



Article

Signaling news outlet trust in a Google Knowledge Panel: A conjoint experiment in Brazil, Germany, and the United States

new media & society

1–24

© The Author(s) 2022

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/14614448221135860

journals.sagepub.com/home/nms



Gina M Masullo 

The University of Texas at Austin, USA

Claudia Wilhelm

University of Vienna, Austria

Taeyoung Lee

The University of Texas at Austin, USA

João Gonçalves 

Erasmus University Rotterdam, The Netherlands

Martin J Riedl 

Natalie J Stroud

The University of Texas at Austin, USA

Abstract

Using data from a conjoint experiment in three countries (Brazil, $n=2038$; Germany, $n=2012$, and the United States, $n=2005$), this study demonstrates that journalistic transparency can cue trust at the level of the entire news outlet—or domain level—using a Google Knowledge Panel that comes up when people search for a news outlet. In Brazil and the United States, two pieces of information in a Knowledge Panel

Corresponding author:

Gina M Masullo, Center for Media Engagement, School of Journalism and Media, The University of Texas at Austin, 300 W. Dean Keeton Street, Austin, TX 78712, USA.

Email: Gina.Masullo@austin.utexas.edu

provided the strongest heuristics that a news outlet was trustworthy: a *description of the news outlet* and a description of *other sites accessed* by people who frequent that news outlet's website. In Germany, *information about journalists* and the *description of the news outlet* were the strongest cues. Results offer insights into how people heuristically process online news and are discussed in relation to the heuristic-systematic model of information processing.

Keywords

Heuristics, journalism, news, transparency, trust

Understanding how news audiences assess whether a news outlet is trustworthy is vital, particularly in today's media ecosystem where the sharing of false misinformation is rife (Tandoc et al., 2018) and perceptions about "fake news" can undermine public confidence in information (e.g., Ognyanova et al., 2020; Wasserman and Madrid-Morales, 2019). This global problem of low trust in news is especially pronounced in the United States and other Anglo-Saxon countries (Hanitzsch et al., 2018) and can undermine the media's normative role of informing the electorate because people with low trust in news are less likely to consume it (Carr et al., 2014) or participate politically (De Vreese and Boomgaarden, 2006; Valeriani and Vaccari, 2016). Low trust in news also can threaten the media's business aims because a fleeing audience weakens their financial base and may deter advertisers (Yamamoto and Nah, 2018), which is concerning after decades of economic challenges from layoffs, declining advertising revenues, and closures (Chyi and Tenenboim, 2017; Nielsen, 2015).

Journalistic transparency—the disclosure of information about a news outlet or its practices—is one approach examined for cueing greater news trust, but results have largely been inconsistent (Masullo et al., 2021a; Peifer and Meisinger, 2021) or unsuccessful (Karlsson and Clerwall, 2018; Karlsson et al., 2014; Tandoc and Thomas, 2017). This study examines journalistic transparency in a new way by using a conjoint experiment in three countries that have varying levels of news trust (Newman et al., 2019, 2021) and differing media systems (De Albuquerque, 2011; Santos Júnior and Becker, 2015) and media usage patterns (Newman et al., 2021). These countries were Brazil ($n=2038$), Germany ($n=2012$), and the United States ($n=2005$). Conjoint experiments allow for the manipulation of many more attributes than traditional experimental designs and they permit researchers to estimate the causal effect of each attribute singly and collectively (Hainmueller et al., 2014; Hair et al., 2010; Knudsen and Johannesson, 2019; Mummolo, 2016; Pelzer, 2019; Westerwick et al., 2013). Thus, unlike earlier experiments on news trust, our conjoint design allowed us to parse more precisely whether a particular transparency attribute signals to the public that a news outlet is trustworthy. Furthermore, we treated transparency differently than most studies, by manipulating what information people see about a news outlet in a functional replica of the sidebar of information—known as a Knowledge Panel—that appears when people search for a news outlet on Google. This Knowledge Panel looks like a box, appears beside search

results, and typically provides information such as the news outlet's name, location, and founding date.

Our research contributes to the literature on news trust and online information processing in several ways. Most importantly, we demonstrate that journalistic transparency can cue trust when it is done at the level of the entire news outlet, or the domain level, and comes from an external source, Google, as opposed to the outlet itself. We find substantial effects across Brazil and the United States that two pieces of information in a Knowledge Panel provide strong heuristics that a news outlet is trustworthy: a brief *description of the news outlet* and an explanation of *other sites accessed* by people who frequent that news outlet's website. In Germany, *information about journalists* and the *description of the news outlet* were the strongest cues. We find other results also vary by country. For example, listing *awards* in a Knowledge Panel was more important to cuing trust in a news outlet in the United States than in Brazil or Germany. The differences and similarities across countries have important implications for how to cue trust on a global scale.

Trust and transparency

News trust

Defining the concept of news trust is challenging because there is a lack of a consistent definition in the literature (e.g., Fisher, 2016) and, in some cases, trust and credibility are used interchangeably (Kohring and Matthes, 2007). We do not treat trust and credibility as synonyms; rather, we define trust in line with Tseng and Fogg (1999) as “a positive belief about the perceived dependability of, or confidence in a person, object, or process” (p. 41), whereas credibility is defined as a perceived quality or believability in a particular object. Thus, following Engelke et al. (2019) and Knudsen et al. (2021), we conceptualize trust as a higher-order concept that is only partially captured by the notion of credibility. In other words, trust is a larger concept, and credibility can be seen as one potential attribute of trust (Engelke et al., 2019). Metzger and Flanagin (2013) explain that news trust involves people's perceptions of whether the media will meet their expectations and, thus, it differs from media credibility, which involves whether the public believes media sources or content. Following this conceptualization, trust includes a trustor's expectation toward the trustee (Coleman, 1990). In our case, this refers to the relationship between the news audience “(the trustors) and the news media (the trustees)” (Strömbäck et al., 2020: 142). Trust, because it is focused toward the future, involves some sense of risk (Fawzi et al., 2021) because it may be betrayed. Furthermore, there is debate about whether the opposite of trust in news is distrust or low trust (Engelke et al., 2019), as most people do not actually have an absence of trust in news. We agree with Engelke et al. (2019) that the opposite of news trust is low trust, not necessarily distrust. Furthermore, we agree with Kohring (2019), who posits that people look for cues of whether they should trust a news outlet. The cue we considered in this study is journalistic transparency, a new journalistic norm, related to but distinct from related concepts, such as objectivity (Tandoc and Thomas, 2017), responsibility, and accountability (Karlsson et al., 2017).

Journalistic transparency at the news story level

Transparency is defined as some type of disclosure, rooted in the idea that revealing something can encourage others to trust you (Collins and Miller, 1994). Based on this notion, news organizations have considered it advantageous (Craft and Heim, 2009; Hellmueller et al., 2013) to enact journalistic transparency, defined as revealing information to the public about how news is made or about the news product or journalists (Curry and Stroud, 2021; Masullo et al., 2021a). Yet, empirical studies of journalistic transparency have had mixed results. If news organizations disclosed several types of information, such as details about journalists and correction policies, it increased consumers' perception that the outlet was credible (Curry and Stroud, 2021), although another study found no effect from single acts of disclosing information such as correction policies (Karlsson et al., 2014). Similarly, if a news organization was transparent about how and why it did a story, it increased perceptions that the outlet was credible in one study (Masullo et al., 2021a), but results were mixed in another (Peifer and Meisinger, 2021). Transparency through adding personal facts about journalists to stories has actually had the opposite of the intended effect, decreasing credibility perceptions (Tandoc and Thomas, 2017).

Journalistic transparency at the domain level

All of the aforementioned studies manipulated some type of journalistic transparency at the news story level by embedding information about the news outlet or the reporting process within or near the story itself. One experimental study (Masullo et al., 2021b), however, took a different tack by examining journalistic transparency at the domain level, or the level of the overall news outlet. In that study, a mock Google Knowledge Panel was created, and the experiment in Germany and the United States varied 14 pieces of information about a news outlet grouped into three major transparency signals in that Knowledge Panel. These were background about the news brand, which included items such as information about ownership and newsroom policies; audience engagement, which showed journalists' bios and provided contact information for them; and external evaluation, which consisted of awards and reviews by outside groups (Masullo et al., 2021b). The effect of each of the three signals individually and collectively was tested to see whether they increased perceptions of trust in the news outlet, but none did (Masullo et al., 2021b).

Despite the null findings from this earlier study, we theorized that the problem was not that cuing trust at the domain level could not work. Rather, the design of the earlier study did not allow researchers to test whether each of the 14 pieces of information about the news outlet increased trust individually, only whether they did so in three combinations. We remedied this problem in the current study by conducting a conjoint experiment (Hainmueller et al., 2014; Hair et al., 2010; Knudsen and Johannesson, 2019; Mummolo, 2016; Pelzer, 2019; Westerwick et al., 2013) that allowed us to test whether each piece of information about a news outlet could increase trustworthiness on its own and also consider dozens of combinations of these pieces of information, rather than only the three combinations in the earlier study. Second, in addition to testing pieces of

information about the news outlet that were intended to cue trust, as in the earlier study, we also tested the effect of information intended to cue lack of trust, neutral information, and the absence of information. Third, as we will turn to shortly, we examined differences across three countries, as opposed to looking only at the United States and Germany. Finally, in the earlier study, our dependent variable was news credibility, but in this study, we focused on news trust.

The current study

In the current study, we varied seven pieces of information about a news outlet in a functional replica of a Google Knowledge Panel. To decide which seven to consider, we adopted signals from the earlier study (Masullo et al., 2021b) that were based on research. We provide some details of the signals here to aid in understanding our research questions, but more specifics are in the “Method” section. These seven signals were (1) a *description of the news outlet* (Masullo et al., 2021b), (2) its *founding date* (Masullo et al., 2021b), (3) whether the news outlet had an independently verified *corrections policy* (Karlsson and Clerwall, 2018; Karlsson et al., 2014, 2017; Masullo et al., 2021b), (4) *other sites accessed* by those who visit the news site, (5) whether the news outlet won *awards* (Masullo et al., 2021b), (6) whether the news outlet had an *external review* by an independent trust initiative (Curry and Stroud, 2021; Masullo et al., 2021b), and (7) whether *information about journalists* (photographs and names) was provided (Curry and Stroud, 2021; Masullo et al., 2021b). The *description of the news outlet*, *founding date*, and *awards* were included because those are actually in real Knowledge Panels, and *other sites accessed* was included to mimic the recommendations people see on <https://www.amazon.com/> or Yelp. We also asked representatives from organizations dedicated to news trust to review and help us select signals from a longer list of potential signals before conducting the initial study (Masullo et al., 2021b).¹ In all cases, participants were exposed to a randomized selection of signals intended to cue more trust (e.g. a *description of the news outlet* that made it sound legitimate) or less trust (e.g. a *description of the news outlet* that made it sound questionable), and in some cases there were neutral or absent signals (Figure 1 and Table 1).

Heuristics cues that signal trust

We posited that these transparency signals could serve as cues—or heuristics—that signal trust (e.g., Masullo et al., 2021a, 2021b). Theoretical support for this idea comes from the heuristic-systematic model of information processing (Chaiken, 1980), which posits that people rely on mental cues called heuristics to make quick assessments about news or other information. Heuristic processing occurs when people have existing ideas about media content, so they process messages without taking a more thoughtful and systematic approach (Chaiken, 1980). Scholars argue that heuristic processing of media content is likely today because people tend to make quick decisions about the information to which they attend in today’s fast-paced media ecosystem, where they may be overloaded with choices (Holton and Chyi, 2011). Heuristics may be particularly valuable today because the proliferation of

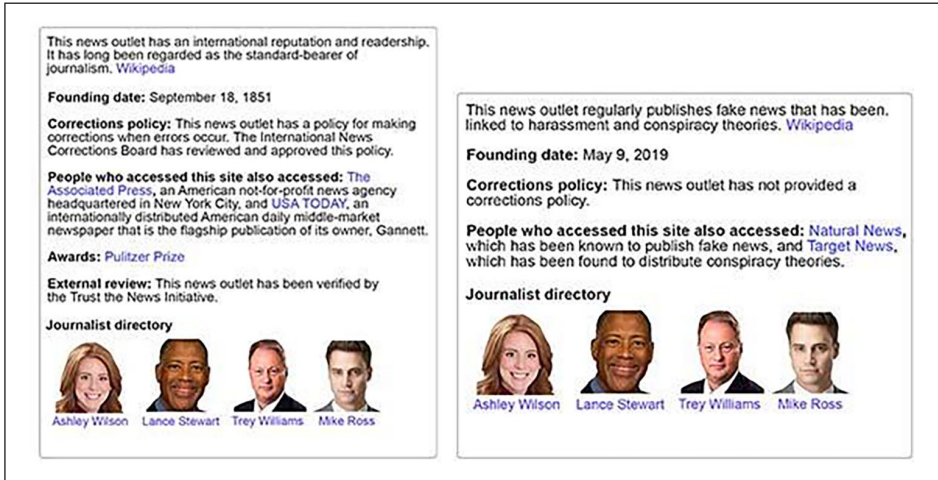


Figure 1. This is one of 40 possible pairs of Google Knowledge Panels that participants might have viewed in our experiment, being prompted to select which was more trustworthy. In this example, the panel on the left includes all the signals that were intended to indicate that a news outlet was trustworthy. The panel on the right includes one signal intended to convey trust (*information about journalists*) along with less trustworthy signals (e.g. the *description of the news outlet* as publishing fake news and a recent *founding date*), and absent signals (awards and information about *external review*). Each Knowledge Panel was translated into German for the German sample and Portuguese for the Brazilian sample. Details, such as the names and pictures of journalists and names of awards and news organizations, were also varied to be appropriate to each country.

mis/disinformation (Tandoc et al., 2018) may make it necessary for people to rely on cues to figure out what to trust (Metzger et al., 2003).

Metzger and Flanagin (2013) identified six heuristics of credibility evaluations that are relevant for news trust: *reputation*, *endorsement*, *consistency*, *self-confirmation*, *expectancy violation*, and *persuasive intent*. We employ some of these concepts—specifically the *reputation*, *endorsement*, *self-confirmation*, and *expectancy violation* heuristics, as they map onto our seven signals of news trust. Specifically, *reputation*, which is when people rely on the prestige of a media source to assess it (Metzger and Flanagin, 2013), relates to two signals: *description of the news outlet*, because this description conveys prestige or lack of prestige, and *information about journalists*, because identifying journalists may convey believability that could be interpreted as prestige. Metzger and Flanagin’s (2013) *endorsement* heuristic refers to the trust conveyed on news when an outside entity endorses it. This relates to our signal *other sites are accessed* by people who access the current news site because if the “other sites”—an outside entity—are perceived as trustworthy this will serve to endorse the current news site as also trustworthy. In addition, the *external evaluation* and *awards* signals link to an *endorsement* heuristic because they could convey trust from an outside source. Our *founding date* signal links to the *self-confirmation* heuristic because self-confirmation is when people trust information that relates to pre-existing notions (Metzger and Flanagin, 2013). In our

Table 1. Manipulation of transparency signals.

Signal	More trust	Less trust	Absent	Neutral
Description of the news outlet	This news outlet has a worldwide reputation and readership and has long been regarded as the standard-bearer of journalism.	This news outlet regularly publishes fake news that has been linked to harassment and conspiracy theories.	X	This news outlet was founded by six businessmen.
Founding date	18 September 1851 ^a	9 May 2019	X	
Corrections policy	This news outlet has a policy for making corrections when errors occur. The International News Corrections Board ^b has reviewed and approved this policy.	This news outlet has not provided a corrections policy.	X	
Other sites accessed	The Associated Press, an American not-for-profit news agency headquartered in New York City, and USA TODAY, an internationally distributed American daily middle-market newspaper that is the flagship publication of its owner, Gannett. ^c	Natural News, which has been known to publish fake news, and Target News, which has been found to distribute conspiracy theories. ^d	X	
Awards	Pulitzer Prize ^e	No awards recorded.	X	
External review	This news outlet has been verified by the Trust the News Initiative.	This news outlet has not been verified by the Trust the News Initiative.	X	
Information about journalists	Names and photographs of journalists are shown. ^f	Publication has not provided information about journalists.	X	

Note. An X indicates that there were conditions where the signal was absent.

^aGermany: 18 September 1949; Brazil: 18 September 1881.

^bInternational News Corrections Board is a made-up organization.

^cGermany: *Sueddeutsche Zeitung*, *Westdeutsche Zeitung* (WAZ). Brazil: *Folha de S. Paulo*, *O Globo*.

^dGermany: *Compact Magazin*, *RT Deutsch*. Brazil: *Jornal da Cidade Online*, *Plantão Brasil*.

^eGermany: *Nannen Preis*. Brazil: *Prêmio Vladimir Herzog*.

^fGermany/Brazil: Names and photographs typical for the country.

case, an older founding date could be perceived as more trustworthy because it confirms existing beliefs that legacy news outlets, based on being around for a long time and having an established reputation, are more trustworthy than newly created outlets that do not have a built-up reputation. Finally, our *corrections policy* signal connects with Metzger and Flanagin's (2013) *expectancy violation* heuristic, which is when people perceive a news outlet as less trustworthy if it violates their expectations about what a news outlet should do. Because corrections policies are quite frequent for news outlets (Curry and Stroud, 2021; Karlsson, 2010), people may expect outlets to have them, and it would violate their expectations if they did not. Based on this theoretical argument, we asked,

RQ1: Does the presence of transparency signals in a Google Knowledge Panel cue perceptions of whether a news outlet is trustworthy or less trustworthy?

RQ2: What is the relative importance of different domain-level transparency signals in a Google Knowledge Panel in cuing trust in a news outlet?

A three-country approach

We chose three countries to study that all have high Internet penetration (96% in the United States and Germany and 71% in Brazil) and many online news consumers (68% in Germany, 72% in the United States, and 87% in Brazil; Newman et al., 2019) so that an online experiment about a digital Knowledge Panel would be plausible to participants. We chose these specific countries because they differ in terms of media systems, levels of news trust, and ways in which people access news. Comparing differing countries is a useful approach to substantiate the validity of findings across contexts (e.g., Seawright and Gerring, 2008), and not an artifact of similarities between countries. For example, news trust is higher in Germany and Brazil than in the United States (Newman et al., 2019, 2021). The US media system is mainly privately owned, relying on advertising and subscription revenue to stay afloat, while Germany has a strong public media system largely funded through license fees (Revers, 2017) while newspapers in Brazil often actively intervene in politics (De Albuquerque, 2011), and state regulation and ownership is scarce. Brazilians rely heavily on social media (63%) and messaging apps (WhatsApp: 43%) for news, percentages that are lower in the United States (Social: 42%, WhatsApp: 6%) and Germany (Social: 31%, WhatsApp: 17%) (Newman et al., 2021). These variations in news access may also mean that users will experience the Knowledge Panel differently, for instance, by looking for the trust signals that most closely mirror their usual way of accessing news. Therefore,

RQ3: Are the effects of the transparency signals on trust consistent across countries (Brazil, Germany, and the United States)?

Moderating role of political beliefs

Because people's political beliefs are often tied up with their perceptions of news trust, we considered these beliefs as potential moderators. Research demonstrates that

people select media that fit their political worldview (e.g., Stroud, 2011) and accept media messages that confirm their political beliefs (e.g., Taber and Lodge, 2006). This may lead to variance in news trust based on political beliefs, particularly in highly polarized countries (Gallup/Knight Foundation, 2020), such as the countries in our study. Across the countries in our study, the United States has the highest perceived tension between political parties (90%), closely followed by Brazil (83%); Germany ranks substantially lower in this indicator (57%) (Duffy et al., 2021). Furthermore, partisanship and political beliefs can influence how people interpret facts in news stories (e.g., Gaines et al., 2007) and whether they accept or reject corrections of misinformation (Nyhan and Reifler, 2010; Weeks, 2015), which, in turn, may shape news trust perceptions. Given the literature just described, it seems plausible that political beliefs may alter how people process information in a Google Knowledge Panel about whether a news outlet is trustworthy:

H1: The effects of transparency signals in a Google Knowledge Panel on news outlet trust will differ depending on people's political beliefs.

Method

Procedure and design

We employed a choice-based conjoint design to analyze participants' assessment of the trustworthiness of an unidentified news outlet based on an experimentally manipulated Google Knowledge Panel about the outlet. Conjoint analysis is a decompositional approach that is used to examine the relative importance of different attributes for the preference of a stimulus (Hainmueller et al., 2014; Hair et al., 2010; Knudsen and Johannesson, 2019; Mummolo, 2016; Pelzer, 2019; Westerwick et al., 2013), either through a choice-based design where people select from two or more choices shown at the same time or a traditional conjoint design where they rank or rate a product using a scale. We employed a choice-based design because it provides higher external validity as it mirrors the real world where people select among different news brands (Westerwick et al., 2013). Also, a choice-based design is more likely to activate heuristic processing—which fits our research interest—than a ranking or rating task in traditional conjoint designs (Pelzer, 2019) because it would cue the quick decision-making people routinely make when selecting news.

In our choice-based conjoint design, participants were shown two versions of stimuli—in our case two Knowledge Panels about two news outlets—side by side and asked to select one as most trustworthy. This design mimics how people chose many consumer products on store shelves (e.g. Coke vs Pepsi) or digital products in a Google search (one news site versus another), although certainly there are differences between consumer products and people's assumptions about news trustworthiness. However, the relevance of conjoint measurement to news content exposure has been established (e.g., Mummolo, 2016). Notably, choice-based conjoint analysis allowed us to estimate the causal effect (Hainmueller et al., 2014; Knudsen and

Johannesson, 2019) of multiple trust signals both individually and simultaneously and to see which indicated to participants that the news outlet was more or less trustworthy. Unlike the earlier experiment which tested 14 potential signals of trust in seven configurations (Masullo et al., 2021b), this study allows us to test seven signals in 40 combinations.

We considered trust in a different way than previous studies by examining what information about a news outlet would signal trust in an unnamed news outlet, rather than measuring whether they actually trusted a particular named outlet or not. We focused on unnamed news outlets because research has shown that a news outlet's name is a powerful cue of credibility perceptions (Hilligoss and Rieh, 2008; Victoria-Mas et al., 2018; Masullo et al., 2021a), and we wanted to assess what particular information about a news outlet would cue trust, not the particular news outlet brand.

Stimuli

The seven signals, explained in the "Literature Review," were depicted in a functional replica of a Google Knowledge Panel that served as the experimental stimuli. Participants in each country were randomly assigned to view five of 20 possible pairs of Google Knowledge Panels (Figure 1) with different configurations of signals. To avoid ordering effects, the order of transparency signal combinations was randomized. Each participant saw each pair side by side and was asked to indicate, "Which one of these news outlets do you trust more?" by clicking a button beneath the signal. This question served as our dependent variable. While the dependent variable was simplistic, it was necessary for people to select one outlet or the other for a choice-based conjoint design.

The full factorial design was reduced to a fractional design using SAS JMP (i.e. manipulating 40 out of 2,916 possible combinations of attributes), striving for orthogonality and minimal overlap, which are relevant criteria to evaluate choice-based conjoint designs (Hair et al., 2010). Orthogonality means that the signals combined in the choice sets are not correlated, so, for example, none of the signals would be more likely to appear in combination with other signals. By minimal overlap, we mean that we avoided providing participants sets of signal combinations that only vary by one signal, as that offers little insight for the overall experiment. However, following common practice for conjoint experiments (Hair et al., 2010), we removed unrealistic combinations of signals (e.g., a news site described as trafficking in fake news that also won a coveted news award) to make the experiment more realistic. Thus, our choice design is not 100% orthogonal, but we selected the most orthogonal fractional designs from among multiple designs to assure there were only slight deviations from orthogonality (Hair et al., 2010).

The experiment was conducted separately for residents of Brazil, Germany, and the United States, but data were ultimately merged. Study materials were translated into Portuguese for the Brazilian experiment and into German for the German experiment by professional translators and checked by German-speaking and Portuguese-speaking research team members. Information for each signal was consistent across countries,

although some details (such as the name of the award) were varied to be applicable to each country. Variations are explained in Table 1.

Sample

Data were collected by the online panel provider Dynata from 24 November to 4 December 2020. A total of 2005 people in the United States, 2012 in Germany, and 2038 in Brazil participated.² For the US sample, Dynata matched age, gender, education, and race/ethnicity of the US adult Internet population based on a random sample survey conducted by Pew Research Center. For the German and Brazilian samples, Dynata matched the age and gender of the sample to the adult population in each respective country. Institutional Review Board approval was obtained.

For H1, we considered political beliefs as a potential moderating variable. For political beliefs, we considered ideology, which was measured on a 1 (*left*) to 5 (*right*) scale in Brazil and Germany and a 1 (*liberal*) to 5 (*conservative*) scale in the United States to fit the political understandings in each country. Furthermore, because the United States has only two dominant political parties, we also considered party affiliation in the United States only, measured as Republican/Republican leaning, Democrat/Democrat-leaning, or not affiliated (Table 2). All demographics, including political beliefs, were asked at the very end of the survey to avoid a question about political beliefs from priming participants' identities. Research shows that priming people's identities, such as their political beliefs (e.g., Anson, 2018) or gender (McGlone et al., 2006), can affect what they report afterward.

Analysis strategy

Data were analyzed using the choice modeling platform in SAS JMP, performing conditional logistic regression analyses. Also referred to as conditional logit models (McFadden, 1974), these analyses take into account that each respondent made multiple selections in our study design. Choice-based conjoint models are typically estimated by using logit models as they more closely mimic real-life decisions than metric scales (Hair et al., 2010; McFadden, 1974). In a conditional logit model, the binary dependent variable is determined by using multiple observations from the same individual, rather than one observation in a binary logistic regression model (McFadden, 1974). Our approach used Firth-Bias corrections to estimate model parameters, which can be applied to logit models (Firth, 1993; Maiti and Pradhan, 2008). This method reduces bias in parameter estimates and thereby increases standard errors, avoiding an under-estimation of standard errors (Kosmidis and Firth, 2010). To answer RQ1 and RQ2, the main effects of the transparency signals were tested for each country separately (Table 3). In a further step, we included interaction terms in order to assess whether the effects of transparency signals significantly varied by country (RQ3) or political beliefs (H1) (Table 4). We computed a log value and likelihood ratio chi-square (L-R χ^2), which are global tests of the effect of each transparency signal. To obtain unbiased estimates, Firth biased-corrected maximum likelihood estimates are computed, as recommended (Firth, 1993).

Table 2. Participant demographics.

	US	Germany	Brazil
	n = 2005	n = 2012	n = 2038
Gender			
Female	50.5%	50.9%	52.2%
Male	49.1	48.3	47.6
Other	0.4	0.4	0.2
Race/ethnicity ^a			
White	68.0	–	–
Black	15.8	–	–
Mixed race/Other	10.1	–	–
Asian	6.1	–	–
Hispanic/Latino/Latina			
Yes	12.9	–	–
No	87.1	–	–
Age			
18 to 29	24.4	16.4	32.8
30 to 49	36.5	36.9	43.1
50 to 64	23.5	32.8	20.6
65 or older	15.7	13.9	3.4
Education			
Less than high school	3.4	19.7	4.0
High school or equivalent	62.5	49.7	35.2
University degree or more	33.8	30.6	60.5
Political ideology (M) ^b	3.02	2.87	3.16
Political affiliation			
Republican/Republican-leaning	31.8	–	–
Democrat/Democrat-leaning	40.0	–	–
Not affiliated	26.2	–	–

^aRace/ethnicity data are not collected in Germany and Brazil as they are in the United States.

^bIn the United States, this was measured on a 5-point scale from *liberal* to *conservative*; in Brazil, Germany, it was measured on a 5-point scale from *left* to *right*.

Results

With respect to RQ1, all transparency signals had a significant effect on participants' perceptions of trust with the exception of the *founding date*, which had a significant effect on the German sample, but did not affect US and Brazilian participants' evaluations of the presented news outlets. Tables 3 and 4 include the coefficients (*Bs*) and standard errors (*SEs*) from the conditional logit models. As shown in Table 3, exponentiating the coefficient gives the odds ratio; the odds of a news source being selected are 1.60 times greater [exp(0.47)] when the *description of the news outlet* signaled more trust than when it did not.

Table 3. Main effects of transparency signals by country.

	US			Brazil			Germany		
	Log value	L-R χ^2	B (SE)	Log value	L-R χ^2	B (SE)	Log value	L-R χ^2	B (SE)
Description of the news outlet	56.73	266.37		106.13	404.50		44.95	211.94	
More trust			0.47 (0.04)			0.61 (0.04)			0.42 (0.04)
Neutral			0.06 (0.02)			0.05 (0.02)			0.13 (0.02)
Less trust			-0.47 (0.03)			-0.64 (0.04)			-0.41 (0.03)
Information about journalists	25.55	117.67		42.84	197.30		66.40	305.80	
More trust			0.29 (0.03)			0.37 (0.03)			0.46 (0.03)
Less trust			-0.08 (0.02)			-0.18 (0.02)			-0.13 (0.02)
Other sites accessed	38.87	178.99		47.31	217.85		24.65	113.53	
More trust			0.36 (0.03)			0.38 (0.03)			0.29 (0.03)
Less trust			-0.21 (0.02)			-0.25 (0.02)			-0.16 (0.02)
Corrections policy	22.93	105.60		49.03	225.80		35.04	161.37	
More trust			0.31 (0.03)			0.45 (0.03)			0.33 (0.03)
Less trust			-0.16 (0.02)			-0.27 (0.02)			-0.09 (0.02)
External review	15.61	71.87		30.00	138.17		14.99	69.02	
More trust			0.20 (0.03)			0.26 (0.03)			0.20 (0.03)
Less trust			-0.15 (0.02)			-0.18 (0.02)			-0.15 (0.02)
Awards	12.79	58.91		5.53	25.49		5.19	23.89	
More trust			0.17 (0.03)			0.15 (0.03)			0.14 (0.03)
Less trust			-0.17 (0.02)			-0.11 (0.02)			-0.09 (0.02)
Founding date	0.11	0.50		0.42	1.92		1.46	6.72	
More trust			0.01 (0.03)			0.04 (0.04)			0.07 (0.03)
Less trust			0.01 (0.02)			0.00 (0.02)			-0.04 (0.02)
N	1995			2019			2012		
AICc	10,159.97			10,366.75			10,527.88		
BIC	1026.90			10,472.72			10,633.43		
-2*LogLikelihood	10,129.91			10,336.69			10,497.82		
-2*Firth LogLikelihood	10,015.21			10,222.03			10,382.61		

L-R: likelihood ratio; SE: standard error; AICc: adjusted Akaike's information criterion; BIC: Bayesian information criterion. Firth bias-corrected maximum likelihood estimates. Coefficients B add up to zero per category, including the condition when signal was absent (X). L-R χ^2 is likelihood ratio chi-square, which is a global test of the effect of each transparency signal. Coefficients in italics are not significant, $p > .05$.

Table 4. Full models including interaction effects.

	All countries		US		Brazil		Germany	
	Log value	L-R χ^2	Log value	L-R χ^2	Log value	L-R χ^2	Log value	L-R χ^2
Description of the news outlet (D)	197.43	915.54	57.22	268.64	4.26	22.37	9.67	48.00
Information about journalists (J)	126.58	582.94	25.11	115.63	43.16	198.76	65.38	301.08
Other sites accessed (P)	108.42	499.31	11.74	54.10	33.36	153.63	4.73	21.79
Corrections policy (C)	97.57	449.34	23.51	108.26	48.13	221.66	34.79	160.21
External review (E)	58.61	269.90	10.68	49.19	30.39	139.94	14.68	67.60
Awards (A)	21.45	98.78	12.41	57.13	6.56	30.22	5.52	25.40
Founding date	0.86	3.97	0.18	0.83	0.48	2.22	1.34	6.15
Country ^a × D	9.91	57.85	–	–	–	–	–	–
Country ^a × C	6.65	36.54	–	–	–	–	–	–
Country ^a × J	5.53	31.10	–	–	–	–	–	–
Country ^a × P	1.64	11.37	–	–	–	–	–	–
Country ^a × A	1.32	9.57	–	–	–	–	–	–
Political ideology × D	–	–	0.61	4.17	7.53	37.91	2.12	11.94
Political ideology × P	–	–	1.30	5.98	16.39	75.41	1.10	5.07
Republican/R-leaning × E	–	–	2.15	9.91	–	–	–	–
N	6059	–	1995	–	2019	–	2012	–
AICc	31,051.93	–	10,068.94	–	10,182.05	–	10,444.76	–
BIC	31,352.82	–	10,201.70	–	10,323.17	–	10,585.33	–
–2*LogLikelihood	30,977.82	–	10,030.85	–	10,141.95	–	10,404.66	–
–2*Firth LogLikelihood	30,665.56	–	9887.60	–	9990.88	–	10,253.71	–

L-R: likelihood ratio; AICc: adjusted Akaike's information criterion; BIC: Bayesian information criterion.

Firth bias-corrected maximum likelihood estimates. L-R χ^2 is likelihood ratio chi-square, which is a global test of the effect of each transparency signal. Coefficients in italics are not significant, $p > .05$.

^aWhile country is a nominal-level variable with three groups (US is the reference category), the conditional logit choice model we used indicates only that the country variable as a whole has a significant interaction effect, not which specific country (Brazil or Germany) deviates the most.

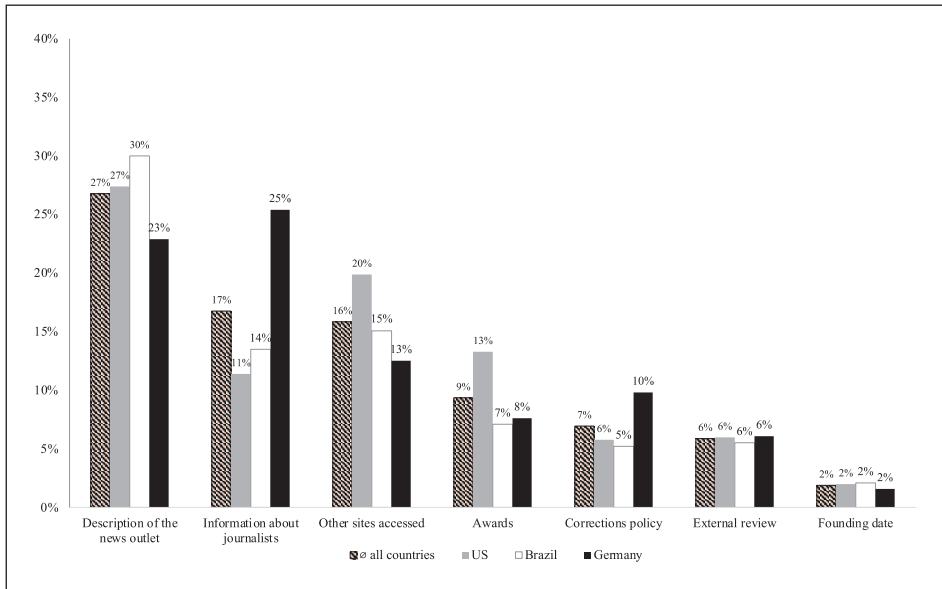


Figure 2. Relative importance of transparency indicators based on choice data.

As shown in Table 3, signals cuing trust nearly always increases trust more than signals cuing low trust reduces trust, both relative to the absence of the signal. For example, showing that *other sites accessed* by the participants were trustworthy increased trust by between 0.29 and 0.38 across countries. Showing that the *other sites accessed* were untrustworthy reduced trust by -0.16 to -0.25 across countries.

Based on part-worth estimates of the transparency signals, we calculated the relative importance of each transparency signal for trust perception. Relative importance was calculated by dividing the range of coefficients of each signal by the total range of all signals and then converting that number into a percentage (Hair et al., 2010). Thus, the relative importance values can be interpreted as effect sizes, as shown in Figure 2. Figure 2³ shows that, with respect to RQ2, the *description of the news outlet* in a Google Knowledge Panel is the most important signal when assessing its trustworthiness on average across the three countries, followed by the *information about journalists* and *other sites accessed*. Answering RQ3, there were significant differences by country, as shown by significant interactions (Table 4). While country is a nominal-level variable with three groups (the United States is the reference category), the conditional logit choice model we used for analysis indicates only that the country variable as a whole has a significant interaction effect, not which specific country (Brazil or Germany) deviates the most.⁴

For example, providing *information about journalists* was the most important transparency signal for the German participants (25%, log value = 66.40), whereas for the US (27%, log value = 56.73) and Brazilian participants (30%, log value = 106.13), *description of the news outlet* was the most important signal (Figure 2 and Table 3). In addition, information on *awards* was the third most important signal for US participants, but of

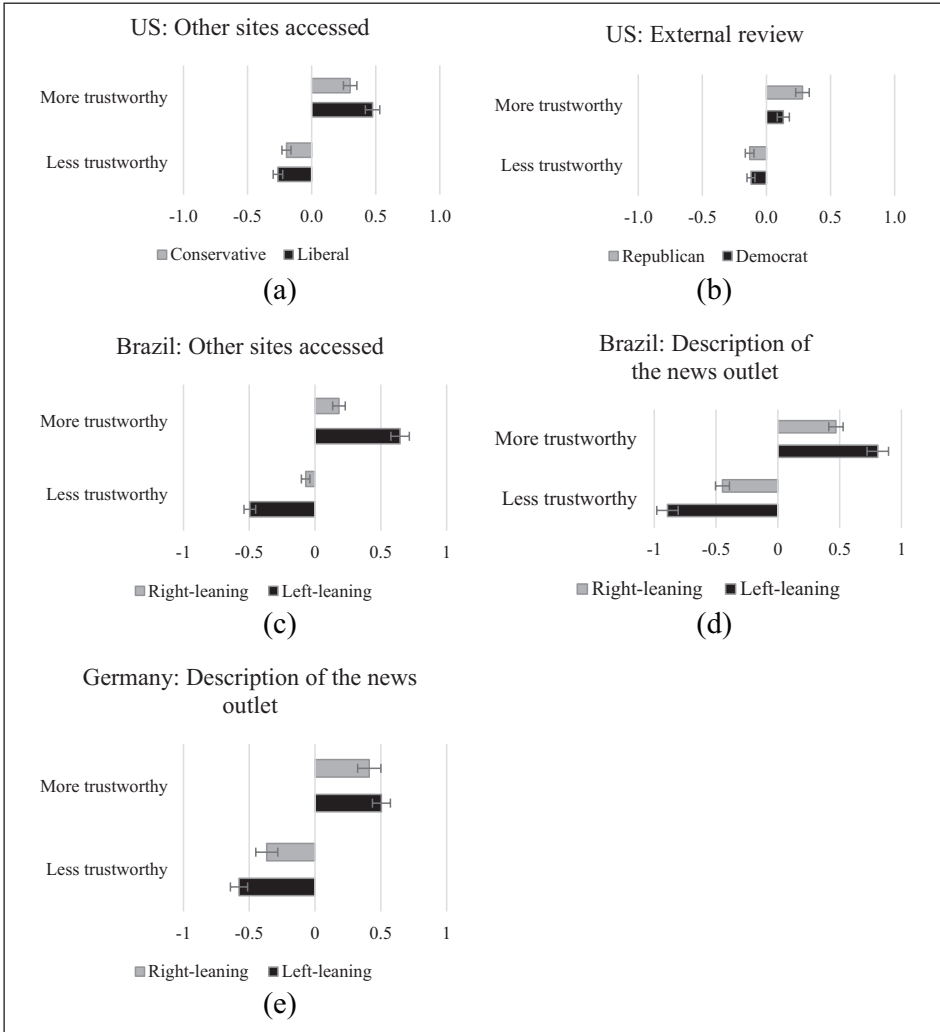


Figure 3. (a) US: other sites accessed, (b) US: external review, (c) Brazil: other sites accessed, (d) Brazil: description of the news outlet, and (e) Germany: description of the news outlet. Note. Figure 3(a) to (e): Estimates and error bars indicate marginal effects (B, SE) of transparency signals.

lower importance for Brazilian and German participants compared with other signals. Having an independently validated *corrections policy* was valued a little more by German respondents than participants of the other countries.

Interaction effects of political beliefs and transparency signals

We further asked whether trust judgments based on the transparency signals differed by participants' political beliefs and, in the United States, party affiliation (H1). As

shown in Table 4, analysis revealed a significant interaction of the signal *other sites accessed* and political beliefs in the US data. It showed that US participants who are liberal perceived greater trust in news outlets that were accessed by people who also access trustworthy news outlets than participants who are conservative (Figure 3(a)). Moreover, we found a significant interaction effect of party affiliation and the *external review* signal in the United States. Those who are Republicans/Republican-leaning placed greater importance on *external review* when assessing trust than Democrats/Democrat-leaning (Figure 3(b)).

Political ideology also affected perceptions of trust among Brazilian participants. Left-leaning participants perceived greater trust in news outlets where *other sites accessed* were trustworthy news outlets than right-leaning participants and were also less likely to trust news outlets where *other sites accessed* were less trustworthy news outlets (Figure 3(c)). Right-leaning respondents were not as skeptical of a less trustworthy *description of the news outlet* and showed less appreciation for trustworthy *description of the news outlet* than left-leaning respondents (Figure 3(d)). Among German participants, left-leaning participants conveyed greater trust in news outlets with a trustworthy *description of the news outlet*, relative to right-leaning participants, and an untrustworthy *description of the news outlet* had a greater influence on left-leaning participants than right-leaning ones (Figure 3(e)).

Discussion

The main contribution of this study was to consider journalistic disclosure transparency in a way that has seldom been examined. We demonstrated that journalistic transparency can cue trust when it is done at the level of the entire news outlet, or the domain level, and comes from an external source, Google, as opposed to the outlet itself. We found that two pieces of information about a news outlet were the strongest heuristics of when a news outlet is perceived as trustworthy in Brazil and the United States: a brief *description of the news outlet* and an explanation of what *other sites were accessed*. In Germany, *information about journalists* was the strongest transparency signal, followed by *description of the news outlet* and *other sites accessed*. (Thus, Brazilian and US participants seemed to be more similar in their perception of trust indicators, whereas German participants revealed diverging perceptions of what signals trust in a Google news search.) People's political beliefs in Brazil, Germany, and the United States also influenced how people perceived transparency signals. In the United States, liberal participants were more influenced than conservative participants by the cue regarding *other sites accessed* if that cue listed trustworthy news outlets. This fits much of what we understand about divides between conservatives and liberals in the highly polarized United States. Liberals tend to have higher news trust overall (Gallup/Knight Foundation, 2020), so it is conceivable that a cue regarding trustworthy sites would hold more sway with them than with their conservative counterparts. Furthermore, when party affiliation was considered in the United States, those who are Republicans/Republican-leaning placed greater importance on *external review* of news outlets when assessing trust than Democrats/Democrat-leaning participants. This suggests that external endorsements may be needed to counter Republicans' underlying low media trust.

In Brazil, we found similar results with left-leaning participants perceiving greater trust in a news outlet if the *other sites accessed* were trustworthy outlets, compared with right-leaning participants. In addition, in Brazil, right-leaning participants were less likely to trust a news outlet if the *other sites accessed* were less trustworthy outlets. They were also not as skeptical of a less trustworthy *description of the news outlet* and showed less appreciation for a trustworthy *description of the news outlet* than left-leaning respondents. In Germany, we found left-leaning participants were likely to trust a news outlet with a trustworthy *description of the news outlet*, and more likely to be influenced by an untrustworthy *description of the news outlet*. These findings support the idea that understanding news trust is complicated by political beliefs. How those on the right and the left perceive news trust and what factors convey trustworthiness are not entirely consistent across locales and ideologies, so any intervention must keep these differences in mind. Transparency that may work for liberals may fail for conservatives and vice versa.

Theoretical and practical implications

Taken together, our findings offer several notable theoretical and practical implications. Theoretically, our findings support the idea that transparency can operate as a news trust heuristic, at least if deployed as we did it at the news outlet level. Specifically, our findings show that the *reputation* heuristic (Metzger and Flanagin, 2013) may be particularly powerful, as a signal linked to this heuristic—*description of the news outlet*—was the strongest indicator that an outlet was trustworthy in Brazil and the United States. In Germany, the most powerful signal, *information about journalists*, also maps onto this *reputation* heuristic, offering more evidence of its value. Furthermore, the *other sites accessed* signal, which relates to the *endorsement* heuristic (Metzger and Flanagin, 2013), was the second strongest indicator of trust in Brazil and the United States and third in Germany. Overall, these findings suggest that when people make assessments about whether to trust a news outlet, they use cognitive shortcuts, such as heuristics, and they rely more heavily on those related to *reputation* and *endorsements*. This finding provides greater understanding of the heuristic-systematic processing model (Chaiken, 1980) and its application to news processing.

Furthermore, these findings support the premise that if information about a news outlet is disclosed, it can have a positive effect by engendering trust, much as interpersonal research has found (Collins and Miller, 1994). These effects may be particularly important when an outside source, such as Google, is being transparent. In today's fast-paced media ecosystem where people may make split-second assessments of whether to trust a news outlet, our results suggest that heuristic information in a Google Knowledge Panel could be helpful. Our work underscores that scholars should not abandon the idea of using transparency to cue news trust, despite studies that show it does not consistently work (Karlsson and Clerwall, 2018; Karlsson et al., 2014; Masullo et al., 2021a; Tandoc and Thomas, 2017), but rather they should change how they do so. Our findings pave the way for future research examining trust at the domain level, either in the Google Knowledge Panel as we did, or perhaps connected to overall news sites or news outlets' Facebook pages. Furthermore, our findings

show the utility of conjoint experimental designs for communication and journalism research. These designs offer versatility and the ability to manipulate more features than traditional experimental research and could prove illuminating for a broad range of research domains. From a practical standpoint, news organizations should be sure that the description of their outlet that appears in a Knowledge Panel (which draws from an organization's Wikipedia page) is accurate and conveys trust, as that is a key signal people use in assessing trust.

Limitations and future research

Some limitations should be considered. First, while we examined three countries specifically chosen for the varying levels of news trust and different media systems and media usage patterns, they cannot serve as a stand-in for all countries. More cross-cultural research is needed in this area, specifically outside the United States. This is particularly important regarding interventions like the Google Knowledge Panel, which could be used internationally to convey information about news organizations to people who use Google's search. Second, while a conjoint design allowed us to vary thousands of combinations of signals, even with this design we were limited to seven different signals within those combinations. Although we derived these seven based on research (Curry and Stroud, 2021; Karlsson and Clerwall, 2018; Karlsson et al., 2014, 2017) and expert consultations, indubitably there are other potential signals that should be considered. For example, recent headlines from a news outlet might convey trust, as could the number of pageviews. These, among other possible indicators, should be considered in future research. Third, while using the Google Knowledge Panel allowed us to manipulate transparency signals at the domain level, research should also continue to investigate transparency signals in other spaces, such as news websites or Facebook pages. This is particularly important because news outlets do not have direct control over what shows up in a Knowledge Panel about their outlet. Fourth, while a single-item dependent measure of trust was required for our choice-based conjoint design, this is a limitation as multi-item trust measures (e.g., Strömbäck et al., 2020) could provide more reliability. Finally, we considered political beliefs as a potential moderator because the literature supported this, but other potential moderators, such as pre-existing news trust levels, should be examined.

Conclusion

Our findings show that journalistic transparency can signal which news outlets are trustworthy and less trustworthy, at least at the domain level. *Description of the news outlet* operates as a *reputation* heuristic and *other sites accessed* as an *endorsement* heuristic as people decide whether a news outlet is trustworthy. Importantly, efforts to cue trust must take into account that people may perceive these heuristics differently based on their political beliefs. The ultimate payoff of research in this vein is its practical importance. Scholars and practitioners alike are in pursuit of ways to surface trustworthy information. This research shows that transparency cues represent a promising strategy.

Acknowledgements

The authors thank the CME team members for their suggestions on an earlier draft of this paper. We are grateful to Caroline Murray, Sinead Keirans, and Mary Margaret Burniston for creating the stimuli for the experiment. We thank Rosenthal C. Alves, Carmem Meir Cunha, and Rachel R. Mourao for reviewing the Brazilian stimuli.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The Google News Project funded this study through a contribution to the Center for Media Engagement (CME) in the Moody College of Communication at The University of Texas at Austin, USA.

ORCID iDs

Gina M Masullo  <https://orcid.org/0000-0002-4909-2116>

João Gonçalves  <https://orcid.org/0000-0002-8948-0455>

Martin J Riedl  <https://orcid.org/0000-0003-2411-1998>

Notes

1. The organizations were the Credibility Coalition, the Global Disinformation Index, the International Fact-Checking Network, the Journalism Trust Initiative, NewsGuard, the News Quality Initiative, Trusting News, and the Trust Project. We contacted representatives from each organization via email and asked for feedback on potential trust signals to be used in this experiment.
2. A total of 2268 Americans were recruited, but data were not analyzed for those who did not consent ($n=164$), who did not reside in the United States ($n=28$), who were not at least 18 years old ($n=52$), or who appeared to attempt to participate more than once ($n=19$), resulting in $n=2005$. A total of 2155 Germans were recruited, but data were not analyzed for those who did not consent ($n=58$), who did not reside in Germany ($n=12$), who were not at least 18 years old ($n=27$), or who appeared to attempt to participate more than once ($n=46$), resulting in $n=2012$. A total of 2318 Brazilians were recruited, but data were not analyzed for those who did not consent ($n=38$), who did not reside in Brazil ($n=15$), who were not at least 18 years old ($n=153$), or who appeared to attempt to participate more than once ($n=74$), resulting in $n=2038$.
3. Figure 2 shows the main effects by country. We first estimated the main effects by country, as is common in conjoint analysis, and then conducted a segment analysis (by adding interaction terms) to see whether these main effects varied by specific groups of interest [political beliefs in Brazil, Germany, and the United States, and party affiliation in the United States, see Table 4 and Figure 3(a) to (e)].
4. We note this because the log value and the likelihood ratio (L-R) chi-square should be interpreted differently than a beta in a dummy-coded variable in ordinary least squares (OLS) regression.

References

- Anson IG (2018) Partisanship, political knowledge, and the Dunning-Kruger effect. *Political Psychology* 39(5): 1173–1192.

- Carr DJ, Barnidge M, Lee BG, et al. (2014) Cynics and skeptics: evaluating the credibility of mainstream and citizen journalism. *Journalism & Mass Communication Quarterly* 91(3): 452–470.
- Chaiken S (1980) Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology* 39(5): 752–766.
- Chyi HI and Tenenboim O (2017) Reality check. *Journalism Practice* 11(7): 798–819.
- Coleman JS (1990) *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.
- Collins NL and Miller LC (1994) Self-disclosure and liking: a meta-analytic review. *Psychological Bulletin* 116(3): 457–475.
- Craft S and Heim K (2009) Transparency in journalism: meanings, merits, and risks. In: Wilkins L and Christians GC (eds) *The Routledge Handbook of Mass Media Ethics*. New York: Routledge, pp. 217–228.
- Curry AL and Stroud NJ (2021) The effects of journalistic transparency on credibility assessments and engagement intentions. *Journalism* 22(4): 901–918.
- De Albuquerque A (2011) On models and margins. In: Hallin DC and Mancini P (eds) *Comparing Media Systems Beyond the Western World*. Cambridge: Cambridge University Press, pp. 72–95.
- De Vreese CH and Boomgaarden HG (2006) Media effects on public opinion about the enlargement of the European Union. *JCMS: Journal of Common Market Studies* 44(2): 419–436.
- Duffy B, Murkin G, Skinner G, et al. (2021) *Culture Wars around the World: How Countries Perceive Divisions*. London: King's College London.
- Engelke KM, Hase V and Winterlin F (2019) On measuring trust and distrust in journalism: reflection of the status quo and suggestions for the road ahead. *Journal of Trust Research* 9(1): 66–86.
- Fawzi N, Steindl N, Obermaier M, et al. (2021) Concepts, causes and consequences of trust in news media—a literature review and framework. *Annals of the International Communication Association* 45(2): 154–174.
- Firth D (1993) Bias reduction of maximum likelihood estimates. *Biometrika* 80(1): 27–38.
- Fisher C (2016) The trouble with “trust” in news media. *Communication Research and Practice* 2(4): 451–465.
- Gaines BJ, Kuklinski JH, Quirk PJ, et al. (2007) Same facts, different interpretations: partisan motivation and opinion on Iraq. *Journal of Politics* 69(4): 957–974.
- Gallup/Knight Foundation (2020) American views 2020: trust, media and democracy, 9 November. Available at: <https://knightfoundation.org/wp-content/uploads/2020/08/American-Views-2020-Trust-Media-and-Democracy.pdf>
- Hainmueller J, Hopkins DJ and Yamamoto T (2014) Causal inference in conjoint analysis: understanding multidimensional choices via stated preference experiments. *Political Analysis* 22(1): 1–30.
- Hair JF, Black WC, Babin BJ, et al. (2010) *Multivariate Data Analysis: A Global Perspective*. 7th ed. London: Pearson Education.
- Hanitzsch T, Van Dalen A and Steindl N (2018) Caught in the nexus: a comparative and longitudinal analysis of public trust in the press. *The International Journal of Press/Politics* 23(1): 3–23.
- Hellmueller L, Vos TP and Poepsel MA (2013) Shifting journalistic capital? *Journalism Studies* 14(3): 287–304.
- Hilligoss B and Rieh SY (2008) Developing a unifying framework of credibility assessment: construct, heuristics, and interaction in context. *Information Processing & Management* 44(4): 1467–1484.

- Holton AA and Chyi HI (2011) News and the overloaded consumer. *Cyberpsychology Behavior and Social Networking* 15(11): 619–624.
- Karlsson M (2010) Rituals of transparency. *Journalism Studies* 11(4): 535–545.
- Karlsson M and Clerwall C (2018) Transparency to the rescue? *Journalism Studies* 19(13): 1923–1933.
- Karlsson M, Clerwall C and Nord L (2014) You ain't seen nothing yet: transparency's (lack of) effect on source and message credibility. *Journalism Studies* 15: 668–678.
- Karlsson M, Clerwall C and Nord L (2017) Do not stand corrected: transparency and users' attitudes to inaccurate news and corrections in online journalism. *Journalism & Mass Communication Quarterly* 94(1): 148–167.
- Knudsen E and Johannesson MP (2019) Beyond the limits of survey experiments: how conjoint designs advance causal inference in political communication research. *Political Communication* 36(2): 259–271.
- Knudsen E, Dahlberg S, Iversen MH, et al. (2021) How the public understands news media trust: an open-ended approach. *Journalism*. Epub ahead of print 31 March. DOI: 10.1177/14648849211005892.
- Kohring M (2019) Public trust in news media. In: Vos TP, Hanusch F, Dimitrakopoulou D, et al. (eds) *The International Encyclopedia of Journalism Studies*. Hoboken, NJ: Wiley-Blackwell, pp. 1–6.
- Kohring M and Matthes J (2007) Trust in news media: development and validation of a multidimensional scale. *Communication Research* 34: 231–252.
- Kosmidis I and Firth D (2010) A generic algorithm for reducing bias in parametric estimation. *Electronic Journal of Statistics* 4: 1097–1112.
- Maiti T and Pradhan V (2008) A comparative study of the bias corrected estimates in logistic regression. *Statistical Methods in Medical Research* 17(6): 621–634.
- Masullo GM, Curry AL, Whipple KN, et al. (2021a) The story behind the story: examining transparency about the journalistic process and news outlet credibility. *Journalism Practice* 16: 1287–1305.
- Masullo GM, Lee T and Riedl MJ (2021b) Signaling news outlet credibility in a Google search. *Journalism & Mass Communication Quarterly*. Epub ahead of print 17 December. <https://doi.org/10.1177/10776990211047964>
- McFadden D (1974) Conditional logit analysis of qualitative choice models. In: Zarembka P (ed.) *Frontiers of Econometrics*. New York: Academic Press, pp. 105–142.
- McGlone MS, Aronson J and Kobrynowicz D (2006) Stereotype threat and the gender gap in political knowledge. *Psychology of Women Quarterly* 30(4): 392–398.
- Metzger MJ and Flanagin AJ (2013) Credibility and trust of information in online environments: the use of cognitive heuristics. *Journal of Pragmatics* 59: 210–220.
- Metzger MJ, Flanagin AJ, Eyal K, et al. (2003) Credibility for the 21st century: integrating perspectives on source, message, and media credibility in the contemporary media environment. *Annals of the International Communication Association* 27(1): 293–335.
- Mummolo J (2016) News from the other side: how topic relevance limits the prevalence of partisan selective exposure. *The Journal of Politics* 78(3): 763–773.
- Newman N, Fletcher R, Kalogeropoulos A, et al. (2019) *Reuters Institute Digital News Report 2019*. Available at: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/inline-files/DNR_2019_FINAL.pdf
- Newman N, Fletcher R, Schulz A, et al. (2021) *Reuters Institute Digital News Report 2021*. Reuters Institute for the Study of Journalism, University of Oxford. Available at: <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2021/>

- Nielsen RK (2015) *Local Journalism: The Decline of Newspapers and the Rise of Digital Media*. London: I.B. Tauris.
- Nyhan B and Reifler J (2010) When corrections fail: the persistence of political misperceptions. *Political Behavior* 32(2): 303–330.
- Ognyanova K, Lazer D, Robertson RE, et al. (2020) Misinformation in action: fake news exposure is linked to lower trust in media, higher trust in government when your side is in power. *Harvard Kennedy School Misinformation Review*. Available at: <https://doi.org/10.37016/mr-2020-024>
- Peifer JT and Meisinger J (2021) The value of explaining the process: how journalistic transparency and perceptions of news media importance can (sometimes) foster message credibility and engagement intentions. *Journalism & Mass Communication Quarterly* 98(3): 828–857.
- Pelzer E (2019) The potential of conjoint analysis for communication research. *Communication Research Reports* 36(2): 136–147.
- Revers M (2017) *Contemporary Journalism in the US and Germany: Agents of Accountability*. New York: Palgrave Macmillan.
- Santos Júnior EG and Becker ML (2015) Assessoria de Imprensa e Jornalismo da Fonte: um mapeamento do conteúdo da comunicação pública da Assembleia Legislativa do Paraná. *Comunicação Pública* 10(19). Available at: <http://journals.openedition.org/cp/1110>
- Seawright J and Gerring J (2008) Case selection techniques in case study research: a menu of qualitative and quantitative options. *Political Research Quarterly* 61(2): 294–308.
- Strömbäck J, Tsfati Y, Boomgaarden H, et al. (2020) News media trust and its impact on media use: toward a framework for future research. *Annals of the International Communication Association* 44(2): 139–156.
- Stroud NJ (2011) *Niche News: The Politics of News Choice*. New York: Oxford University Press.
- Taber CS and Lodge M (2006) Motivated skepticism in the evaluation of political beliefs. *American Journal of Political Science* 50: 755–769.
- Tandoc EC and Thomas RJ (2017) Readers value objectivity over transparency. *Newspaper Research Journal* 38(1): 32–45.
- Tandoc EC, Lim ZW and Ling R (2018) Defining “fake news.” *Digital Journalism* 6(2): 137–153.
- Tseng S and Fogg BJ (1999) Credibility and computing technology. *Communications of the ACM* 42(5): 39–44.
- Valeriani A and Vaccari C (2016) Accidental exposure to politics on social media as online participation equalizer in Germany, Italy, and the United Kingdom. *New Media & Society* 18(9): 1857–1874.
- Victoria-Mas M, Lacasa-Mas I and Marimon F (2018) Assessing the consumer-based brand equity of news media firms: a new validated scale. *Journal of Media Business Studies* 15(3): 214–235.
- Wasserman H and Madrid-Morales D (2019) An exploratory study of “fake news” and media trust in Kenya, Nigeria and South Africa. *African Journalism Studies* 40(1): 107–123.
- Weeks BE (2015) Emotions, partisanship, and misperceptions: how anger and anxiety moderate the effect of partisan bias on susceptibility to political misinformation. *Journal of Communication* 65(4): 699–719.
- Westerwick A, Kleinman SB and Knobloch-Westerwick S (2013) Turn a blind eye if you care: impacts of attitude consistency, importance, and credibility on seeking of political information and implications for attitudes. *Journal of Communication* 63(3): 432–453.
- Yamamoto M and Nah S (2018) A multilevel examination of local newspaper credibility. *Journalism & Mass Communication Quarterly* 95(1): 76–95.

Author biographies

Gina M Masullo (PhD, Syracuse University, USA) is Associate Director of the Center for Media Engagement and an Associate Professor in the School of Journalism and Media, both at the University of Texas at Austin, USA. Her research focuses on how the digital space both connects and divides people and how that influences society, individuals, and journalism. She is the author of *Online Incivility and Public Debate: Nasty Talk* and *The New Town Hall: Why We Engage Personally with Politicians* and co-editor of *Scandal in a Digital Age*. She spent 20 years as a newspaper journalist before becoming a professor. Her research has been published in *New Media & Society*, *Journalism*, *Social Media + Society*, and *Computers in Human Behavior*, among other journals.

Claudia Wilhelm (PhD, Friedrich Schiller University Jena, Germany) is an Assistant Professor at the Department of Communication, University of Vienna, Austria. Her research focuses on media use, the role of gender in digital media environments, and changes in the journalist–audience relationship in the digital age. Her research received third-party funding from the EU and the Austrian Research Fund (FWF) and has been published in *Information, Communication & Society*, *New Media & Society*, *Journalism*, *Communication Research*, *Journal of Broadcasting & Electronic Media*, *Behaviour & Information Technology*, and *Sex Roles*.

Taeyoung Lee (MA, Indiana University, USA) is a doctoral candidate in the School of Journalism and Media, at the University of Texas at Austin, USA. Her research focuses on how various forms of political communication in the changing media environment contribute to fostering, reinforcing, or undermining democratic values. Her research has been published in *Journalism & Mass Communication Quarterly*, *Mass Communication and Society*, and *Computers in Human Behavior*, among other journals.

João Gonçalves (PhD, University of Minho, Portugal) is an Assistant Professor at the Department of Media and Communication, Erasmus School of History, Culture and Communication, Erasmus University Rotterdam, Rotterdam, the Netherlands. His research focuses on the intersection between artificial intelligence technologies and democratic values. He manages three EU-funded Horizon 2020 Projects and his research has been published in *New Media & Society*, *Journalism*, *International Journal of Press/Politics*, and the *Journal of Computer-Mediated Communication*.

Martin J Riedl (PhD, University of Texas at Austin, USA) is a postdoctoral fellow at the Center for Media Engagement and a research associate with the Technology and Information Policy Institute, both at the University of Texas at Austin, USA. His research interests include platform governance, digital journalism, and dis/misinformation. His work has been published in *Computers in Human Behavior*, *Information, Communication & Society*, and *Digital Journalism*, among other journals.

Natalie J Stroud (PhD, Annenberg School for Communication, University of Pennsylvania, USA) holds the E. M. “Ted” Dealey Professorship in the Business of Journalism, is a Professor in the Department of Communication Studies and the School of Journalism and Media, and is the founding and current Director of the Center for Media Engagement (<https://mediaengagement.org/>) at the University of Texas at Austin, USA. Her research has received national and international awards, including the International Communication Association’s (ICA) Outstanding Book Award for her book *Niche News: The Politics of News Choice* and the inaugural Public Engagement Award from the Journalism Studies Division of ICA.