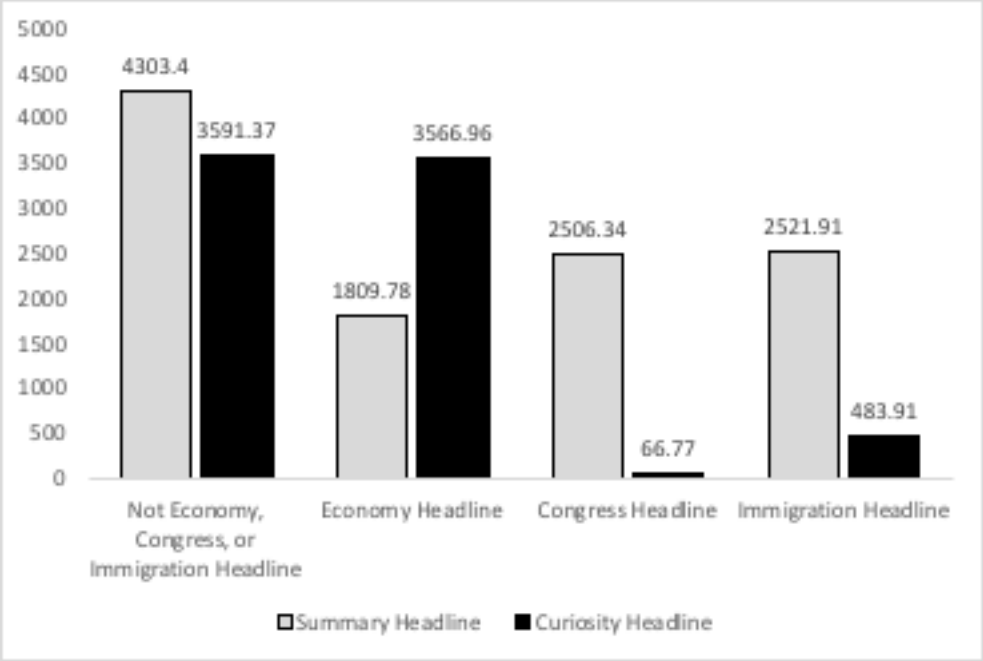
Study 2 Interaction Effects Between Headline Type and Issue

Study 2 was an observational field test in which journalists chose whether to write a headline using a summary or curiosity presentation. Thus, we controlled for a number of variables in the models. Of particular interest is the issue focus of a news article because journalists may choose to write curiosity headlines for particular types of issues more than others. We coded headlines for each of the following types of issue content, where 1 = issue is present in the headline and 0 = issue is not present (details about the coding are in the main text of the article): campaign, economy, immigration, Congress. To test whether curiosity headlines performed differently for these different issues, we added interaction effects to the model between headline presentation and each of these issues (see Appendix Table 5). The campaign by headline presentation interaction was not significant. The other interactions were significant. Of these significant interactions, curiosity headlines that mentioned Congress or Immigration were even less likely than the curiosity headlines overall to receive page views, further supporting the hypotheses raised in the study. However, curiosity headlines that mentioned the Economy were *more* likely to receive page views than summary headlines that mentioned the Economy, suggesting that issue topic could matter in the success of curiosity headlines (see Appendix Figure 1). Once again, however, extreme caution is warranted here, this time due to small sample sizes. Out of the over 5,000 news stories coded in this dataset, only 26 Economy headlines were presented as curiosity headlines, only 10 Congress headlines were presented as curiosity headlines, and only 8 Immigration headlines were presented as curiosity headlines. Campaign news presented in curiosity headline form was more prevalent (n = 430), but there was no interaction effect with this type of news coverage. In all, there is very preliminary evidence that issue could affect curiosity headline success, but much more research is necessary before making the claim that this is the case.

Appendix Table 5. Study 2 Negative Binomial Regression Model with Interactions

	Page Views B(SE)
Intercept	8.71*** (0.06)
Primary Election	0.11* (0.05)
Campaign Headline	-0.33*** (0.05)
Economy Headline	-0.72*** (0.11)
Congress Headline	-0.59*** (0.16)
Immigration Headline	-0.64** (0.22)
Headline Presentation	-0.23*** (0.06)
Campaign X Headline Presentation	0.18 (0.13)
Economy X Headline Presentation	0.86* (0.34)
Congress X Headline Presentation	-1.14* (0.53)
Immigration X Headline Presentation	-1.47* (0.61)

Note. *$p < .05$, ** $p < .01$, *** $p < .001$
The model also includes dummy variables for each newsroom involved in the study.



Appendix Figure 1. Graphing the expected number of page views.