

**Delegating Importance Judgements to the Press: An Experimental  
Test of the Agenda Cueing Hypothesis in an Online News Aggregator**

Submitted to the 2020 American Political Science Association Annual  
Meeting

Kirill Bryanov

*Social and Cognitive Informatics Laboratory, National Research University – Higher  
School of Economics, Saint Petersburg, Russia*

[kbryanov@hse.ru](mailto:kbryanov@hse.ru)

# **Delegating Importance Judgements to the Press: An Experimental Test of the Agenda Cueing Hypothesis in an Online News Aggregator**

Agenda cueing is a theorized mechanism whereby news consumers form judgements of relative social issue importance as a result of exposure to media coverage. The process is driven by users who mistakenly believe that gatekeepers prioritize problems mainly based on importance to society, and entails taking issue importance cues from the news. Relying on an experimental stimulus simulating an interface of a major news platform, this study puts this hypothesis to test in the context of aggregated digital newsfeed, and tests whether cues coming from different gatekeepers produce varying agenda-setting effects. The analysis reveals that various types of interface agenda cues can influence users' perceptions of issue importance differently. Furthermore, it advances theory by providing empirical evidence for the mediating role of gatekeepers' perceived agendas, with users high in gatekeeping trust proving to be especially susceptible to media agenda cues.

Keywords: agenda setting; agenda cueing; interface cues; digital platforms; news portals; news aggregators; gatekeeping theory; gatekeeping trust.

## **Introduction**

Agenda cues, understood as surface features of news presentation that media consumers can use to form judgements of relative issue importance, have been shown to exert powerful agenda-setting effects in previous experimental studies (Pingree & Stoycheff, 2013; Stoycheff et al., 2018). Importantly, such cues can affect individuals' perceptions of social issues' significance even without exposure to actual news content. These findings can have significant implications not just for the agenda-setting scholarship, but for democratic public discourse writ large. In theory, the agenda-setting function of mass media is central for a system that relies on citizens' shared understanding of the most pressing problems facing society. It is believed that the news is at least capable of directing public attention to the issues of utmost importance, mustering public support

for specific courses of policy action (e. g. Baumgartner & Jones, 2010). However, the reality of agenda-setting is far from an ideal rational process of prioritizing problems. On the supply side, a host of factors underlying formation of news agendas – economic incentives, news values such as timeliness and conflict, interests of political elites, and diverging news preferences of journalists and the public, to name a few – result in mass media prioritizing issues on grounds other than societal importance (Bennett, 1990; Boczkowski & Mitchelstein, 2015; Cook, 1998; Price & Tewksbury, 1997). On the consumer side, news users often misinterpret signals coming from the media – particularly, by taking agenda cues such as the mere frequency of coverage as indication of problem importance – and thus form agendas that are reactive and unstable (Pingree et al., 2013).

Put forth by Pingree and Stoycheff (2013), the agenda cueing hypothesis contributes to the broader agenda-setting theory by specifying one of the mechanisms that underlies formation of the public's issue priorities. The hypothesis postulates that some news consumers tend to delegate judgements of social issues' importance to the press based on superficially perceived news agendas (agenda cueing) rather than engage in a thoughtful consideration of the issues and why they are important (agenda reasoning). This model describes a two-step process whereby agenda cues that individuals encounter first influence their perceptions of what issues are prioritized in news coverage. On the second step, this perceived news agenda informs users' own importance judgements such that individuals become more likely to name the more frequently covered problems as the most important to society. Crucially, the second step of the hypothesized process is moderated by users' belief that journalists systematically prioritize problems based on their importance more than any other criteria – an overly

simplified view of newsmaking practices that Pingree and Stoycheff labelled gatekeeping trust.

Building on this theoretical framework, this study seeks to advance agenda-setting theory in several ways. Firstly, I put the agenda cueing hypothesis to test in a context of an online news aggregator, which is different from previous studies that either explored the influence of generic mainstream media coverage (Pingree & Stoycheff, 2013), or frequency of Twitter posts (Stoycheff et al., 2018), delivered to respondents as experimentally manipulated news/Twitter summary reports. In contrast, I use a novel, newsfeed screenshot-based stimulus that allows users to take up agenda cues from the coverage itself. Secondly, informed by the idea that in today's digital media environments there exist other gatekeepers than just media professionals, I manipulate the source of agenda cues (news media vs. other users) to test whether the agenda-setting effects differ between these two conditions. Finally, whereas previous studies only hypothesized the two-step mechanism where agenda cues initially shape perceived media agenda that in turn influences individuals' own issue importance judgements, the present experiment incorporates tools that allow me to first validate this mediated process empirically.

The results demonstrate that users pick up agenda cues from news aggregator feeds, and that the source of perceived problem prioritizations does make a difference: users high in gatekeeping trust are more susceptible to agenda cues that come from the feed representing news agenda rather than the one labelled as user-curated. With regard to one of the two experimental issues, moderated mediation analysis supports the expectation that agenda cues first shape the impression of media agenda, which then affects perceptions of issue importance in respondents high in gatekeeping trust.

### ***Agenda cueing and dual-process agenda setting***

Early stages of agenda-setting research were marked by little attention to psychological mechanisms underlying formation of issue importance judgements. A dominant presumption, grounded in psychological theories of knowledge activation (e.g. Higgins, 1996), has long been that agenda-setting effects are driven by cognitive accessibility, i.e. exposure to problems' media coverage makes them more easily retrievable from the top of one's mind (Iyengar, 1990; Price & Tewksbury, 1997). As some scholars called for increasing the explanatory capacity of agenda-setting theory (Kosicki, 1993), the more recent wave of investigations addressed the question of psychological mechanisms directly. The role of accessibility as a key causal ingredient of agenda setting effects came into question when evidence emerged that such effects are moderated by media trust (Tsfati, 2003), suggesting that at least some individuals do not just blurt out the problems that are the easiest to recall in response to the survey question, but choose to accept the influence of information sources in a conscious cognitive process (Pingree & Stoycheff, 2013). Furthermore, the findings of a study where cognitive accessibility of relevant objects was actually measured did not support the expectation that it mediates agenda-setting effects (Miller, 2007).

Eventually the agenda-setting scholarship largely departed from viewing cognitive accessibility as the main driving force behind the formation of citizens' issue priority judgements. Most of recent theoretical developments in the field are grounded in the notion that the nature of the process is dual, following the distinction initially laid out by Petty and Cacioppo in their Elaboration Likelihood Model (ELM) of persuasion (Petty & Cacioppo, 1986). Dual-process models that adopt this logic presume that internalization of information from outside sources may occur through one of the two distinct routes: the more cognitively taxing central route, which is associated with

thoughtful processing and deliberation, and the peripheral route, which is geared toward making quick and efficient decisions using minimal cognitive resources. Peripheral processing often invokes various heuristics that help individuals sort information according to simple, pre-stored rules of thumb.

In the field of agenda-setting research, Takeshita (2006) was among the first to argue that people's responses to the most important issue question can be driven by distinct processes: either cognitive accessibility or systematically reasoned opinion that a certain issue is socially important. Takeshita's model makes a distinction between the automatic, low-effort process that he calls "pseudo" agenda setting, and the "genuine" agenda setting, construed as an effortful process that involves central processing of considerations related to problem importance. Still, Takeshita retains cognitive accessibility as the mechanism driving the "pseudo" agenda setting process. A dual-process model of agenda setting developed by Bulkow and colleagues (2012) abandons the cognitive accessibility mechanism altogether and instead centers on individuals' personal involvement with the issue. They find that greater involvement predicts reading an increased number of articles on the issue and processing the information centrally, while lower involvement is associated with diminished attention to the articles on the topic and higher susceptibility to presentation cues such as frequency of coverage.

Based on these theoretical advancements, Raymond Pingree and Elizabeth Stoycheff have developed a dual-process agenda-setting model where the systematic process is labelled agenda reasoning and heuristic process, agenda cueing (Pingree & Stoycheff, 2013). Agenda reasoning represents a cognitively effortful, central-route process whereby individuals get exposed to the actual content of media coverage and discover substantive reasons for why a certain issue is societally important. On the

peripheral side, agenda cueing, similar to the models that feature accessibility heuristic, is grounded in the notion that the answer to the most important problem survey question is constructed at the moment of giving a response. The crucial difference from the accessibility-based processes here is that, rather than simply resorting to whatever issue comes to mind first, respondents use what they recall to be on the news agenda as a substitute for their own issue importance judgements. This route does not presume active engagement with news content: individuals can pick up agenda cues from superficial characteristics of news coverage such as frequency of headlines referencing certain topics, which can be inferred from simply scrolling through the newsfeed.

Stoycheff, Pingree, Peifer, and Sui (2018) extended this line of research into the realm of social media. They tested the effects of perceived social media agenda, cued using a Twitter summary report, alongside the effects of the news media agenda. The researchers found evidence that telling respondents that an issue is frequently discussed on Twitter increases their likelihood to name it as important, even though the effect is smaller compared to a similar cue attributed to news media. The existence of these effects and the difference in their magnitude suggests that news users' issue importance judgements are malleable to agenda cues coming from a variety of gatekeepers, and that the perceived agency behind the cues does matter. This warrants further experimental exploration of agenda cueing effects in digital multi-source media environments, where news platforms' interface features allow for cueing diverse logics of content prioritization and presentation.

### ***The role of gatekeeping trust in agenda cueing***

The agenda cueing hypothesis has roots in previous work that found evidence for the moderating role of media trust in agenda-setting processes (Tsftati, 2003; Miller & Krosnick, 2000). This line of reasoning maintains that the more individuals trust the

media, the more likely they are to accept their agenda as a reflection of the issues important to the nation. Pingree and Stoycheff (2013) put to test an intuition that it is not the generic media trust that underlies this relationship, but a more specialized set of beliefs, which they labelled gatekeeping trust. This construct captures the extent to which media consumers believe that news organizations tend to prioritize the issues that are important to the society in their coverage, and that these prioritizations reflect news professionals' importance-based judgements rather than more pragmatic considerations. Individuals with higher levels of this belief were found to be influenced more by agenda cues from news media than their low-gatekeeping trust peers. This construct, however, is different from general media trust: it is possible to view mass media positively while being skeptical of their ability to always prioritize the most important issues of the day. In Pingree and Stoycheff's experiment, the measure of gatekeeping trust was validated as distinct, as it moderated agenda cueing effects and general media trust did not.

### ***Social gatekeeping trust***

In today's digital news environments, news media professionals are not the only actors to exercise gatekeeping power. Aggregated newsfeeds where a significant portion of the digital audience encounters media content are also curated by members of their social networks, users who comment and "like" articles on news websites, and recommendation algorithms (Thorson & Wells, 2016). The amount of attention and salience that these gatekeepers afford to certain topics could also indicate a coherent agenda and serve as a perceived manifestation of collective judgements of issue importance. If users of online news are susceptible to these bandwagon agenda cues, their effects should be moderated by the belief that the source of the cue has done the requisite cognitive work. Following this logic, Stoycheff and colleagues (2018) introduced the concept of social media gatekeeping trust in a study that examined the



effects of both media agenda and user agenda (inferred from Twitter) on respondents' perceptions of relative issue importance. Similarly to gatekeeping trust, this new construct was intended to capture the extent to which individuals believe that social media users prioritize issues based on their importance.

Stoycheff et al.'s experiment failed to produce evidence for the moderating role of social media gatekeeping trust for any of the six issues examined. Yet, the authors admitted that this result should be considered as highly tentative, since the way they operationalized the concept was just one of many possible options. The lack of the moderating effect could also be specific to the social network they used and the format of the stimulus: a Twitter coverage summary report. In this study, I use a modified version of social gatekeeping trust that taps into the respondents' perception of the "wisdom of the crowd" as the source of the cue. It is also not confined to a single platform or social media at large, but instead relates to all users of online news as a gatekeeping authority.

### ***Studying agenda cueing in multi-source media environments***

In both agenda cueing experimental studies to date, researchers relied on a highly specific treatment: made-up reports summarizing previous week's news coverage and presenting either the percentage of stories dedicated to each issue (Pingree & Stoycheff, 2013) or rank-ordered list of the most covered topics, with the issues purported to have dominated the media agenda coming first (Stoycheff et al., 2018). Had the actual news been available to participants, they could have engaged in systematic processing of agenda reasons, thus diluting the effect of agenda cueing manipulation. Such stimuli provide a robust operationalization of the concept of agenda cue, and for the purposes of experimentally testing agenda cueing hypotheses it is irrelevant whether perceptions of media agenda are derived from exposure to media or a summary report.

Advancement of agenda cueing theory requires more externally valid tests of the actual forms that real-life cues can take. We have to demonstrate that agenda cue uptake occurs in a situation of users' exposure to a realistic news environment, while minimizing exposure to agenda reasons. The word "minimizing" here is no coincidence: in real-life news setting, users' complete isolation from substantive agenda reasons is impossible because their bits are always present in news headlines and blurbs. The present study seeks to complement the existing theory with empirical evidence generated from a test that combines a realistic experimental stimulus with users' minimal exposure to substantive coverage of issues.

### ***The role of interface cues***

Scholars of computer-mediated communication have long pointed out that certain features of website interfaces that accompany online messages can affect users' expectations and perceptions of the content of these messages (Sundar et al., 2015). The MAIN model, short for Modality, Agency, Interactivity, and Navigability, outlines four major categories of interface features (also described as interface cues) that can influence information processing in online media environments (Sundar, 2008). The MAIN model conceptualizes interface cues as website features that activate certain heuristics that individuals rely on when processing information (Bellur & Sundar, 2014). One example is the interface cues that convey other people's collective behaviors toward or perceptions of media content: comments, views, likes, upvotes and downvotes that refer to certain headlines or posts. Sundar and Nass (2001) labelled this type of interface features, arguably the most dominant in online news environments, bandwagon cues.

Past research suggests that bandwagon cues present in digital interfaces exert powerful effects on both attitudinal and behavioral outcomes, such as message

persuasiveness, purchase intention, click likelihood, and selective exposure to the endorsed content (Yang 2016; Messing & Westwood, 2014; Sundar, 2008; Sundar et al., 2008; Xu, 2013; Knobloch-Westerwick et al., 2005). I argue that, by a similar logic, interface cues can contribute to creating a perception that online gatekeepers – either news professionals or other users – regard certain problems as more important than others. For example, if articles on the topic are consistently featured on top of the Most viewed sidebar, it is reasonable to expect that individuals can take it as an indicator of other users thinking of the problem as urgent. In this study, I refer to interface cues that can convey such issue importance prioritizations as agenda cues.

In the context of agenda cueing model, it does matter whose exactly is the perceived agenda that respondents rely on as they think of their own issue prioritization. The evidence of the moderating role of gatekeeping trust indirectly suggests that individuals who are prone to take agenda cues are aware of where the cues come from. Based on the theoretical advancements in computer-mediated communication literature, one can reasonably expect that respective website interface features will allow users to differentiate between various entities behind the newsfeed's curation, and update their issue importance judgements according to the level of gatekeeping trust attributed to each of these actors. In order to test this expectation, in this study agenda cues presented in a news portal feed were attributed to either news media or peer users.

### ***Logics of recommendation***

Given almost limitless opportunities for website designers to create features that convey any kind of additional information about the content present in the feed, it is possible to envision an interface element explicitly indicating that certain news stories were selected on the grounds of their perceived importance. Indeed, news portals often include areas designated for featured stories, marked as “trending” or “most popular.” A

feasible version of this affordance could be the one presenting some stories as specifically recommended as important, i.e. highlighting that the selection of news items is the result of someone's conscious prioritization. If such a feature proves to be more effective in influencing individuals' problem importance perceptions than a non-specific agenda cue, there might be room for strategically designing news website interfaces so as to facilitate news consumers forming more robust and reasoned issue agendas. This effect would be achieved by members of the public following explicit agenda cues originating from other news media consumers who are willing to make and share circumspect issue importance judgements. The present study tests the effect of an interface cue that explicitly points to the fact that the articles are prioritized based on importance.

The following hypotheses summarize expectations generated from the review above:

H1: Agenda cues emphasizing a social issue and attributed to a) news media; b) other users, in the form of a popularity indicator; c) other users, in a form of importance-based recommendation, increase perceived importance of the cued issue compared to the absence of this problem from the coverage;

H2: Agenda cues attributed to news media produce a greater increase in perceived importance of the cued issue among individuals with high gatekeeping trust compared to those with low gatekeeping trust;

H3: Agenda cues attributed to other users produce a greater increase in perceived importance of the cued issue among individuals with high social gatekeeping trust compared to those with low social gatekeeping trust;

RQ1: Do gatekeepers' perceived agendas mediate the effect of agenda cues on perceived importance of the cued issue?

## **Methods**

The study was designed as a fully factorial, between-subjects experiment with a pre-test and post-test. Its design was preregistered with the Center for Open Science (Bryanov, 2019). In the pretest, participants responded to a battery of demographic questions and series of items measuring the two versions of gatekeeping trust (general and social, see appendix for details) and general media trust. In addition, they were presented with a closed-ended list of twenty national problems and prompted to indicate on a 1-7 scale how important they thought each problem was. Respondents were then randomly assigned to one of six experimental conditions enacted by the following design: 2 (Social issue cued: Abortion / Drugs) X 3 (Source of agenda cue: Top stories / Most viewed / Recommended).

In order to address the questions at the center of this study, I employed a convenience sample (initial N=1026) of US-based respondents, recruited through Amazon Mechanical Turk crowdsourcing platform. Participants were paid \$1 for participating in the study. After dismissing cases with excessively patterned responses and those who didn't provide a meaningful answer to the open-ended question measuring the focal outcome, I arrived at my final N=785. Treating the MIP non-respondents as dropouts, I conducted attrition analyses by estimating a logistic regression model to test whether any of the key demographic characteristics, experimental treatments, or interactions between these two types of predictors were associated with a greater chance of failure to provide a meaningful MIP response. The analysis revealed that none of these factors or their interactions predicted dropout.

## ***Stimuli***

This study was designed to improve on external validity of past agenda cueing investigations by using a novel experimental stimulus that consisted of a series of static

screenshots simulating an aggregated newsfeed. Because it resembled a snapshot of a real-life newsfeed with story headlines, source titles, and attendant presentation cues, such stimulus could convey the frequency of problems' coverage, the agency behind the feed's curation, as well as the logic of headlines' selection. At the same time, the headlines were not clickable and they did not allow respondents to proceed to reading the actual articles and learn agenda reasons that they likely contained.

To render the experimental treatment as realistic as possible, I used screenshots that closely resembled the newsfeed of Google News, one of the most trafficked news aggregators globally. The logo on top of every page, as well as the general interface layout, major interface elements and fonts were identical to those used by Google News at the time of the experiment. Each participant saw three consecutive screenshots from three different days that each delivered the same social issue presence manipulation. On top of each newsfeed screenshot, respondents saw a prompt reading: "Screenshot of Google News from [date]. Please click on headlines to mark which stories you would have chosen to read. You can choose up to 5 headlines." The task was designed both to obscure the main goal of estimating agenda-setting effects, and as a means of focusing users' attention on the newsfeed content.

A label on top of each screenshot read either "Top Stories," "Most viewed" or "Recommended," consistent between three consecutive screenshots in each cue source condition. The annotation in smaller print under the Recommended label read, "Recommended by portal users as important." In the Top Stories label condition, the gatekeeping authority is ascribed to Google News' ranking algorithm, which also reflects aggregated decisions of mainstream media professionals. Because Google is a dominant player in online information search market, the Top Stories section of its news

service can be considered a reliable representation of what the news media are talking about generally.

Every screenshot contained eight news items, each represented by a headline, thumbnail illustration, and source label. The articles were real recent news items drawn from Google News' Top Stories section, and covered a variety of topics. In all three screenshots, stories about the experimental problem were featured in prominent positions multiple times: In screenshot 1 of every experimental condition, stories on either abortion or drugs were seen as #1 and #4; in screenshot 2, treatment stories occupied spots #2, #5, and #6; in screenshot 3, a treatment news item was in spot #3. Between the two emphasized problem conditions, the stories about the experimental issue were featured in the exact same spots in the newsfeed, and the filler stories (those not related to the experimental problem) remained identical. In each social problem condition, there were no stories on the other experimental issue featured anywhere in the feed. A sample stimulus screenshot can be found in appendix.

## **Measures**

### ***Dependent variable: perceived issue importance***

The main outcome of interest – perceived importance of focal issues – was measured using an open-ended question borrowed from Stoycheff and colleagues (2018): “What do you think are the most important problems facing the nation? Please list them in order of importance, starting with the most important problem.”

Each participant's problem importance scores for abortion and drugs were calculated by dividing the problem's inverse position on the respondent's MIP list by the total number of issues that they mentioned. As a result, regardless of the total number of issues named, the problem listed first would always receive the importance score of 1; if a respondent did not mention the issue at all, its importance score is 0; if a

problem was mentioned halfway through the list of several problems, it is coded as 0.50. For instance, if drugs was last in a list of three problems, its importance score would be 0.33; if “opioid crisis” was listed last in a list of five problems, drugs would receive a score of 0.20. Two trained coders first produced the counts of problems mentioned in each MIP response, then generated rankings for each of the focal issues. Reliability was acceptable on all four items, with Krippendorff’s alpha ranging from 0.72 to 0.91.

Gatekeeping trust (Cronbach’s  $\alpha=0.89$ ,  $M=4.45$ ,  $SD=1.38$ ) was adapted from Pingree and Stoycheff (2013) and included items like, “News outlets choose which stories to cover by carefully deciding which issues or problems are the most important in society,” measured on a 1-7 Likert-type scale. Social gatekeeping trust (Cronbach’s  $\alpha=0.84$ ,  $M=4.76$ ,  $SD=1.24$ ) followed a similar logic that Stoycheff et al. (2018) used in adapting the original gatekeeping trust measure to the context of social media. However, in contrast to their social media gatekeeping trust construct, social gatekeeping trust measured in this study is not limited to users of platforms such as Twitter or Facebook, but rather is intended to tap into the perceptions of the gatekeeping capacity of online news users at large (e. g. “You can trust that when there is a problem in society that is really urgent and important, people will pay a great deal of attention to it online”). As in previous agenda cueing studies, I also included a measure of general media trust (Cronbach’s  $\alpha=0.95$ ,  $M=4.11$ ,  $SD=1.62$ ) to test whether the effects of gatekeeping trust are distinct from those of the general construct capturing individuals’ trust in mainstream media. Items included in gatekeeping, social gatekeeping, and general media trust scales can be found in appendix.

In order to enable within-subject comparisons between before and after exposure to the treatment, as well as to have a covariate in models estimating agenda-setting



effects, in the pre-test I presented respondents with a closed-ended list of 20 problems drawn from the Gallup December 2019 Most Important Problem Survey, shown in a randomized order, and asked them to rate the importance of each issue on a 1 to 7 scale ranging from “Not very important” to “Extremely important.” (Gallup, Inc. n.d.). Abortion and drugs, the problems used in the experimental treatment, were included among other issues.

### ***Theorized mediators: Perceived agendas***

Since the agenda cueing hypothesis predicts that some news consumers will base their problem importance judgements on what they think the media prioritized in their coverage, it is critical to establish that the experimental manipulation of various issues’ prominence in portal newsfeed resulted in perceptions of gatekeepers’ heightened attention to these issues. I measured perceptions related to news media agenda and user agenda separately. In the post-test, respondents were asked to answer a battery of four questions about the two focal problems. For each issue, participants were asked to indicate their level of agreement with the following statements: “News media covered [experimental issue] a lot recently;” “Journalists think that [experimental issue] is an important issue in society;” “People on the internet have been paying a lot of attention to [experimental issue] lately;” “People on the internet think that [experimental issue] is an important issue in society.”

### **Results**

I begin with describing the data on the main outcome of interest: perception of the importance of the focal issues. Mean values and standard deviations are summarized in Table 1. Respondents perceived abortion as a somewhat more important problem than drugs, when averaging across all experimental conditions. More importantly, when the scores were recoded as the importance of the issue emphasized or deemphasized by the

treatment for a particular respondent, the difference between mean importance score of the emphasized issues and deemphasized issues was in the expected direction and significant using a paired-samples t-test,  $t(784) = 3.95$ ,  $p < 0.001$ .

Table 1. Descriptive statistics of outcome variables and sample demographics.

|                                      |               |
|--------------------------------------|---------------|
| Variables                            |               |
| Importance of abortion               | 0.052 (0.191) |
| Importance of drugs                  | 0.039 (0.162) |
| Importance of the emphasized issue   | 0.065 (0.212) |
| Importance of the deemphasized issue | 0.025 (0.132) |
| Demographics                         |               |
| Age (median)                         | 33            |
| Male                                 | 57%           |
| Democrats                            | 48%           |
| College degree                       | 56%           |
| Caucasian                            | 76%           |

Note: All variables are means with standard deviations in parentheses.

This preliminary analysis suggests that the experimental treatment succeeded in eliciting higher perceived importance of the problems emphasized in the main portal newsfeed. It has to be noted that this is not yet a hypothesis test, since it does not differentiate between different cue sources and merely captures the averaged effect of exposure to the portal across all cue source conditions.

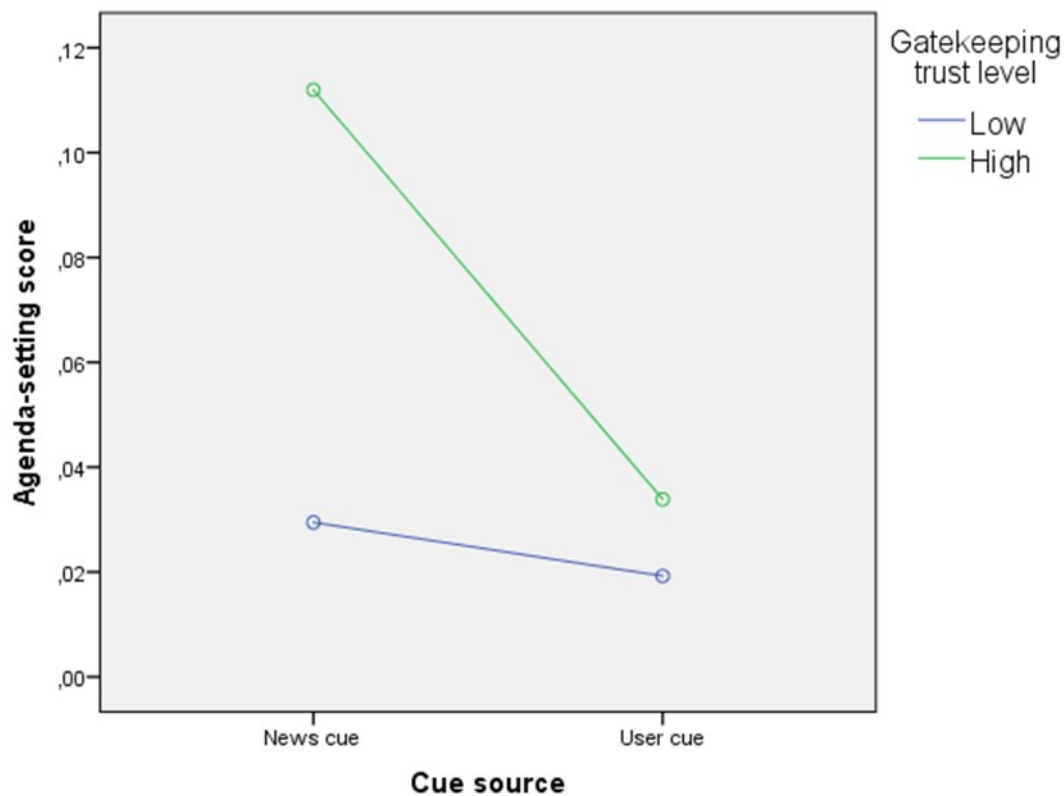
### ***Testing differential effects of cues***

In order to address H1, H2, and H3, I estimated an ANCOVA model with all experimental factors (Social issue presence; Source of agenda cue) entered as main effects, cue source factor's interactions with hypothesized moderators (dichotomized gatekeeping trust and dichotomized social gatekeeping trust), general media trust as a covariate, and the agenda-setting effect (difference between importance scores of the emphasized and deemphasized issues) as an outcome variable. The initial model yielded a one-way significant main effect for source of agenda cue,  $F(2, 773) = 2.97$ , one-tailed  $p = 0.026$ , partial  $\eta^2 = 0.008$ , such that participants in the Top stories condition reported higher agenda-setting effect scores ( $M = 0.072$ ,  $SE = 0.015$ ) than their peers in both

user-sourced conditions: Most viewed ( $M = 0.028$ ,  $SE = 0.016$ ) and Recommended ( $M = 0.026$ ;  $SE = 0.016$ ). Because the mean outcomes for both user cue conditions were nearly identical, and there was no difference between these two cue types across levels of gatekeeping trust and social gatekeeping trust, I collapsed them together to produce a two-level cue source factor (Top stories/User-sourced), which I used in all subsequent statistical analyses.

A similar ANCOVA model specified to include a two-level cue source variable yielded a significant main effect for that factor,  $F(1, 776) = 5.92$ ,  $p = 0.015$ , partial  $\eta^2 = 0.008$ , such that respondents in the news agenda (Top stories) cue condition reported significantly higher importance scores ( $M = 0.072$ ,  $SE = 0.015$ ) than did respondents in the combined user-sourced cue condition ( $M = 0.027$ ,  $SE = 0.011$ ). Controlling for general media trust, an interaction between the cue source factor and dichotomized measure of gatekeeping trust was significant,  $F(1, 776) = 2.76$ , one-tailed  $p = 0.048$ , partial  $\eta^2 = 0.004$ . Post-hoc Bonferroni comparisons revealed that inside this interaction one group was significantly different from all others: users in the news cue condition who are high in gatekeeping trust. While agenda-setting scores reported by participants in the user-sourced cue condition who were both low ( $M = 0.019$ ,  $SE = 0.016$ ) and high in gatekeeping trust ( $M = 0.034$ ,  $SE = 0.020$ ), as well as by participants in the news cue condition who were low in gatekeeping trust ( $M = 0.030$ ,  $SE = 0.021$ ) were statistically indistinguishable from each other, users who were exposed to the Top news feed and scored high in gatekeeping trust were significantly more likely than any other group to name the emphasized issue as important ( $M = 0.114$ ,  $SE = 0.024$ ). These differences are visualized in Figure 1.

Figure 1. Interaction between Cue source and Gatekeeping trust on agenda setting effect.



The data did not support my expectation that social gatekeeping trust moderates the agenda cueing effects for users in user-sourced cue condition, as the interaction between cue source and dichotomized social gatekeeping trust was not significant,  $F(1, 776) = 0.332$ ,  $p = 0.56$ , partial  $\eta^2 = 0.000$ .

### ***Mediation analyses***

The agenda cueing hypothesis posits that some news consumers consciously accept what they perceive to be prominently covered by the news media as an indicator of what journalists and editors deem to be important, and, by extension, what is actually important to society. This study incorporated post-test survey items that allow me to test this mechanism empirically. As a first step in this analysis, I used responses to questions designed to gauge participants' perceptions of how much attention either news media or people online have recently paid to the experimental issues, and how important these gatekeepers think these problems are. First, I investigated whether the main treatment –

emphasizing a problem in the portal newsfeed – had an effect on these four potential mediators in the agenda cueing process. My analyses revealed that the experimental treatment significantly increased the means of all four outcomes: perceptions of the amount of attention allocated to the problem by news media and social gatekeepers, as well as perceived importance ascribed to the problem by these gatekeepers.

Next, I tested whether cues meant to represent the agenda of either mainstream news or portal users succeeded in influencing respondents' perceptions of these gatekeepers' respective agendas. The data suggested that interface cues meant to convey different agencies behind the newsfeed's curation were only partly successful in producing differential effects on perceived agendas: while the news agenda cue heightened perceived importance that journalists ascribe to the emphasized issue, user-sourced cues did not have an expected effect on perceived user agenda (for details, see appendix).

Having established that emphasizing the problem in the portal newsfeed results in a significant increase in both the issue importance perceived by users and their perceptions of the importance ascribed to the issue by media professionals, I can empirically test the central tenet of the agenda cueing hypothesis: the two-step process whereby the effect of exposure to news on users' issue importance is mediated by perceived gatekeepers' agendas and importance judgements. More specifically, the agenda cueing model predicts that the second step of the process, whereby perceptions of gatekeepers' agenda inform users' own responses to the most important problem question, is moderated by gatekeeping trust.

To conduct moderated mediation analysis, I relied on the PROCESS macro developed by Hayes, which uses OLS regression-based path analysis to estimate a range of conditional process models. This tool performs bootstrapping, whereby it runs

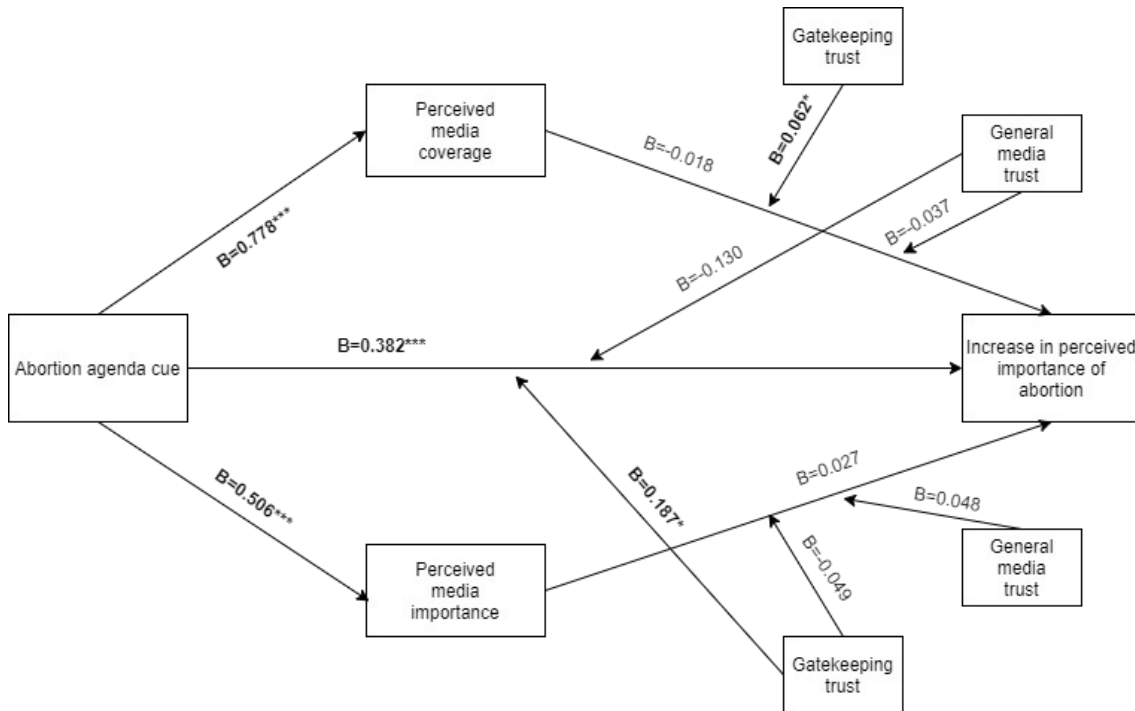
sampling with replacement on the original dataset, creating a large sample from which it calculates confidence intervals for indirect effects of interest (Hayes, 2013).

I estimated two identical moderated mediation models, separately for the issues of abortion and drugs. In each model, I used the change in perceptions of the target problem's importance from pre-test to post-test, calculated as a difference in the standardized values of these two measures, as the outcome variable. The dichotomous experimental issue factor (the presence of abortion/drugs agenda cue) was entered as the independent variable, while two potential mediators were tested simultaneously: perceived intensity of the problem's coverage by news media and perceived importance that news professionals ascribe to the problem. Finally, I included two potential moderators, gatekeeping trust and general media trust, to assess their effect on the path between each potential mediator and the outcome variable, as well as the possibility that they could moderate the direct path from treatment to the outcome. The models did not differentiate between different sources of agenda cues, rather focusing on the general process whereby exposure to the portal resulted in the change of the participants' issue importance judgements.

The model with the change in perceived importance of abortion as the outcome was significant,  $F(11, 771) = 3.246$ ,  $p < 0.001$ , and explained 4.4 percent of the overall variance in the dependent variable. Individual effects are visualized in Figure 2. Controlling for mediated effects, a significant direct effect of the treatment on the outcome variable was revealed,  $B = -0.382$ ,  $t = -4.064$ ,  $p < 0.001$ , along with significant effects of the treatment on both potential mediators. In the second step of the mediation process, although perceived media coverage and perceived media importance did not have a direct effect on the outcome variable, the analysis revealed a significant

interaction effect between perceived media coverage and gatekeeping trust, 95% confidence interval (CI) = -0.1212 to -0.0029,  $p = 0.04$ .

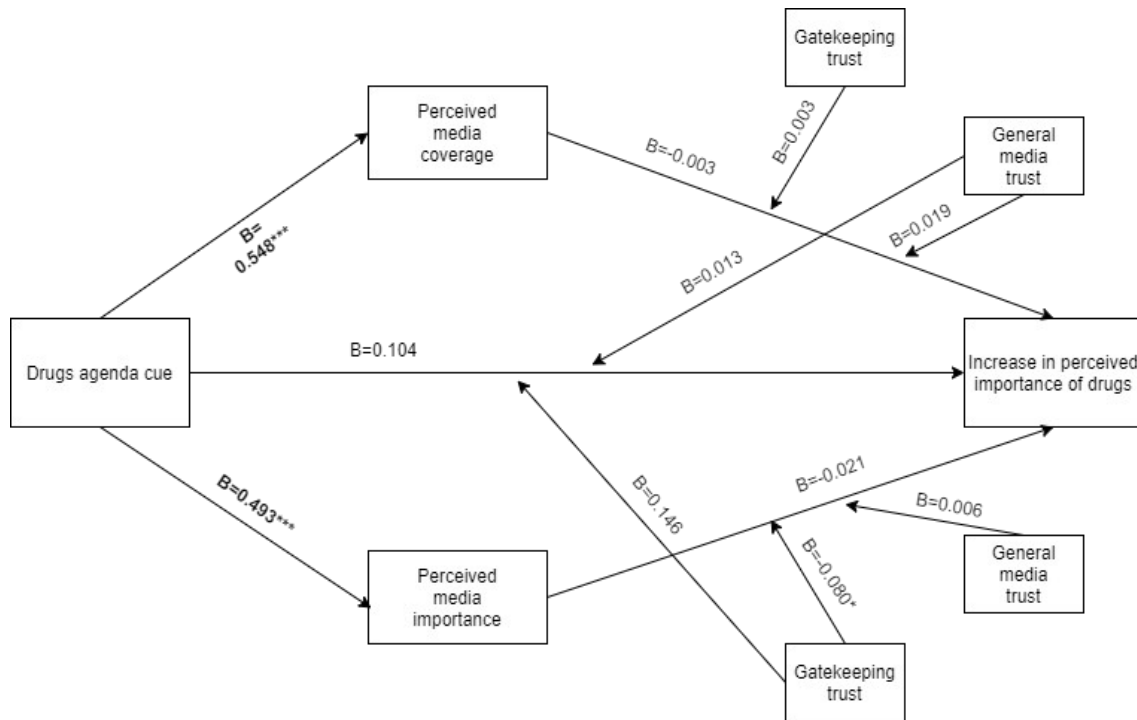
Figure 2. Moderated mediation model, outcome variable: Change in perceived importance of abortion.



Note:  $p < .05$  \*,  $p < .01$  \*\*,  $p < .001$  \*\*\*. Model constructed following a bootstrapping procedure with 10000 iterations. Overall model:  $F(11, 771) = 3.246$ ,  $p < 0.001$ ,  $R^2 = 0.044$ .

Such effect was not observed in the case of the interaction between perceived media importance and gatekeeping trust, as its 95% confidence interval included zero:  $CI = -0.0089$  to  $0.1075$ . Thus, only perceived media coverage was revealed to be a significant mediator in this process, with gatekeeping trust moderating its effect on the outcome variable. Gatekeeping trust also moderated the direct effect of the experimental treatment on the dependent variable,  $CI = -0.3698$  to  $-0.0036$ . Of note, general media trust did not significantly moderate any of the direct or indirect effects in the model, supporting the notion that gatekeeping trust operates separately from the more general construct.

Figure 3. Moderated mediation model, outcome variable: Change in perceived importance of drugs.



Note:  $p < .05$  \*,  $p < .01$  \*\*,  $p < .001$  \*\*\*. Model constructed following a bootstrapping procedure with 10000 iterations. Overall model:  $F(11, 769) = 3.898$ ,  $p < 0.001$ ,  $R^2 = 0.053$ .

The model with the change in perceived importance of drugs as the outcome is visualized in Figure 3. Overall, the model was significant,  $F(11, 769) = 3.898$ , and explained 5.3 percent of variance in the dependent variable. The analysis yielded no significant direct effect of the treatment on the outcome variable,  $B = 0.104$ ,  $t = 1.088$ ,  $p = 0.2770$ . Although the treatment succeeded in significantly affecting both potential mediators, the expectation that in the second step of the mediation process these variables would predict the change in perceived importance of drugs was not supported by the data. No significant interactions of these potential mediators with either gatekeeping trust or general media trust that theory would lead me to expect were revealed.



## **Discussion**

This study set out to test the agenda cueing hypothesis in the context of a news aggregating portal, while using a realistic experimental treatment enhancing the external validity of the test. The data supported my expectation that, when the agenda cue is present in the portal newsfeed, users' perceived importance of the cued problem increases. Consistent with theory, the treatment also successfully influenced respondents' perceptions of how often news media cover the problem of interest, as well as of how important news professionals think the problem is to society for both of the cued issues. While previous research only theorized that agenda cueing is mediated by gatekeepers' perceived agendas, the present study is the first to generate empirical evidence supporting this presumption. Consistent with existing agenda cueing scholarship, gatekeeping trust moderated this mediation effect.

In the case of the emphasized problem of abortion, the analysis revealed both a mediated effect of the treatment on issue importance judgements through perceived media agenda and the direct effect of the treatment that remains there even controlling for the mediated effects. This direct influence can be viewed as being produced by all other agenda-setting processes resulting from news portal exposure other than agenda cueing, including but not confined to cognitive accessibility.

The central hypothesis of the study was informed by the expectation that users' perceptions of different gatekeepers behind the newsfeed's curation can exert varying agenda-setting effects. The experiment pitted the aggregated mainstream news media, whose agenda prioritizations manifested in the portal's Top Stories selection, against portal users as the source of agenda cues. The results of empirical analyses supported the hypothesized differential effects of cues coming from different curatorial actors, lending further credence to the idea that the process of agenda cueing entails conscious

delegation of problem importance judgements to an authoritative gatekeeper. The finding that the increase in the agenda-setting efficiency of the news agenda cue is primarily driven by users high in gatekeeping trust can also be viewed as evidence in support of the agenda cueing hypothesis, which predicts that this effect is concentrated among those who trust news media to prioritize the most important issues of the day in their coverage.

Two contextual factors could also be at play to make the newsfeed labelled as Top Stories significantly more efficient in influencing respondents' problem importance perceptions as a result of exposure to a simulated Google News interface. One is that major news aggregating websites, and Google News in particular, are known to be online spaces that host high-quality journalistic content. Users' expectations of the kind of information they can encounter on the Google News platform is likely those of the most high-profile news stories of the day, produced by the most reputable publishers and reliably and "objectively" selected by Google's algorithm. The Top Stories label provides a cue that the content presented in the feed is consistent with these expectations. In contrast, both user-sourced cues are representative of the mode of curation that is largely peripheral in the context that the experiment is simulating. Secondly, while the Top Stories is a real feature of Google News that users could have encountered previously, the affordances indicating most viewed and recommended headlines have not been featured on this particular website before and therefore might be perceived as unfamiliar. Both of these factors could lead to increased credibility of the Top Stories newsfeed compared to newsfeeds with user-sourced cues, which would in turn make it more likely that users adopt the information presented under the Top Stories label.

My conclusion that mainstream news media has been the most influential gatekeeper in the context of a news portal feed rests on the assumption that users treated Google News' Top Stories section as a reliable representation of what the news talked about. Google News is a news aggregating service provided by a single most dominant player in the information search industry. As such, it is the entity whose logo is arguably the most suitable to be put on top of an experimental newsfeed that attempts to look like the most reliable representation of the aggregate mainstream news agenda. Still, there remains a possibility that some of the resulting agenda-setting effect could be explained by the attitudes that users have toward the delivery platform rather than publishers. Future studies could further advance the theory by incorporating tests to discern users' the credibility and trust to either mainstream media or the news platforms' sponsors (Flanagin & Metzger, 2007; Westerwick, 2013).

Addressing H1b and H1c, the effects produced by both variations of user-sourced agenda cue were not different from one another, but were significantly smaller than the agenda-setting effect of the media-sourced cue. This does not mean that newsfeeds labelled as user-curated did not have any influence on individuals' issue importance perceptions – yet, their effect was not discernible from the overall effect of exposure to the portal, and therefore I cannot claim that the observed process is agenda cueing. As mediation analyses revealed, the user cue manipulation fell short of moving participants' perception of the portal users' agenda and importance judgements to a greater extent than did the news agenda cue. One possible explanation for this is, again, contextual: users may have not perceived Google News as a platform from where collective behaviors and attitudes of internet users at large could be gauged, even when “bandwagon” interface cues are present. Future research should continue investigating

the comparative effects of agenda cues coming from various gatekeepers with due consideration of the digital platforms' contextual features.

Gatekeeping trust emerged as a significant moderator in the agenda cueing process, supporting Hypothesis 2. Respondents who reported higher levels of the belief that news media prioritize the issues most important to society were more susceptible to the news agenda cue, even controlling for general media trust. This finding further supports the notion that media literacy interventions aimed at reducing citizens' level of gatekeeping trust are needed in order to mitigate some individuals' propensity to uncritically accept media agenda as a reliable representation of the most important social issues (Pingree et al., 2013). As the present study illustrates, this logic remains valid even as the bulk of news consumption migrates to multi-source, digital news environments.

No similar effect was observed in the tests of the role of social gatekeeping trust in the agenda-setting process driven by user-sourced cues. Yet, this is not the definitive negative answer to RQ1. The reason why there was no moderation of agenda cueing from portal users by social gatekeeping trust is not that the construct itself is irrelevant; rather, it is because there was no separate socially driven agenda cueing process to moderate. Social gatekeeping trust is still potentially relevant and should be tested in the context of appropriate newsfeeds, such as Reddit-style news websites with explicit user content ranking affordances or social-first information spaces like Twitter.

The fact that two moderated mediation models (with abortion and drugs as an outcome) produced discrepant results is unsurprising in the light of a long tradition of research that documented the contingency of agenda setting effects. Scholars observed that the media's ability to influence the public's perceptions of relative problem importance depends on a number of both recipient-specific and message-specific

contextual factors, including the problem at hand, the surrounding news agenda, and the baseline perceived importance (Geiß, 2019; Walgrave & Van Aelst, 2006).

Overall, the findings validate the agenda cueing hypothesis but also highlight the multi-faceted nature of agenda setting as a process that can be driven by multiple psychological mechanisms for different individuals even when all aspects of the message are held constant. Agenda cueing does occur in the context of aggregated newsfeeds, and at least some individuals are perceptive to variation in the source of agenda cues, indicating a promising research avenue: investigation of various gatekeepers' relative effectiveness in setting public agenda.

## References

- Baumgartner, F. R., & Jones, B. D. (2010). *Agendas and Instability in American Politics, Second Edition*. University of Chicago Press.
- Bellur, S., & Sundar, S. S. (2014). How Can We Tell When a Heuristic Has Been Used? Design and Analysis Strategies for Capturing the Operation of Heuristics. *Communication Methods and Measures*, 8(2), 116–137. <https://doi.org/10.1080/19312458.2014.903390>
- Bennett, W. L. (1990). Toward a Theory of Press-State Relations in the United States. *Journal of Communication*, 40(2), 103–127. <https://doi.org/10.1111/j.1460-2466.1990.tb02265.x>
- Boczkowski, P. J., & Mitchelstein, E. (2015). *The News Gap: When the Information Preferences of the Media and the Public Diverge* (Reprint edition). The MIT Press.
- Bryanov, K. (2019). Agenda cueing in online newsfeeds. Retrieved from [osf.io/e3wkb](https://osf.io/e3wkb)
- Bulkow, K., Urban, J., & Schweiger, W. (2013). The Duality of Agenda-Setting: The Role of Information Processing. *International Journal of Public Opinion Research*, 25(1), 43–63. <https://doi.org/10.1093/ijpor/eds003>
- Cook, T. E. (1998). *Governing with the News: The News Media as a Political Institution*. University of Chicago Press.
- Flanagin, A. J., & Metzger, M. J. (2007). The role of site features, user attributes, and information verification behaviors on the perceived credibility of web-based information. *New Media & Society*, 9(2), 319–342. <https://doi.org/10.1177/1461444807075015>
- Gallup, Inc. (n.d.). Most Important Problem | Gallup Historical Trends. Retrieved January 3, 2020, from <https://news.gallup.com/poll/1675/Most-Important-Problem.aspx>
- Geiß, S. (2019). The Media's Conditional Agenda-Setting Power: How Baselines and Spikes of Issue Salience Affect Likelihood and Strength of Agenda-Setting: *Communication Research*. <https://doi.org/10.1177/0093650219874968>
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. The Guilford Press.
- Higgins, E. T. (1996). Activation: Accessibility, and salience. *Social psychology: Handbook of basic principles*, 133-168.
- Iyengar, S. (1990). The accessibility bias in politics: Television news and public opinion. *International Journal of Public Opinion Research*, 2(1), 1-15.
- Knobloch-Westerwick, S., Sharma, N., Hansen, D. L., & Alter, S. (2005). Impact of Popularity Indications on Readers' Selective Exposure to Online News. *Journal*

- of Broadcasting & Electronic Media*, 49(3), 296–313.  
[https://doi.org/10.1207/s15506878jobem4903\\_3](https://doi.org/10.1207/s15506878jobem4903_3)
- Kosicki, G. M. (1993). Problems and Opportunities in Agenda-Setting Research. *Journal of Communication*, 43(2), 100–127. <https://doi.org/10.1111/j.1460-2466.1993.tb01265.x>
- Messing, S., & Westwood, S. J. (2014). Selective exposure in the age of social media: Endorsements trump partisan source affiliation when selecting news online. *Communication research*, 41(8), 1042-1063.
- Miller, J. M. (2007). Examining the Mediators of Agenda Setting: A New Experimental Paradigm Reveals the Role of Emotions. *Political Psychology*, 28(6), 689–717. <https://doi.org/10.1111/j.1467-9221.2007.00600.x>
- Miller, J. M., & Krosnick, J. A. (2000). News Media Impact on the Ingredients of Presidential Evaluations: Politically Knowledgeable Citizens Are Guided by a Trusted Source. *American Journal of Political Science*, 44(2), 301. <https://doi.org/10.2307/2669312>
- Patterned response counter*. (n.d.). Retrieved March 15, 2020, from <http://raymondpingree.com/prc.php>
- Pingree, R. J., Quenette, A. M., Tchernev, J. M., & Dickinson, T. (2013). Effects of Media Criticism on Gatekeeping Trust and Implications for Agenda Setting: Gatekeeping Trust. *Journal of Communication*, 63(2), 351–372. <https://doi.org/10.1111/jcom.12016>
- Pingree, R. J., & Stoycheff, E. (2013). Differentiating Cueing From Reasoning in Agenda-Setting Effects: Agenda Cueing and Reasoning. *Journal of Communication*, 63(5). <https://doi.org/10.1111/jcom.12051>
- Price, V., & Tewksbury, D. (1997). News values and public opinion: A theoretical account of media priming and framing. *Progress in communication sciences*, 173-212.
- Stoycheff, E., Pingree, R. J., Peifer, J. T., & Sui, M. (2018). Agenda Cueing Effects of News and Social Media. *Media Psychology*, 21(2), 182–201. <https://doi.org/10.1080/15213269.2017.1311214>
- Sundar, S. S., & Nass, C. (2001). Conceptualizing sources in online news. *Journal of Communication*, 51(1), 52–72. <https://doi.org/10.1111/j.1460-2466.2001.tb02872.x>
- Sundar, S. S. (2008). The MAIN model: A heuristic approach to understanding technology effects on credibility (pp. 73-100). MacArthur Foundation Digital Media and Learning Initiative.
- Sundar, S. Shyam, Jia, H., Waddell, T. F., & Huang, Y. (2015). Toward a Theory of Interactive Media Effects (TIME). In *The Handbook of the Psychology of Communication Technology* (pp. 47–86). Wiley-Blackwell.

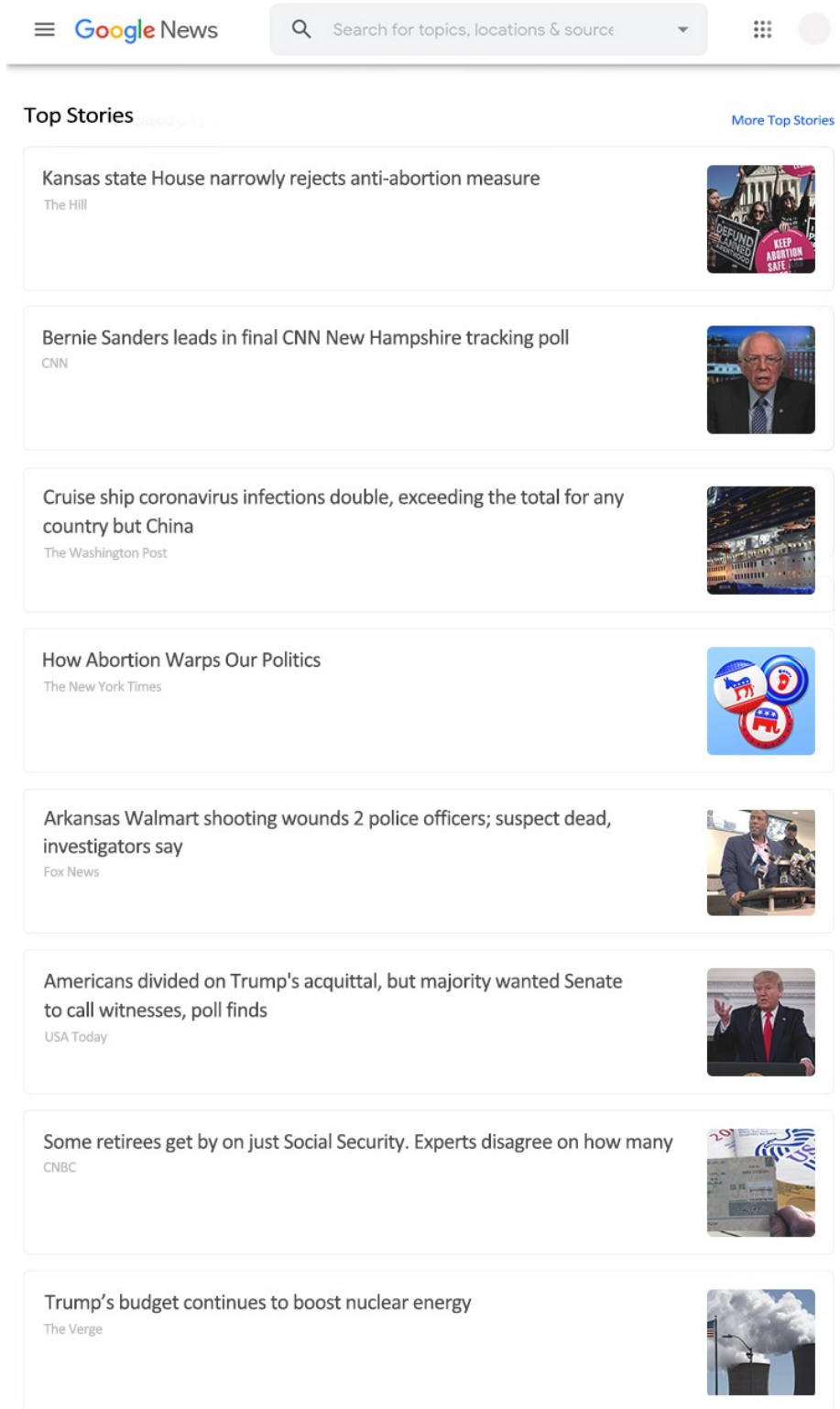
<https://doi.org/10.1002/9781118426456.ch3>

- Sundar, S. Shyam, Oeldorf-Hirsch, A., & Xu, Q. (2008). The Bandwagon Effect of Collaborative Filtering Technology. *CHI '08 Extended Abstracts on Human Factors in Computing Systems*, 3453–3458. <https://doi.org/10.1145/1358628.1358873>
- Takeshita, T. (2006). Current Critical Problems in Agenda-Setting Research. *International Journal of Public Opinion Research*, 18(3), 275–296. <https://doi.org/10.1093/ijpor/edh104>
- Thorson, K., & Wells, C. (2016). Curated Flows: A Framework for Mapping Media Exposure in the Digital Age: Curated Flows. *Communication Theory*, 26(3), 309–328. <https://doi.org/10.1111/comt.12087>
- Tsfati, Y. (2003). Media Skepticism and Climate of Opinion Perception. *International Journal of Public Opinion Research*, 15(1), 65–82. <https://doi.org/10.1093/ijpor/15.1.65>
- Walgrave, S., & Van Aelst, P. (2006). The Contingency of the Mass Media's Political Agenda Setting Power: Toward a Preliminary Theory. *Journal of Communication*, 56(1), 88–109. <https://doi.org/10.1111/j.1460-2466.2006.00005.x>
- Westerwick, A. (2013). Effects of Sponsorship, Web Site Design, and Google Ranking on the Credibility of Online Information. *Journal of Computer-Mediated Communication*, 18(2), 80–97. <https://doi.org/10.1111/jcc4.12006>
- Xu, Q. (2013). Social Recommendation, Source Credibility, and Recency: Effects of News Cues in a Social Bookmarking Website. *Journalism & Mass Communication Quarterly*, 90(4), 757–775. <https://doi.org/10.1177/1077699013503158>
- Yang, J. (2016). Effects of Popularity-Based News Recommendations (“Most-Viewed”) on Users’ Exposure to Online News. *Media Psychology*, 19(2), 243–271. <https://doi.org/10.1080/15213269.2015.1006333>



## Appendix A. Sample stimulus screenshot.

Newsfeed screenshot 1 out of 3, abortion emphasized over drugs, Top Stories agenda cue.



## **Appendix B. Measures and scales.**

### **Gatekeeping trust**

The following items were included: “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.” Responses were measured on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). For the purposes of statistical analysis, a dichotomized gatekeeping trust variable was created, where 0 stood for values below the median of 4.60 and 1 represented the values above the median.

### **Social gatekeeping trust**

Social gatekeeping trust scale used in this study included the following items: “You can trust that when there is a problem in society that is really urgent and important, people will pay a great deal of attention to it online”; “Even when you don’t follow politics and current events, you can trust that others will bring important issues to your attention on the internet”; “When a lot of people read and talk about a political issue online, it means people think that issue is more important than other issues”; and “When people read news on the internet, the problem to which they pay the most attention is usually the one that they think is really serious, urgent, or widespread in society.” Responses were measured on a 7-point scale ranging from 1 (strongly

disagree) to 7 (strongly agree). A dichotomized version of this scale was constructed using its median of 4.75.

#### General media trust

General media trust scale included the following items: “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.” Similarly to gatekeeping trust and social gatekeeping trust, responses were measured on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). A dichotomized version of this scale was constructed using its median of 4.20.

**Appendix C. Modelling the moderated mediation process of agenda cueing:  
Supplementary analyses.**

***The effects of emphasizing problems in portal newsfeed on four potential mediators  
of agenda cueing process.***

I ran two sets of ANOVA models, separately for each emphasized issue, abortion and drugs. Each model had one of the four outcomes of interest as a dependent variable, with all experimental factors entered as independent variables. The results are summarized in the table below.

Factorial Between-Subjects Models  
Independent Variable: Issue emphasized in general newsfeed

| <b>Dependent Variable</b>   | <b>df, residual</b> | <b>F</b> | <b>p</b> | <b>partial <math>\eta^2</math></b> |
|---|---------------------|----------|----------|------------------------------------|
| Perceived recent coverage of abortion by media                          | 1, 980              | 39.50    | ***      | 0.039                              |
| Perceived importance of abortion among journalists                      | 1, 978              | 20.83    | ***      | 0.021                              |
| Perceived attention recently paid to abortion by people on the internet | 1, 977              | 19.42    | ***      | 0.019                              |
| Perceived importance of abortion among people on the internet           | 1, 979              | 23.27    | ***      | 0.023                              |
| Perceived recent coverage of drugs by media                             | 1, 978              | 15.11    | ***      | 0.015                              |
| Perceived importance of drugs among journalists                         | 1, 978              | 11.43    | **       | 0.012                              |
| Perceived attention recently paid to drugs by people on the internet    | 1, 980              | 19.90    | ***      | 0.020                              |
| Perceived importance of drugs among people on the internet              | 1, 975              | 14.67    | ***      | 0.015                              |

Note:  $p < .05$  \*,  $p < .01$  \*\*,  $p < .001$  \*\*\*

***Specialized effects of agency cues on users' perceptions of attention and importance ascribed to issues by various gatekeepers***

If the experimental manipulation of agency behind agenda cues achieved the intended specialized effects, the news media cue should be more effective in influencing respondents' perceptions of the emphasized issue's heightened media coverage and importance assigned to it by journalists, while the user-sourced cue should produce a greater effect on participants' perceptions of the amount of online audiences' attention to the issue, as well as of how important internet users think the problem is.

To estimate these effects, I conducted a series of ANOVAs with perceived media/user agendas and perceived media/user-ascribed emphasized issue importance, and all experimental factors as independent variables, including two-level cue source factor. The results of these tests are summarized in the table below.

**Factorial Between-Subjects Models**

**Independent Variable: Two-level cue source**

| Theorized effective cue source | Dependent Variable  | <i>df</i> , residual | F    | <i>p</i> | partial $\eta^2$ |
|--------------------------------|---|----------------------|------|----------|------------------|
| News                           | Perceived recent coverage of emphasized issue by media                          | 1, 980               | 0.00 | -        | .000             |
| News                           | Perceived importance of emphasized issue among journalists                      | 1, 979               | 3.07 | *        | .003             |
| Users                          | Perceived attention recently paid to emphasized issue by people on the internet | 1, 979               | 0.89 | —        | .001             |
| Users                          | Perceived importance of emphasized issue among people on the internet           | 1, 977               | 2.13 | —        | .002             |

Note:  $p < .05$  \*,  $p < .01$  \*\*,  $p < .001$ \*\*\*, one-way.

The analyses suggested that the only potential agenda cueing mediator significantly influenced by its “specialized” cue is the perceived importance that

journalists ascribe to the emphasized issue, which saw a significantly greater increase in the news cue condition compared to user-sourced cue condition. Yet, a more important finding here is the lack of the user-sourced cues' effect on perceived user agenda. Heightened perceptions of the news coverage intensity and journalist-assigned importance are already baked into the experimental treatment enacted by exposure to the news portal aggregating stories from mainstream media. However, the failure of user-sourced cues to produce heightened perceptions of user-related agenda outcomes suggests that the manipulation did not succeed in creating the intended effect. This also could be the reason why the data did not present evidence for the hypothesized moderation of agenda-setting effects by social gatekeeping trust in user-sourced condition.

## Appendix D. IRB approval

### ACTION ON EXEMPTION APPROVAL REQUEST



TO: Kirill Bryanov  
Mass Communication

FROM: Dennis Landin  
Chair, Institutional Review Board

DATE: February 4, 2020

RE: IRB# E12095

TITLE: User Evaluation of a Multi-Source News Portal

Institutional Review Board  
Dr. Dennis Landin, Chair  
130 David Boyd Hall  
Baton Rouge, LA 70803  
P: 225.578.8892  
F: 225.578.5983  
[irb@lsu.edu](mailto:irb@lsu.edu)  
[lsu.edu/research](http://lsu.edu/research)

New Protocol/Modification/Continuation: New Protocol

Review Date: 2/3/2020

Approved X Disapproved \_\_\_\_\_

Approval Date: 2/3/2020 Approval Expiration Date: 2/2/2023

Exemption Category/Paragraph: 2b

Signed Consent Waived?: Yes

Re-review frequency: Three years

LSU Proposal Number (if applicable):

By: Dennis Landin, Chairman 

#### PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –

##### Continuing approval is **CONDITIONAL** on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects.\*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. **SPECIAL NOTE: When emailing more than one recipient, make sure you use bcc. Approvals will automatically be closed by the IRB on the expiration date unless the PI requests a continuation.**

\* All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.lsu.edu/irb>