Differentiating Cueing From Reasoning in Agenda-Setting Effects

Raymond J. Pingree1 & Elizabeth Stoycheff2

1 Manship School of Mass Communication, Louisiana State University, Baton Rouge, LA, USA
2 Department of Communication, Wayne State University, Detroit, MI, USA

This study differentiates two explanations of agenda-setting effects: agenda cueing (the influence of the mere fact of news coverage) and agenda reasoning (the influence of reasons for problem importance in the content of news stories). We isolate the two using a report summarizing recent news coverage as the experimental stimulus, instead of actual news coverage, allowing independent manipulation of agenda cue exposure and agenda reason exposure. A key moderator in both processes is gatekeeping trust, or trust in the media to base coverage decisions on problem importance judgments. Specifically, pure cues (without agenda reasons) are more influential on those with higher gatekeeping trust, and among those with low gatekeeping trust, cues are more influential when backed by agenda reasons.

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Agenda-setting research has extensively documented that the news can affect audience members’ issue priorities (Iyengar & Kinder, 1987; McCombs, 2005; McCombs & Shaw, 1972; Wanta & Ghanem, 2007), but explanations of how this effect works remain in dispute. Recent evidence (Miller, 2007; Miller & Krosnick, 2000; Takeshita, 2006; Tsfati, 2003; Weaver, 2007) has cast substantial doubt on explanations that focus exclusively on cognitive accessibility, which is how readily problems come to mind (Price & Tewksbury, 1997). The resulting search for new explanations has led some (Bulkow, Urban, & Schweiger, 2012; Takeshita, 2006; Weaver, 2007) to turn to dual-process models, which specify both a lower effort, rapid process and a higher effort, slower process (Chaiken, 1980; Chaiken, Liberman, & Eagly, 1989; Evans, 2008; Petty & Cacioppo, 1986). In addition to the promise of improving agenda-setting theory, this dual-process approach may help reconcile conflicting views of the implications of this effect in which it is either seen positively as citizens learning about problems beyond their direct experience or seen negatively as a dysfunction leading to sensationalized, unstable, and reactive priorities (Takeshita, 2006).

In explaining agenda setting as a dual process, greater conceptual clarity is needed about two key issues. First is the exact nature of the heuristic or cognitive
shortcut that constitutes the lower effort half of the model. The accessibility heuristic mentioned above should be distinguished from cueing, which is a quite different heuristic in which the conclusions of a trusted source are used to avoid the cognitive effort of systematically arriving at those conclusions for oneself (Chaiken, 1980). Takeshita’s (2006) dual-process model uses cognitive accessibility as the heuristic process, neglecting the possibility of agenda cueing. Second, dual-process models should specify the moment of cognitive processing they model either as the moment of exposure (as in Bulkow et al., 2012) or as some later moment based on remembered information, as in our model as well as in most other agenda-setting models (Willnat, 1997).

We propose a novel dual-process model of agenda setting that focuses on this later moment and uses agenda cueing instead of cognitive accessibility as its heuristic process. Agenda cueing is the use of the perceived news agenda as a cognitive shortcut in the agenda response. By taking an agenda cue, audience members effectively delegate the difficult task of prioritizing problems to journalists. We propose that this heuristic is rooted in a specific form of media trust called gatekeeping trust, which is a trust that journalists choose what to cover largely based on problem importance judgments (Pingree, Quenette, Tchernev, & Dickinson, 2013). The systematic process in our model, agenda reasoning, is the influence of reasons for the importance of problems learned from the content of news stories. Note that these two processes differ not only in terms of mechanisms but also in terms of their independent variables. Specifically, agenda cueing is an effect of the perception of frequent news coverage of a problem, regardless of the content of that coverage. In agenda reasoning, what is influential is information in the content of news stories that audience members find useful in systematically weighing problem importance.

To our knowledge, exposure to agenda cues and exposure to agenda reasons have not been isolated from one another in any past study. We aim to isolate the two as completely as possible using a novel design in which the stimulus is not actual news coverage, but is instead a Pew News Coverage Index (NCI) report, which is a summary of the previous week’s top stories in numerous mainstream outlets. This allows the manipulation of an agenda cue by altering which problem this report says received the most coverage in the past week, without requiring actual exposure to news coverage, thus avoiding exposure to agenda reasons. We use a fully factorial 2 (issue 1, issue 2) × 2 (pure cue, reason-backed cue) experiment to test the moderating role of gatekeeping trust in the influence of agenda cues with and without exposure to agenda reasons.

Explaining agenda setting

In terms of explanatory power, or the ability of a theory to explain why an effect occurs (Chaffee & Berger, 1987), many have pointed out that there is room for improvement in agenda-setting theory (e.g., Kosicki, 1993; McCombs, 1981; Nabi & Oliver, 2010; Takeshita, 2006). Improving explanatory power requires experimental
research that carefully isolates possible causal processes from one another (Chaffee & Berger, 1987; Kosicki, 1993), but agenda-setting experiments remain a small minority of agenda-setting research e.g., (this list is not comprehensive) (Bulkow et al., 2012; Holbrook & Hill, 2005; Iyengar & Kinder, 1987). In contrast, the predictive power of agenda-setting theory has been quite firmly established across a variety of study designs, measurement approaches, and contexts (for a meta-analytic review, see Wanta & Ghanem, 2007). Numerous nonexperimental studies have found that the media agenda consistently correlates with the public agenda, that changes in the media agenda usually precede similar changes in the public agenda, and that variations in received media agendas across geographic or demographic groups predict variations in the public agenda across those same groups (Dunaway, Branton, & Abrajano, 2010; Kiousis & McDevitt, 2008; McCombs & Shaw, 1972; Owens, 2010; Robert, Wanta, & Dzwo, 2002; Shehata, 2010; Smidt, 2012; Strömbäck & Klousis, 2010; Wanta & Foote, 1994; Wanta, Golan, & Lee, 2004; Wirth et al., 2010). Again, although this research has firmly established the predictive power of agenda-setting theory, studies that do not use experimental manipulation to isolate competing causal mechanisms have limited utility for building the explanatory dimension of agenda-setting theory.

Accessibility-based models

In the 1990s, theorists introduced (but did not directly test) cognitive accessibility as a promising explanatory mechanism for agenda-setting effects (Iyengar, 1990; Price & Tewksbury, 1997; Scheufele, 2000; Scheufele & Tewksbury, 2007). Accessibility is an unconscious mechanism of knowledge activation in which constructs that were recently active in memory (e.g., because of recent news exposure mentioning a problem) are more likely to come to mind (Price & Tewksbury, 1997). The resulting accessibility can be temporary, typically only lasting a matter of seconds or minutes, or can accumulate into chronic accessibility through repeated activation (Price & Tewksbury, 1997). To use accessibility as a heuristic means to infer that because a thought came to mind quickly, it is relevant, correct, or important (Kelley & Lindsay, 1993; Labroo, Lambotte, & Zhang, 2009). Thus, the accessibility heuristic explanation of agenda setting is that when asked to list the most important problems facing the nation, respondents assume issues that come to mind more readily are more important.

Recent research has undermined the accessibility explanation in several ways. Most importantly, when cognitive accessibility of a problem is actually measured, it does not mediate agenda-setting effects (Miller, 2007). Miller’s (2007) study showed that media content—rather than accessibility alone—led people to recognize an issue as important. A second form of evidence against the cognitive accessibility explanation is that media trust moderates agenda-setting effects (Miller & Krosnick, 2000; Tsfati, 2003). For any message effect operating via the accessibility heuristic, mere comprehension of the message should be enough to produce accessibility and thus produce the effect, regardless of whether the message is from a trusted
source. In addition to media trust, several other individual difference variables have been identified that moderate agenda-setting effects, including need for orientation (Weaver, 1977), need for cognition (Matthes, 2008), and issue interest (Bulkow et al., 2012; Wanta, 1997). Together, these findings suggest that more conscious cognitive processes after knowledge activation play an important role in agenda-setting effects.

**Dual processes during the agenda response**

Some recent work has employed a dual-process approach to explaining agenda-setting effects (Bulkow et al., 2012; Takeshita, 2006). A dual-process explanation is one in which two distinct effect processes operate to produce the same outcome, typically with one process being more systematic or cognitively effortful and the other involving heuristics or shortcuts to reduce cognitive effort (Evans, 2008). Specifically, we will use the terminology of the heuristic-systematic model (Chaiken, 1980; Chaiken et al., 1989) here instead of the elaboration likelihood model (Petty & Cacioppo, 1986) to avoid implying intentional persuasion by the media or that the cognitive processes of interest are occurring in each moment of media exposure. Our model focuses on dual processes that occur in a later moment based on remembered considerations. We will return to this issue of the moment in which a dual-process model occurs in the next section.

As Takeshita (2006) argues, dual-process explanations of agenda setting hold the promise of reconciling two opposite perspectives on the normative implications of agenda-setting effects for the health of a democracy. On one hand, agenda setting can be seen as a valuable process of citizens learning about issues beyond their direct experience and building consensus (McCombs, 1997a), while on the other hand it can also be seen as a central part of a dysfunctional system of collective prioritization prone to instability, sensationalism, and reaction after problems have dramatic impacts rather than proactively preventing problems. Takeshita (2006) points out that the former, more positive view of agenda-setting effects suggests systematic processing involving learning reasons why issues are important from the content of news stories, whereas the latter suggests some form of lower effort heuristic processing by audience members.

Our dual-process model differs from Takeshita’s (2006) model in one key respect: We use cueing instead of cognitive accessibility as the heuristic. Agenda cueing is a conceptually distinct heuristic from cognitive accessibility in which one accepts the apparent conclusions of some trusted source in order to avoid the cognitive effort of forming those conclusions for oneself (Chaiken, 1980). Agenda cueing means relying on news workers to do the difficult cognitive task of weighing the relative importance of problems. On the systematic side of our model, we prefer the term agenda reasoning over systematic agenda setting because, like agenda cueing, it refers to a specific aspect of news content we can isolate as the independent variable (exposure to agenda reasons) and not to the assumed mechanism of effect (systematic processing).
Figure 1 illustrates our dual-process model of agenda cueing and agenda reasoning, and for comparison also depicts the other two dual-process models and earlier models based only on cognitive accessibility. On the basis of the results from Miller (2007), in which accessibility was influenced but did not then affect the agenda response, we depict the direct link between accessibility and the agenda response as a dotted line. Although not visually depicted in our model for simplicity, accessibility may still play an indirect role via effects on the accessibility of orientations involved in the other processes, such as the perceived news agenda. Agenda cueing is modeled as the use of the perceived news agenda as a cognitive shortcut to avoid the effort of agenda reasoning when responding to the agenda question and is contingent on media trust. As discussed further below, we employ a more specific form of media trust called gatekeeping trust as the key moderating variable explaining whether agenda cueing or agenda reasoning occurs. Agenda reasoning is the more systematic form of processing in our model, and it involves effortful cognitive processing of reasons recalled from memory that are seen as relevant to deciding the relative importance of problems. Our model posits that audience members with lower levels of gatekeeping trust are more likely to engage in agenda reasoning because they are less likely to see the mere fact of coverage of events related to a problem as a valid cue representing anyone’s judgments of problem importance.

The role of stored attitudes
Bulkow et al. (2012) offer a fundamentally different kind of dual-process model of agenda setting that focuses on cognitive processing in response to each news story that results in updating stored attitudes about problem importance, whereas agenda cueing, agenda reasoning, and the accessibility heuristic all occur at a later time.
(e.g., during the agenda response) using information sampled from memory. In an innovative two-experiment study, Bulkow et al. found the results quite consistent with a dual-process explanation of agenda-setting effects occurring during moments of news exposure. Specifically, they found that agenda-setting effects for those with higher prior involvement in the issue were longer lasting and more contingent on agenda reasons in the content of news stories\(^1\), whereas those lower in involvement were more sensitive to agenda cues such as journalists’ explicit statements of issue importance. The crucial difference between their model and ours is that theirs focuses on “on-line” updating of attitudes during or immediately after exposure to each news story (Hastie & Park, 1986), which is a potentially important and largely neglected possibility in models of agenda setting (Willnat, 1997). Although Bulkow et al. did not explicitly describe their model as on-line or impression-driven, their use of issue-specific involvement as the key moderator necessitates that the cognitive processes in their model occur in a moment involving some specific news story. Thus, their dual-process model is one in which either process leads to “on-line” updating of a stored attitude about the importance of the issue in the news story (depicted in Figure 1 as “heuristic updating” and “systematic updating”). These stored attitudes about individual issues are presumably then recalled and compared with one another in unspecified cognitive processes during the moment of agenda response.

Converting these individual problem importance attitudes to relative rankings may at times be very straightforward. For instance, an antiabortion activist might list only abortion in an agenda response as a result of simply recalling this attitude without any need for further processing. However, it seems likely that in most cases, two or more problem importance attitudes will come to mind that seem indistinguishably strong, and, in such cases, there is a need for further processing (i.e., either agenda cueing or agenda reasoning) to rank them. This can occur even when someone has a well-developed attitude about importance of each individual problem. For instance, one might be able to use a stored attitude without further processing to quickly respond “strongly agree” to two separate questions about the importance of global warming and the economy but might have to stop and think about their relative importance, thus engaging in memory-based processing even after stored attitudes exist and are successfully recalled. Further, even when recalled attitudes about two problems are distinguishably different, the respondent might doubt whether the attitudes were formed on the basis of genuinely comparable information, which could also then result in uncertainty that may be resolved using memory-based processes of agenda cueing or agenda reasoning.

**Media trust and gatekeeping**

Media trust is usually conceptualized as a very general attitude about the credibility or trustworthiness of the mass media (Gaziano & McGrath, 1986; Tsfati, 2010). In terms of the cueing process described above, general trust in a cue source is only one factor affecting whether a cue is accepted from that source, with the more fundamental
requirement being the perception that the source has done the cognitive effort one is trying to avoid. Gatekeeping trust is designed to play this role in the context of agenda cueing. Gatekeeping trust is trust that news coverage represents the results of a systematic effort by news workers to prioritize problems. High gatekeeping trust is problematic in that it indicates an oversimplified view of media production practices, ignoring factors other than problem importance that affect news story selection. Many such factors have been identified in past research (Atwood, 1970; Atwood & Grotta, 1973; Brown, 1979; Price & Tewksbury, 1997; Shoemaker & Vos, 2009; Tuchman, 1980), including news workers’ tendency to judge newsworthiness in terms of isolated individual news events instead of underlying social problems (Lester, 1980; Shoemaker & Vos, 2009) and rely heavily on an event’s news values such as timeliness, novelty, conflict, and drama (Price & Tewksbury, 1997). We do not mean to imply that judgments of issue importance play no role in story selection. Of course, journalists can and often do go out of their way to cover issues they feel are important. However, to continue covering an issue repeatedly, the issue must generate some new and newsworthy events. Thus, it is not necessarily a mistake for an audience member to infer based on the content of an individual story that the journalist decided to cover it because of the importance of the problem. This kind of inference becomes problematic when it is based on the frequency of recent news coverage of an issue (i.e., the perceived news agenda in Figure 1), because coverage frequency is strongly influenced by news values that can be unrelated to journalists’ judgments of underlying problems.

This study adopts a measure of gatekeeping trust developed and validated in a recent experiment that tested effects of two forms of media criticism, including gatekeeping criticism, on three media trust constructs, including gatekeeping trust and general media trust (Pingree et al., 2013). Although the experimental focus of that study was media criticism, not agenda setting, it included two findings in nonexperimental analyses that support our predictions about the role of gatekeeping trust in agenda cueing and reasoning. First, in a regression including three forms of media trust, gatekeeping trust was the only media trust measure to positively predict the overlap between the respondent’s perceived news agenda and the respondent’s own agenda. This suggests that gatekeeping trust is the form of trust that moderates agenda cueing, but could just as easily be explained as reverse causality owing to the use of a self-reported perceived news agenda. In other words, high gatekeeping trust could have led some respondents to conclude that the media must have been covering whatever issues they believed were most important. Second, in a similar regression model, gatekeeping trust was the only media trust measure to negatively predict agenda reasoning, a measure of the number of reasons respondents gave for the importance of problems they mentioned in an open-ended response. This supports our prediction that when recent news coverage is not seen as a valid agenda cue, people are more likely to engage in their own active processing of agenda reasons, further validating gatekeeping trust in terms of its theorized role in agenda reasoning. However, as in the case of agenda cueing, the previous study does not constitute a
test of causality in agenda reasoning because exposure to agenda reasons was not experimentally manipulated.

Hypotheses

We begin with the question of the effectiveness of our novel approach to experimentally manipulating the news agenda. Unlike past agenda-setting experiments that manipulate actual exposure to news coverage (e.g., Iyengar & Kinder, 1987), we manipulate exposure to a report summarizing recent news coverage. This allows us to cleanly isolate a “pure cue” of the mere fact of news coverage from other effects of exposure to the content of that coverage, such as effects of agenda reasons contained in the coverage or chronic issue accessibility due to repeated exposure. Before testing the moderating role of gatekeeping trust, we first need to establish that exposure to this form of pure agenda cue influences respondents’ problem importance judgments. Thus, Hypothesis 1 is that exposure to a pure agenda cue will shift problem importance judgments in the direction of the cue.

Because the moderating role of gatekeeping trust is expected to be quite different for a pure agenda cue than for agenda reasons, we do not predict an overall interaction of gatekeeping trust and cueing, and instead make two separate predictions about gatekeeping trust’s moderating role. First, as outlined above, a pure cue is expected to be more influential among those with higher gatekeeping trust because this form of trust indicates a belief that news coverage represents the conclusions of others about relative problem importance, and can therefore be used to avoid doing this difficult cognitive task for oneself, effectively delegating this task to news workers. Thus, Hypothesis 2 is that for a pure cue, cueing effects will be stronger for those with higher gatekeeping trust.

As a consequence of being less likely to interpret the mere fact of news coverage as a valid cue about problem importance, those lower in gatekeeping trust are expected to be more likely to engage in agenda reasoning. This should make these audience members particularly sensitive to whether agenda reasons are included along with the cue. Therefore, Hypothesis 3 is that for those with lower gatekeeping trust, cueing effects will be stronger when agenda reasons are included supporting the cue than when they are not.

Finally, it is also possible that the same predictions described above depend not on gatekeeping trust, but on a more general feeling of media trust. Because any measures of media trust are likely to share variance, support for either of the hypotheses above involving gatekeeping trust could instead be due to general media trust, with gatekeeping trust acting as a proxy. This is an important possibility to rule out because if cueing or reasoning effects depend on general media trust instead of gatekeeping trust, this would undermine the normative argument that agenda cueing is rooted in specific and correctable misperceptions of news production practices (see Pingree et al., 2013). Thus, if Hypotheses 2 or 3 are supported, we will conduct supplemental analyses testing whether these results hold with the inclusion of general media trust.
as a covariate, and also test whether similar results are found when gatekeeping trust is replaced with general media trust.

Method

Overview
To test these hypotheses, we conducted an experiment embedded in an online survey. Participants completed initial pretest questions about general media trust and gatekeeping trust followed by random assignment to a 2 (unemployment cue, national debt cue) × 2 (agenda reason exposure, no agenda reason exposure) factorial design. After exposure to a report stimulus purported to summarize news coverage from the previous week and containing both experimental factors, participants were asked an open-ended question about the most important problems facing the country and prompted for demographic information.

Participants
Participants (N = 353) were recruited from undergraduate courses at a large university in the Midwestern United States from April 1 to April 5, 2012. Participants ranged in age from 18 to 50 (M = 21.2, SD = 3.97), and 64% were female. Overall, 12.8% of participants self-identified as working class, 23% as lower middle class, 59.4% as upper middle class, and 4.8% as wealthy. In terms of racial identity, 76.2% of the sample self-reported as White, 11.6% as Asian or Asian American, 6.5% as Black or African American, 1.7% as Hispanic, 3.1% as biracial or multiracial, and 0.8% as other. The sample was slightly more liberal (M = 4.84, SD = 2.2) on an 11-point scale from 0 (very liberal) to 10 (very conservative), and 71.2% of participants reported that they were registered to vote.

Stimuli
Because the primary focus of this study is to differentiate agenda cueing from agenda reasoning, we employ a novel stimulus approach designed to isolate exposure to agenda cues as cleanly as possible from exposure to the agenda reasons that may be present in the content of news stories. Specifically, the stimulus was a modified version of a NCI report, a weekly report released by Pew’s Project for Excellence in Journalism. Each NCI report is based on a content analysis of approximately 1,000 stories from the previous week in 52 mainstream outlets, and reports the percentage of the news hole occupied by the five most-covered topics. The agenda cue manipulation altered whether the top story of the week was said to be the national debt or unemployment. In both conditions, this top story of the week was said to occupy 23% of the newshole, and the other four top stories were identical across conditions: the 2012 Presidential Election (18%), Health Care (10%), the Trayvon Martin Shooting (5%), and Syrian Unrest (3%). In order to maximize effect size in this initial study using this type of stimulus, we opted to compare two conditions with cues operating in opposite directions (emphasizing debt over jobs or emphasizing...
jobs over debt) instead of comparing to a control group in which no issue is cued. As a result, the effects of agenda reasoning cannot be assessed entirely independent of cueing. Instead, the purpose of the agenda reasoning manipulation is to compare effects of pure cues versus reason-backed cues. The agenda reasoning manipulation was whether this same NCI report concluded with an additional few paragraphs supplying agenda reasons supporting the importance of the top story (either the national debt or unemployment) relative to the other economic story. These agenda reasons included evidence from government agencies and academic research studies. See Appendix for the full text of the stimulus.

Measures

Jobs importance relative to debt

Because the agenda cue manipulation did not include a control condition with no issue cue, the dependent variable of interest is the relative importance of the two cued issues. This was assessed using an open-ended item that asked participants, “If a friend who doesn’t follow politics much asked what you think are the most important problems facing the nation, what would you say to him or her? Please actually write the words you would say, instead of describing what kinds of things you would say.” Previous research (Schuman, Ludwig, & Krosnick, 1986) has found that results from such open-ended “most important problems” responses are comparable to closed-ended responses and may mitigate a participant’s tendency to select a problem simply because question wording made it salient. Various open-ended agenda prompts have also been found to produce consistent results across variations in wording and question ordering (Min, Ghanem, & Evatt, 2007). Two trained researchers coded participants’ responses for mentions of unemployment (Krippendorff’s $\alpha = .93$) and national debt (Krippendorff’s $\alpha = .96$) on a 0–2 scale, where 0 = no mention, 1 = issue was present in the response, and 2 = issue was dominant and listed first in the response. Each participant’s score for national debt importance was subtracted from his or her score for unemployment importance to arrive at a 5-point scale ranging from −2 to 2, such that more positive numbers on the variable represent a relatively higher priority for jobs over debt.

Gatekeeping trust

Gatekeeping trust (Cronbach’s $\alpha = .85$, $M = 5.21$, $SD = 1.85$) was measured by averaging responses to five 11-point items ranging from 0 labeled strongly disagree to 10 labeled strong agree. A dichotomized version of this scale was also constructed, with 0 representing gatekeeping trust below the median of 5 and 1 representing values above the median ($M = 0.52$, $SD = 0.50$). The five items that comprised the gatekeeping trust scale were as follows: “News outlets choose which stories to cover by carefully deciding which issues or problems are the most important in society,” “When deciding how much time to spend covering each issue, reporters and editors are thinking mostly about how important each issue is in society,” “When the news gives some topic a lot of coverage, it means they’ve decided it’s a really important
issue in society,” “The top stories in a TV newscast are usually about whatever issues the editors think are the most serious, urgent or widespread in society,” and “You can trust that when there are problems in society that really are urgent and important, the news will make a big deal out of them.”

General media trust
We also included general media trust (Cronbach’s $\alpha = .86, M = 3.75, SD = 1.57$) to allow us to test whether gatekeeping trust is operating as a proxy for a more general media trust construct. As in our previous work validating gatekeeping trust (Pingree et al., 2013), we employed a general media trust scale adapted from Tsfati (2010), measured by averaging responses to five 11-point items ranging from 0, labeled strongly disagree, to 10, labeled strongly agree. A dichotomized version of this scale was also constructed using its median of 3.6 ($M = 0.50, SD = 0.50$). The five items that comprised the general media trust scale were as follows: “In general, mainstream news outlets are fair,” “In general, mainstream news outlets are accurate,” “In general, mainstream news outlets are unbiased,” “In general, mainstream news outlets tell the whole story,” and “In general, mainstream news outlets can be trusted.”

Results
Hypotheses 1 and 2 predict the effects of pure agenda cues in the absence of agenda reasons. Accordingly, we tested these two hypotheses using a model that included only subjects in the pure cue condition, without any agenda reason exposure. An analysis of variance (ANOVA) model predicting jobs importance relative to debt included two two-level factors: the agenda cue manipulation (unemployment or national debt) and a gatekeeping trust dummy constructed using a median split. Hypothesis 1 predicted a main effect of a pure cue on issue importance, and was supported by a significant main effect of cue direction [$F(1, 166) = 14.312, p < .001$]. With the dependent variable coded such that positive values indicated higher importance for jobs relative to debt, the means for the two cue direction conditions were in the predicted direction, with a mean of 0.319 in the jobs cue condition and a mean of −0.320 in the debt cue condition.

Hypothesis 2 predicted that for those who received a pure cue, gatekeeping trust would moderate cueing effects such that higher gatekeeping trust will be associated with a stronger effect. This was tested in the same model as Hypothesis 1, using the interaction term between cue direction and gatekeeping trust. This interaction term was significant [$F(1, 166) = 3.35, one-tailed p = .035$]. As the pattern of means was in the predicted direction, Hypothesis 2 was supported. For those with high gatekeeping trust, receiving the jobs cue instead of the debt cue increased the jobs importance mean from −0.395 to 0.553, an increase of 0.948, and for those with low gatekeeping trust the means increased from −0.244 to 0.086, a significantly smaller increase of 0.330.

Two supplemental models were used to examine the utility of gatekeeping trust versus general media trust in moderating agenda cueing. First, an additional ANOVA
model identical to the above test of Hypothesis 2 was conducted, replacing the gatekeeping trust dummy with a dummy for general media trust. In this model, the interaction between cue direction and general media trust was not significant [$F(1, 166) = 0.554$, one-tailed $p = .23$]. Second was an analysis of covariance (ANCOVA) model identical to the model for Hypothesis 2 except for the inclusion of general media trust as a covariate. In this model, the interaction remained significant [$F(1, 165) = 3.70$, one-tailed $p = .028$], and the pattern of means remained in the expected direction.

Hypothesis 3 predicted that for those low in gatekeeping trust, a reason-backed cue would be more effective at predicting issue importance than a pure cue. This was tested with an ANOVA model including only respondents who scored below the median in gatekeeping trust. In this model, the interaction between cue direction and agenda reason exposure was significant [$F(1, 164) = 2.89$, one-tailed $p = .046$]. As the pattern of means was in the predicted direction, Hypothesis 3 was supported. Specifically, for those subjects low in gatekeeping trust, the reason-backed jobs cue increased the jobs importance score from $-0.312$ to $0.600$, for a total increase of $0.912$, and the pure cue only increased the jobs importance rating mean from $-0.244$ to $0.086$ for a total cueing effect of $0.330$. Although not hypothesized, we also tested a parallel model for those with high gatekeeping trust, and although the interaction term between cue and reason exposure was not significant [$F(1, 182) = 1.875$, $p = .173$], it was in the opposite direction, such that pure cues were actually slightly stronger than reason-backed cues for these subjects with high gatekeeping trust. As a result, in a model including all subjects, the overall two-way interaction between cue and reason exposure was nonsignificant [$F(1, 346) = 0.118$, $p = .731$]. In this overall model, the reason-backed jobs cue resulted in a mean of $0.380$ (compared to $0.319$ for a pure jobs cue), and the reason-backed debt cue resulted in a mean of $-0.339$ (compared to $-0.320$ for a pure debt cue). Thus, if we did not account for the moderating role of gatekeeping trust, reason-backed cues would not have appeared to be significantly more effective than pure cues, but among those with low gatekeeping trust, reason-backed cues are more effective as hypothesized.

Following the same approach as with Hypothesis 2, two supplemental models addressed whether gatekeeping trust outperforms general media trust in moderating agenda reasoning. In an ANOVA replacing gatekeeping trust with general media trust, the interaction was not significant [$F(1, 173) = 0.532$, one-tailed $p = .233$], and in the ANCOVA adding general media trust as a covariate, the interaction remained significant [$F(1, 163) = 2.913$, one-tailed $p = .045$].

Discussion

By using a report summarizing news coverage instead of actual news coverage as the stimulus, this experiment for the first time isolates manipulation of exposure to a pure agenda cue, or the perception of frequent coverage of a problem in recent news, from exposure to agenda reasons, or information contained in news stories that could
be used in systematic reasoning about problem priorities. Significant agenda-setting effects were found using a pure agenda cue without any exposure to agenda reasons, suggesting that cueing is an important mechanism of agenda setting. Further, these effects were concentrated among those with high gatekeeping trust and not high general media trust, supporting our explanation of these agenda-cueing effects as rooted in specific misperceptions of news production practices instead of more general positive feelings toward the media. For audience members lower in gatekeeping trust, agenda-setting effects were strengthened by the inclusion of agenda reasons supporting the cue, suggesting that when the mere presence of coverage is not seen as a valid agenda cue, audience members require substantive information about problem importance that can be used in making their own systematic importance judgments.

Conceptually, the most important contribution of this study is to differentiate agenda cueing not only from agenda reasoning but also from the commonly assumed heuristic of cognitive accessibility. Recent efforts to reconceptualize agenda setting as a dual process (Bulkow et al., 2012; Takeshita, 2006) made an important step toward improving the explanatory power of agenda-setting theory. We extend this approach with three important differences from past conceptualizations. First, instead of heuristic agenda setting, a conceptual label that does not differentiate the accessibility heuristic from cueing, we focus on one specific heuristic we label agenda cueing, which is accepting news coverage as someone else’s judgment of problem importance in order to avoid the difficult cognitive task of judging the relative importance of problems for oneself. Second, instead of merely treating the two processes as mechanisms of the exact same effect, our conceptualization of the two processes specifies differences in the independent variable as well as differences in mechanisms. In particular, agenda-cueing effects are effects of the mere fact of news coverage of an issue, regardless of its content, and agenda-reasoning effects are effects of information contained in news stories that is useful for systematic reasoning about issue priorities. And third, in contrast to (and complementary with) the “on-line” dual-process model proposed by Bulkow et al. (2012), which makes the valuable contribution of explaining cognitive mechanisms of agenda setting that occur in response to each news story received, our memory-based dual-process model specifies dual processes during some later moment of agenda response.

The novel design of this study is also a practical contribution to agenda-setting research that we hope will facilitate future agenda-setting experiments. In this study, we manipulated agenda cues with a brief, one-shot exposure to a report summarizing recent news coverage. In contrast, typical agenda-setting experiments are far more time-intensive for researchers and subjects alike, generally requiring repeated message treatments over the course of several days to a week, and in some cases even employing professional editors to insert stimulus segments seamlessly into television newscasts (e.g., Iyengar & Kinder, 1987). We hope this methodology will encourage more agenda-setting experiments to be conducted because again, a large body of experimental research that carefully isolates mechanisms from one another is exactly what is needed to strengthen the explanatory power of agenda-setting theory (Kosicki, 1993).
Future research should include efforts to replicate our findings in other contexts such as local news, international news, or even the influence of non-news gatekeepers via social media. It should also include design variations to isolate other possible mechanisms of agenda setting. For instance, emotional appeals are a distinct aspect of news content that some have argued may play a role in explaining agenda-setting effects (Nabi & Oliver, 2010). Future research could manipulate the inclusion of emotional appeals about problem importance just as this study manipulated the inclusion of agenda reasons, to distinguish their effects from either cueing or reasoning. Another stimulus possibility not tested in this initial study but arguably common in the real world is simultaneous exposure to reasons and cues in which the two work in opposite directions, unlike the reason-backed cues in this study where agenda reasons always provided support for the importance of whichever issue was cued. One common example of this scenario is when surprisingly positive economic data is released and receives widespread news coverage. In such a case, someone who remembers there were a lot of economic stories lately but recalls nothing about their content might mistakenly use this increase in coverage as a cue that the economy has become a more important problem. Another important possibility to explore in future research is the addition of a control condition with no news cue to allow independent assessment of the impact of reason exposure without cues.

These results may also have more general implications for theories of persuasion or information processing. In more general terms, gatekeeping trust can be seen as a perception of relevant cognitive effort by the cue source. In explaining the strength of cueing effects, past research typically focuses on subdimensions of source credibility such as perceived expertise, honesty, and attractiveness (Pornpitakpan, 2004; Reinhard & Sporer, 2010). A perception of relevant cognitive effort by the cue source may be an important neglected moderating variable in other cueing contexts beyond agenda setting, at least in situations where a cue is being taken to avoid what is perceived to be substantial cognitive effort. For instance, advice about which move to make in a chess game would not be taken as a relevant cue if the person giving the advice had not so much as glanced at the chess game in question, regardless of his or her skill at chess.

This study has important limitations, particularly in terms of external validity. As with any experimental study using a convenience sample of undergraduates, it is possible that these effect processes are somehow specific to college students. Replicating these results with a more diverse adult sample is an important next step for future research. Another external validity concern is specific to this study’s use of a report summarizing news coverage instead of actual exposure to news coverage. This was what allowed this study to cleanly isolate a pure agenda cue, but this internal validity came at a cost in external validity. Although it may be difficult to replicate a pure cue using actual news coverage as a stimulus, future research could complement this study by using actual news exposure with a manipulation of whether additional agenda reasons are added, thus comparing cues with fewer versus
more agenda reasons. Our model also has the conceptual limitation of not explaining factors that lead to news exposure. In other words, it does not model whether citizens actively seek out agenda influence from media content, although this has important implications for effects and helps explain the moderating role of need for orientation (Wanta, 1997; Weaver, 1977). In terms of our study’s results, this is an additional external validity limitation, as real news exposure is typically sought out by audience members. Note that it is possible to conduct agenda-setting experiments with or without forced exposure to address this limitation (e.g., compare study 1 and study 2 in Bulkow et al., 2012).

Our model also does not explicitly address second-level agenda setting, meaning agenda-setting effects on the relative importance of attributes associated with an issue (Ghanem, 1997; Iyengar, 1997b; Lopez-Escobar, Llamas, & McCombs, 1998), or the “third level” recent work that has been proposed as part of a network approach to agenda setting (Guo, 2012). However, all of the processes outlined in Figure 1 seem conceptually applicable within these additional levels. Specifically, at the second level of effects on the relative importance of attributes associated with an issue, one could conceptually distinguish the influence of an attribute agenda cue, meaning the mere fact of media coverage of certain attributes of the issue, from the influence of attribute agenda reasons, meaning substantive information in the content of stories that supports the importance of that attribute over other attributes. This study has focused only on the first level, and leaves the question of whether the same mechanisms apply beyond the first level for future research.

Cognitive accessibility alone seems unlikely to fully explain agenda-setting effects (Bulkow et al., 2012; Miller, 2007; Miller & Krosnick, 2000; Takeshita, 2006; Tsfati, 2003). However, it seems highly plausible that accessibility would play at least some role in a cognitive step immediately prior to agenda cueing, in which people estimate the recent media agenda using accessibility of memories of recent news coverage of issues as a heuristic. Of course, participants in this study did not have to engage in guesswork about the media agenda because the NCI stimulus provided hard data on it for them. In real-world agenda setting, accessibility seems likely to play a key role in agenda cueing, as a heuristic for estimating the recent media agenda, and perhaps even a fairly accurate one for those with sufficient recent news exposure.

The two explanations of agenda setting we offer may help reconcile opposing perspectives on the normative implications of agenda-setting effects. On one hand, agenda-setting effects are sometimes seen as part of a healthy and necessary process in which citizens improve their preferences by learning about issues beyond their own direct experience, as well as building consensus amongst citizens (McCombs, 1997a). This more positive view is more compatible with the agenda reasoning explanation. Of course reasoning does not guarantee high opinion quality, but it is at least potentially a step in this direction (Pingree, Scholl, & Quenette, 2012; Price, Nir, & Cappella, 2006). On the other hand, agenda-setting effects are also often treated as quite undesirable in that they can lead to systematic neglect of otherwise important problems that lack news values such as conflict or drama (Price & Tewksbury,
1997) or are neglected in elite discourse (Bennett, 1996). This negative view is more compatible with the mechanism of agenda cueing. Thus, our findings that higher gatekeeping trust is associated with agenda cueing and that lower gatekeeping trust is associated with agenda reasoning suggest that gatekeeping trust may be a point of leverage for shifting the mechanism of agenda setting from cueing to reasoning. Media criticism has been shown to be capable of reducing gatekeeping trust without reducing more desirable forms of media trust (Pingree et al., 2013). Taken together with the results of this study, this suggests that by reducing gatekeeping trust, media criticism could result in a public agenda that is more proactive, more stable, and less prone to sensationalism.

**Note**

1 Bulkow et al. use the term “implicit cues” for information indicating problem importance, which we take to be essentially equivalent to agenda reasons. What they call “explicit cues,” the reporter explicitly states that the issue is important (i.e., an agenda cue) instead of providing “implicit” evidence that it is important.

**References**


Hastie, R., & Park, B. (1986). The relationship between memory and judgment depends on whether the judgment task is memory-based or on-line. Psychological Review, 93, 258–268.


**Appendix: Stimulus with cue manipulation bracketed, agenda reasons italicized**

**PEJ NEWS COVERAGE INDEX: MARCH 24–30, 2012**

**Economic Coverage Shifts from [Jobs to Debt/Debt to Jobs]**

The economy remained the top news story this week at a total of 25% of the newshole, but within this topic coverage shifted sharply from [jobs to the national debt/the national debt to jobs]. From March 24 to March 30, [the national debt/unemployment] was the top story with 23% of the newshole, up from 6% the previous week. [The national debt/Unemployment] received only 2% of coverage, falling out of the top five stories after being the No. 4 story in the previous week.
(Four brief paragraphs here mentioning the 2012 presidential campaign as the No. 2 story, health care as the No. 3 story, the Trayvon Martin shooting as No. 4, and the conflict in Syria as No. 5).

**National debt passes a milestone [Entire section only for debt cue condition]**

Media interest in the national debt was driven by the March 26 release of a report from the Congressional Budget Office in which the national debt officially passed the milestone of 100% of GDP. This ratio of government debt to the size of a nation’s economy is seen as a key indicator of a government’s fiscal health. According to the CIA’s 2011 Factbook, only 8 other countries have debt to GDP ratios over 100%, led by Japan with a ratio of 197%. The last time U.S. debt exceeded 100% of GDP was during World War II.

Much of the coverage of the debt milestone this week focused on the question of whether a crisis similar to that faced by the Greek government in 2010 could occur in the United States. When the Greek government’s debt to GDP ratio spiked to over 150% in 2010, interest rates on Greek debt rose dramatically, forcing the government to make drastic cuts in services and to request two separate bailouts. The U.S. government pays an average interest rate just under 3% on the national debt, a lower rate than most other developed countries due to its status as an economic superpower and its control of the world’s dominant currency.

**Unemployment at a turning point**

One reason for the [renewed/reduced] focus on jobs is a March 23 report from the Bureau of Labor Statistics that indicated [an increase/a decrease] in the seasonally adjusted unemployment rate from 8.3% to [8.5%/8.1%]. Analysts were surprised by [this sudden reversal of a 4-month trend/this unusually large month-to-month change], fueling new [fears of a “double-dip” recession unless government takes further action to create jobs/optimism that the economic recovery is developing its own momentum even as stimulus measures are expiring].

[Remainder of this section only for jobs cue condition]

The report also highlighted a historically high proportion of long-term unemployed, defined as those who have been unemployed at least 27 weeks. Forty-five percent of the unemployed were in this category, the highest such figure since 1948 when modern unemployment record keeping began, and likely the highest since the Great Depression.

Having a college degree has provided some protection in past recessions, but surveys of recent college graduates in this recession tell a different story. A Rutgers University study found that among members of the class of 2010, just 56 percent had held at least one job in their first year since graduation. That compares with 90 percent of graduates from the classes of 2006 and 2007. Another study by the job placement firm Adecco found that 60% of 2010 college graduates had not been able to find a full-time job in their chosen profession, and 43% had jobs that did not require a four-year degree.

**About the NCI**

PEJ’s weekly News Coverage Index examines the news agenda of 52 different outlets from five sectors of the media: print, online, network TV, cable, and radio (see
List of Outlets). The weekly study, which includes some 1,000 stories, is designed to provide news consumers, journalists, and researchers with hard data about what stories and topics the media are covering, the trajectories of that media narrative, and differences among news platforms. The percentages are based on “newshole,” or the space devoted to each subject in print and online and time on radio and TV (see Our Methodology).