Most Read Versus Most Shared:

How Less (vs. More) Social Popularity Labels Influence News Media Consumption

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ABSTRACT

News outlets commonly highlight the most popular content using different labels (e.g., “most read” and “most shared”). As prior research has found that people primarily consume news for information or entertainment, it is important to understand what these popularity labels convey about the information value and entertainment value of articles and how they shape consumers’ news preferences and decisions. Nine lab and field studies, including two in the web appendix, demonstrate that labels reflecting less social behavior (e.g., “most read”) signal higher information (vs. entertainment) value, while labels reflecting more social behavior (e.g., “most shared”) signal higher entertainment (vs. information) value. Thus, consumers with information motives prefer less social popularity labels, a stronger signal of information value. Conversely, consumers with entertainment motives prefer more social labels, a stronger signal of entertainment value. Notably, an analysis of 120 major media outlets revealed that 73% use labels that are misaligned with readers’ dominant motives (or use no label at all), indicating considerable room for improvement. Reassuringly, this work finds that strategically using popularity labels can increase clicks by over 20%. This has implications for media outlets aiming to spur engagement as well as researchers and organizations concerned with information dissemination.

Keywords: social influence, media consumption, word-of-mouth, inferences, online news

The news media plays an important role in the lives of consumers. From setting the agenda for public discourse to influencing political processes to spotlighting and disseminating popular culture to tracking economic and commercial developments, the ways in which news affects us are manifold. Indeed, consumers read the news for a variety of reasons, chief among them being information acquisition and entertainment (Rubin 2009; Tsfati and Cappella 2005). Furthermore, the news stories consumers encounter can impact their beliefs and opinions (Ecker et al. 2022), behavior (Han et al. 2019), and mental wellbeing (Relihan et al. 2023).

As 86% of American adults consume news online and 52% prefer online news sources (Pew 2021a), it is important to understand the factors that may influence news consumption in a digital setting. One prevalent feature of online news outlets are labels such as "most read," "most shared," and "trending" that highlight the most popular content (Ferrucci 2020). These popularity labels appear in different locations and formats, from section headers on homepages (e.g., *The Wall Street Journal*'s "Most Popular News" section), to subpages devoted to compiling popular content (e.g., www.nytimes.com/trending/), to annual year-end articles listing an outlet's most popular content (e.g., "The most-read *Vogue Business* stories of 2023"). We propose that popularity labels may systematically shape consumers' expectations about articles and ultimately influence engagement decisions.

Although popularity labels appear interchangeable—after all, most labels provide normative information about what interests other people—one core distinction is the type of engagement that they reflect. Popularity can reflect various behaviors, from what people do *personally* (e.g., clicking, reading) to what they do *socially* (e.g., sharing, commenting). Akin to prior distinctions between less social online behavior—"focusing on the information itself...without directly interacting with others"—and more social online behavior—"posting,

sharing, and commenting" (Hoffman, Novak, and Kang 2017, 216), we posit that these popularity labels can range from less social (e.g., "most read" or "most viewed") to more social (e.g., "most shared" or "most emailed"). For example, at the less social end of the spectrum, *The Washington Post* lists the "most read" articles on their website. At the more social end of the spectrum, *The New York Times* lists the "most shared articles on Facebook" and "most emailed articles." Furthermore, news outlets may utilize both ends of the spectrum simultaneously—*The Guardian* features not only the "most viewed" articles (i.e., a less social label) but also the "most commented" and "most shared" article (i.e., more social labels) (see web appendix A).

Our central contention is that consumers use popularity labels to infer the relative information and entertainment value of news articles and determine what content will satisfy their media consumption motives. By "information value," we mean the extent to which content is useful, relevant, and edifying (Berger 2014); by "entertainment value," we mean the extent to which content is generally enjoyable, which can include other dimensions such as amusement and interestingness (Berger 2014; Berger and Milkman 2012; Chen and Berger 2013). While *any* popularity label may suggest that a featured article excels on multiple attributes (i.e., information *and* entertainment value), consumers may infer the *relative* strength of these two attributes from a particular label. We posit that less social popularity labels convey relatively higher information (vs. entertainment) value, while more social popularity labels convey relatively higher entertainment (vs. information) value. Accordingly, under an information goal, consumers will prefer a less social popularity label (e.g., "most read"); conversely, under an entertainment goal, they will prefer a more social popularity label (e.g., "most shared"). That is, consumers seek content whose attributes are congruent with their motives (Katz et al. 1973; Rubin 1984, 2009).

Critically, it appears that many media outlets are unaware of the potential impact of

popularity labels on consumers' decisions. In fact, a pilot study examining 120 major media outlets found that only 16.67% use popularity labels that match consumers' primary goal for visiting the outlet (i.e., information or entertainment motives), while the remaining outlets either use mismatching labels (49.17%) or no label at all (34.17%) (see study S1 in web appendix B). Ultimately, as we show in this paper, this mismatch can undermine engagement.

The primary contribution of this research is investigating a substantive phenomenon—the effect of popularity labels on news media consumption—that has received little attention in the literature. Recent work has called for more research exploring news media and drivers of news consumption decisions (Mende, Vallen, and Berry 2021). Marketing researchers have explored different elements of the news media context, from macro-level factors like media bias (Gal-Or, Geylani, and Yildirim 2012; Zhu and Dukes 2015) and news media as legitimation (Humphreys and Thompson 2014) to micro-level factors like the presence of outbound links (Roos, Mela, and Shachar 2020), the introduction of mobile news apps (Xu et al. 2014), and referral source effects (Bar-Gill, Inbar, and Reichman 2021; Sismeiro and Mahmood 2018). However, research has not examined tactics for promoting specific articles, such as the widespread use of popularity labels. Beginning to fill this gap, we show that popularity labels varying in sociality signal an article's relative information versus entertainment value, which ultimately drives news consumption decisions. More broadly, as news outlets are particularly interested in attracting and sustaining attention (Berger, Moe, and Schweidel 2023), it is important to examine how different features of their platforms contribute to or detract from this objective.

The present work provides guidance on when marketers in the news industry should employ different types of popularity labels to influence engagement. One implication is that media outlets seeking to emphasize information (entertainment) value and satisfy information

(entertainment) motives should favor less (more) social popularity labels. Based on our pilot study, however, over 70% of major media outlets currently use suboptimal or no popularity labels (see web appendix B). This represents a substantial missed opportunity industry-wide, as click-through rates (CTR) were 24-29% higher when popularity labels matched (vs. mismatched) consumers' goals (studies 1 and 6). Thus, this research can help media outlets better align their functional objectives with their content promotional tactics. Furthermore, given the impact of news consumption on our beliefs and behavior (Ecker et al. 2022; Han et al. 2019), coupled with the rapid spread of fake news online (Vosoughi, Roy, and Aral 2018), this research can inform policy regarding how to combat misinformation.

From a theoretical standpoint, we offer a nuanced understanding of social proof in news consumption. We further the understanding of social influence by uncovering differences in ostensibly similar sources of influence (John et al. 2017; Tu and Fishbach 2015; Watson, Ghosh, and Trusov 2018). Extending the distinction between less social and more social online behavior (Hoffman et al. 2017) into the domain of popularity, we show that popularity that varies in sociality can have different effects on preferences depending on consumers' motives.

CONCEPTUAL DEVELOPMENT

There are three key components of our theorizing. First, consumers have multiple motives for reading news (e.g., information acquisition and entertainment) and prefer articles that they expect to fulfill their motive. Second, popularity labels are a form of social influence used by media outlets, but labels can vary in their social basis. Third, less (vs. more) social popularity labels differentially signal the functional attributes of news articles. While less social

labels send a stronger signal of an article's information value and attract consumers with information acquisition motives, more social labels send a stronger signal of entertainment value and attract those with entertainment motives. We discuss these premises in greater detail below.

Media Consumption Motives Determine News Preferences

According to uses and gratifications theory, consumers actively seek news to satisfy a host of motives, and the primary motive for news consumption is the desire for useful information (Katz et al. 1973; Rubin 1984, 2009; Ruggiero 2000; Tsfati and Cappella 2005). People often read news for utilitarian purposes—to obtain information that facilitates everyday life and to learn about current events in the world, their society, and their community (Rubin 1984, 2009). However, media scholars have also identified several psychological drivers of news consumption (Tsfati and Cappella 2005), prominent among which is the need for entertainment or amusement (Katz et al. 1973; Rubin 1984, 2009). That is, beyond its informational value, news can offer people temporary diversions and escape from the stressors of daily life.

These different motives—information acquisition and entertainment—can shape news preferences. A core principle of goal pursuit is the notion that active goals increase the value of things that are instrumental for goal attainment (Förster, Liberman, and Friedman 2007). Thus, if consumers seek news articles to fulfill specific motives, then they should prefer articles that signal instrumentality in satisfying the active motive. When the motive is information, they should look for cues that an article will offer high quality information. Likewise, when the motive is entertainment, they should look for cues that the article will offer high quality entertainment. While this seems straightforward, the sheer abundance of articles published each

day—and the multitude of channels through which to access these articles—can make it difficult for consumers to identify the content that will best satisfy their needs. How, then, do consumers decide on which articles to click, and what are the factors that can influence this decision?

Media Consumption and Social Influence

In uncertain situations, people look to the decisions of others to guide their own behavior (Cialdini 2001). Consistent with this principle, we propose that consumers are sensitive to others' news consumption decisions and use such information as a signal of quality. Providing a source of social influence, many media outlets use popularity labels to indicate what content their audience is engaging with the most.

A modest but growing body of work explores phenomena concerning social influence in the news media domain. Much of the extant work focuses on factors that motivate the sharing of news, from the attributes of the content to the characteristics of the consumer (Barasch and Berger 2014; Berger 2011; Berger and Milkman 2012; Chen and Berger 2013; Milkman and Berger 2014). A core takeaway from this literature is that social influence—persuading others, forming social bonds, or managing impressions of oneself—is a key driver of social transmission (Berger 2014). Although this work elucidates what drives news sharing, it does not explore what drives consumers' news consumption decisions in the first place.

One study that began to shed light on this topic, Mahmood and Sismeiro (2017), found that Facebook users are 12% more likely to visit news outlets on which their Facebook friends are active. However, this study of network effects addressed the likelihood of visiting the platform, but not engagement with any specific content, which is the focus of the present work.

Focusing on article-level decisions and more impersonal sources of social influence, Schulz, Shehu, and Clement (2019) examined drivers of article purchases and returns on a pay-per-article news platform. They found that the number of likes an article received increased sales of the article and decreased article returns. In other words, information about other people's evaluations of news articles influenced individuals' own decisions about what news to consume. By focusing on likes, Schulz and colleagues illuminate the effects of other people's explicitly valenced judgments of news content, but not the effects of other social proof cues that are less explicitly valenced (e.g., reads and shares). This distinction is important, as online likes are often less persuasive than information about consumers' more meaningful actions (John et al. 2017), and media outlets have a variety of engagement metrics at their disposal.

In general, when news platforms use engagement metrics (e.g., the number of reads or shares) to highlight the popularity of content, they are conveying normative information, which can have a substantial effect on consumers' decisions (Burnkrant and Cousineau 1975; Cialdini and Goldstein 2004; Goldstein, Cialdini, and Griskevicius 2008). Designations such as "most read" and "most shared," which suggest many people are engaging with the content, should make the highlighted content more attractive to others. Beyond conveying that many people are engaging with content, popularity labels can specify *how* people engaged with the content—that is, whether the engagement was less or more social—which we posit can signal information about the content's attributes.

Popularity Labels Signal the Multiple Functions of News

Closely tied to the notion that consumers have different motives for reading the news is

the idea that outlets produce news articles to serve different functions (Katz et al. 1973; Rubin 2009; Wright 1960). The principal function of news media is to provide critical information and knowledge, but a secondary function of news media is to provide entertainment (Berger and Milkman 2012; Rubin 2009; Wright 1960). As popularity labels are indicators of social proof, they may generally convey that the information and entertainment value of an article are both high; however, the specific behavior underlying the popularity label (e.g., reading or sharing) may indicate the *relative* strength of these attributes. We propose that less (vs. more) social popularity labels differentially signal the information and entertainment value of news articles. Specifically, less (vs. more) social popularity labels will send a stronger signal of an article's information value. That is, labels indicating that many other people have read an article (e.g., "most read") convey that the article provides high quality information and knowledge to the readers. Indeed, if people mainly read news articles to gain information, then an article that has been read by many should be perceived as rich in information. Accordingly, consumers should expect articles under less social popularity labels to be relatively high in information value.

On the other hand, more (vs. less) social popularity labels (e.g., "most shared") should send a relatively stronger signal of an article's entertainment value. Akin to Berger (2014, 590), who defines entertainment as content that is "interesting, surprising, funny, or extreme" and thus considers interestingness as a component of entertainment value (see also Berger and Milkman 2012; Chen and Berger 2013), we conceptualize entertainment value as including interestingness, or the capacity to hold attention. However, we acknowledge that being interesting may be necessary but not sufficient for being entertaining.

To the extent that sharing implies that an individual has not only read an article but also deemed it valuable enough to disseminate, one could reasonably expect more social popularity

labels to signal higher information value. However, many consumers share articles without ever reading them. For example, 59% of links shared on Twitter/X are never opened, indicating that consumers frequently retweet stories without reading beyond the headline (Gabielkov et al. 2016). Furthermore, beyond sharing to transmit useful information, consumers often share articles to connect with others and manage impressions (Berger 2014). To this end, people are more likely to share entertaining content, which can engender more favorable impressions of the sender (Berger and Milkman 2012; Berger 2014). Insofar as what people share is perceived as a reflection of themselves, sharing entertaining articles should cast people in a more positive light and make them more attractive to others. Thus, if consumers are more inclined to share entertaining articles, then they may correspondingly believe that content curated under more (vs. less) social popularity labels (e.g., "most shared") will be relatively high in entertainment value.

Furthermore, research on self-other decision making has found that choices made for others (vs. oneself) are more hedonic and indulgent (Lu, Liu, and Fang 2016; Lu, Xie, and Xu 2013). Thus, people may infer that articles listed under more social popularity labels like "most shared"—content chosen for others to consume—will be more entertaining. Additionally, we may expect more social popularity labels to be stronger signals of entertainment value because these labels reflect public (vs. private) behavior. By definition, sharing is more public than reading; it is possible to read an article without anybody else knowing, but it is not possible to share an article without anybody else knowing. Much like choices made for others, public contexts tend to promote hedonic decisions (Ratner and Hamilton 2015). Given this, consumers may expect articles denoted by more social popularity labels (i.e., content that people engage with in a more public sense) to be more entertaining. As the labels "most read" and "most shared" exemplify the two ends of the sociality spectrum, we use these labels throughout the

paper to operationalize less social and more social popularity labels. Stated formally:

H1a: Consumers will expect more information value from articles labeled "most read" (vs. "most shared").

H1b: Consumers will expect more entertainment value from articles labeled "most shared" (vs. "most read").

As previously discussed, active news consumption motives should shape consumers' preferences for articles whose popularity labels signal higher information value (i.e., less social labels) or higher entertainment value (i.e., more social labels). When consumers have an information acquisition goal, they should be more attracted by less social popularity labels (e.g., "most read"), which more strongly signal the information value of an article. Furthermore, given that information acquisition is the predominant motive for media consumption (Rubin 1984), consumers should have a baseline inclination toward less social popularity. That is, the default preference should be for articles described with less social popularity labels, as these can facilitate attainment of a goal that is typically active in the context of news consumption. However, when entertainment motives are active, consumers should be more attracted by more social popularity labels (e.g., "most shared"), which send a stronger signal of an article's entertainment value. Stated formally:

H2a: When information acquisition motives are active, consumers will prefer articles labeled "most read" to articles labeled "most shared."

H2b: When entertainment motives are active, consumers will prefer articles labeled "most shared" to articles labeled "most read."

OVERVIEW OF STUDIES

We test these predictions in nine studies that examine consumers' evaluations and choices of news articles. A pilot study establishes that the sociality of popularity labels signals an article's information and entertainment value. Additionally, we demonstrate the fit between readers' information (entertainment) motives and the label "most read" ("most shared"), which exemplifies low (high) sociality. A second pilot study (see study S1 in web appendix B) examines whether major media outlets use labels that match consumers' perceived goals for visiting the outlets (i.e., information or entertainment). Study 1 examines the real-world effect of "most read" and "most shared" labels on CTR in a Facebook A/B test. Importantly, study S2 (web appendix E) conceptually replicates these findings in the lab.

The remaining studies explore the underlying mechanism. Study 2 tests whether expected information and entertainment value mediate the effect of "most read" (vs. "most shared") labels on article reading intentions. Study 3 measures information and entertainment goals and tests their effects on choice between "most read" and "most shared" articles. Further investigating motives, study 4 tests whether the effect of manipulated information (vs. entertainment) goals on article choice is mediated by the weight placed on an article's information (vs. entertainment) value. Next, given that choices for others tend to be more indulgent (Lu, Liu, and Fang 2016; Lu, Xie, and Xu 2013), study 5 manipulates self-other choice to assess whether choosing for others

(vs. oneself) heightens preferences for "most shared" articles (i.e., content aligned with entertainment goals). Finally, a second Facebook A/B test—this time, a longitudinal field study—examines how exogenous variation in information motives moderate the effect of popularity labels on CTR (study 6). Specifically, focusing on a Thanksgiving recipe article, we investigate whether the effect of labeling the article as "most read" versus "most shared" on CTR differs before Thanksgiving—when information motives are higher—and after Thanksgiving—when information motives for reading the article are lower.

PILOT STUDY: PERCEPTIONS OF POPULARITY LABELS

This pilot study had three objectives. First, we examined whether the sociality of popularity labels influences consumers' expectations of the information and entertainment value of news articles. Second, we tested the assumption that "most read" and "most shared"—the two labels used to operationalize sociality throughout the rest of the paper—exemplify low and high sociality, respectively. Third, we measured perceptions of the alignment between different popularity labels and consumers' information and entertainment motives.

Method

Two hundred and two U.S. participants (53.96% women, M_{age} = 44.08, SD = 13.24) from Amazon Mechanical Turk (MTurk) completed a survey about media consumption. Sample size was predetermined, with a target of 200 participants, and there were no exclusions. First, participants rated their perceptions of the information value (*informative*, *educational*, *important*;

α = .90) and entertainment value (*entertaining*, *enjoyable*, *amusing*; α = .86) of labels "based on social behaviors" and "based on nonsocial behaviors" (1 = not at all, 7 = very much).

Next, participants rated their perceptions of the sociality of the labels "most shared" (MS) and "most read" (MR) using two items: the extent to which each label reflects social behavior (0 = not at all, 6 = very much) and how much social interaction each label reflects (0 = no social interaction at all, 6 = a lot of social interaction"). We averaged responses to these sociality perception measures (r = .75 for MR; r = .67 for MS).

In the third section of the survey, participants answered questions about the perceived fit between each popularity label and different motives. First, they rated their agreement that when they click on an MS or MR article, their primary goal is "to be informed" and "to be entertained" using 7-point Likert scales. Next, they rated their expectations that when they click on a MS or MR article, the content will be "informative" and "entertaining" (1 = not at all, 7 = very much). We averaged the two information goal items (r = .75 for MR; r = .76 for MS) and the two entertainment goal items (r = .81 for MR; r = .66 for MS). See web appendix C for all measures.

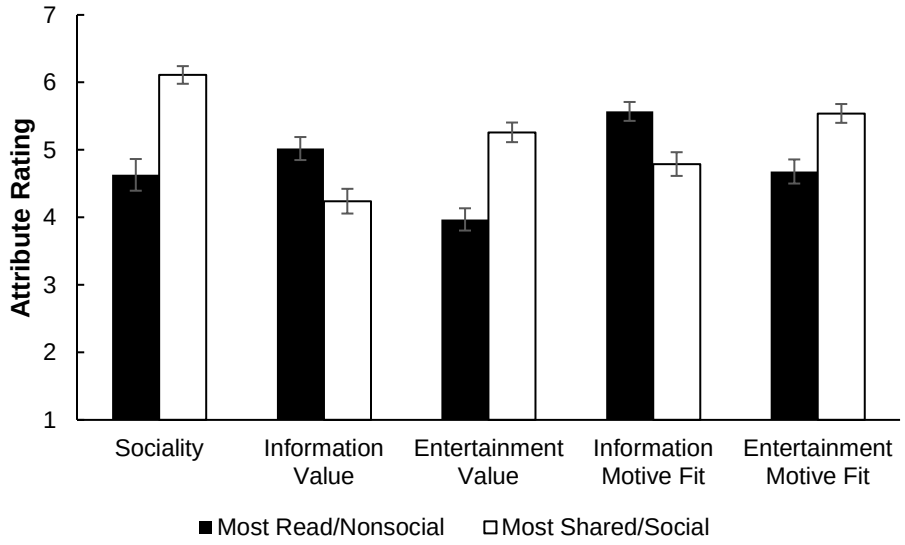
Results

Information and Entertainment Value Conveyed by Labels. As predicted, a paired samples t-test indicated that popularity labels reflecting "nonsocial behaviors" (M = 5.02, SD = 1.24) convey higher information value than labels reflecting "social behaviors" (M = 4.24, SD = 1.33; $t(201) = 6.56$, $p < .001$, d = .46). Conversely, social labels (M = 5.26, SD = 1.05) convey higher entertainment value than nonsocial labels (M = 3.97, SD = 1.19; $t(201) = 12.41$, $p < .001$, d = .87). Furthermore, nonsocial labels convey higher information value than entertainment

value ($t(201) = 10.82$, $p < .001$, $d = .76$), while social labels convey higher entertainment value than information value ($t(201) = 9.86$, $p < .001$, $d = .52$) (see figure 1).

FIGURE 1

POPULARITY LABEL PERCEPTIONS (PILOT STUDY 1)



NOTE.—Information and entertainment value are ratings of "nonsocial" and "social" labels. All other DVs are ratings of "most read" and "most shared." Sociality was measured on a 0-6 scale, so we recoded it to 1-7 in this figure to maintain consistency with all other DVs. Error bars represent the 95% CI.

Sociality of MR and MS Labels. Supporting our use of MR [MS] to operationalize less [more] social labels, a paired samples *t*-test revealed that consumers perceive the MS label ($M = 5.11$, SD = .95) to reflect significantly more social behavior than the MR label ($M = 3.63$, SD = 1.70; $t(201) = 11.92$, $p < .001$, $d = .84$). Further, both MS ($t(201) = 31.71$, $p < .001$, $d = 2.23$) and

MR ($t(201) = 5.27$, $p < .001$, $d = .37$) were rated significantly higher than the midpoint of the sociality scale (3) based on one-sample *t*-tests, suggesting that all popularity labels inherently convey sociality (see figure 1).

Label-Goal Fit. Demonstrating the fit between the MR [MS] label and information [entertainment] motives, in a paired samples *t*-test, participants perceived that clicking on an MR article ($M = 5.57$, SD = 1.02) corresponds more strongly with information goals than clicking on an MS article ($M = 4.79$, SD = 1.27; $t(201) = 8.858$, $p < .001$, $d = .62$). Similarly, clicking on an MS article ($M = 5.54$, SD = 1.01) corresponds more strongly with entertainment goals than clicking on an MR article ($M = 4.68$, SD = 1.29; $t(201) = 8.73$, $p < .001$, $d = .61$). Furthermore, MR had a higher fit with information goals than entertainment goals ($t(201) = 7.66$, $p < .001$, $d = .54$), while MS had a higher fit with entertainment goals than information goals ($t(201) = 6.89$, $p < .001$, $d = .48$) (see figure 1).

Despite differences in their correspondence with information goals, both MR ($t(201) = 22.03$, $p < .001$, $d = 1.55$) and MS ($t(201) = 8.86$, $p < .001$, $d = .62$) were rated higher than the midpoint of the scale based on one-sample *t*-tests. Similarly, despite differences in their correspondence with entertainment goals, both MR ($t(201) = 7.48$, $p < .001$, $d = .53$) and MS ($t(201) = 21.66$, $p < .001$, $d = 1.52$) were rated higher than the midpoint of the scale.

Discussion

The results of this pilot study provided preliminary support for hypotheses 1a and 1b. As expected, participants perceived popularity labels derived from “nonsocial” behaviors as stronger

signals of an article's information value and labels derived from "social" behaviors as stronger signals of an article's entertainment value. Critically, the findings do not suggest that nonsocial labels indicate a lack of entertainment value or social labels indicate a lack of information value; rather, our results suggest that the sociality of popularity labels indicates which attribute—entertainment or information—is *relatively* stronger. Indeed, both types of labels were rated highly on information and entertainment value alike; however, nonsocial labels conveyed more information value than entertainment value, while social labels conveyed more entertainment value than information value.

Beyond revealing the attributes conveyed by "nonsocial" and "social" popularity labels as general categories, this pilot study verified the underlying sociality of the specific popularity labels MR and MS. As expected, we found that MS reflects significantly more sociality than MR; thus, we should expect that it conveys relatively more entertainment value and less information value (and the opposite for MR). Finally, we demonstrated consumers' perceived fit between expected attribute levels and motives: informative [entertainment] motives corresponded to a greater perceived fit with an MR [MS] label.

Having tested consumers' perceptions of different popularity labels, we next examine their impact in a real-world context. Specifically, study 1 tests the effects of popularity labels on CTR in a Facebook field study.

STUDY 1: REAL-WORLD EFFECT OF POPULARITY LABELS ON CLICK-THROUGH RATES

The goal of study 1 was to provide evidence that popularity labels can have real-world

consequences for news consumption. We utilized the Facebook Ads platform to conduct a field study that measured click-through rates (CTR) for a news article framed as "most read" versus "most shared." In the focal article, a transportation engineer discussed the benefits of roundabouts. We expected—and verified in a pretest—that consumers' desire for information (vs. entertainment) would be a stronger driver of interest in this article. Given our theory, we predicted that CTR would be higher when the article was framed as "most read" than when it was framed as "most shared."

Pretest

We recruited 100 participants from the CloudResearch Connect platform (46.00% women, M_{age} = 36.99, SD = 11.44). Participants were shown the news article without a popularity label and asked the pair of questions, "If someone clicks on this article, to what extent do you think they are seeking information [entertainment]?" (1 = not at all, 7 = very much). Next, to evaluate the alternative explanation that participants may simply be more likely to click an article with a popularity label that they are more accustomed to seeing, we asked two pairs of questions: "On Facebook, how common is it for you to see lists of the "Most Read" ["Most Shared"] articles?" and "On Facebook, how common is it for you to see advertisements that describe articles as "Most Read" ["Most Shared"]?" (1 = very uncommon, 7 = very common) (r_{Most_Read} = .66, r_{Most_Shared} = .77; see web appendix D).

As predicted, a paired-samples *t*-test revealed that participants expected stronger information (vs. entertainment) motives for clicking the focal article (M_{info} = 5.97, SD = 1.10; M_{ent} = 2.77, SD = 1.54; $t(99) = 14.94$, $p < .001$, d = 1.49). Furthermore, ruling out the alternative

explanation based on frequency of exposure to different popularity labels, participants encountered the label "Most Read" (M = 3.65, SD = 1.63) less commonly than the label "Most Shared" (M = 3.88, SD = 1.75, $t(99) = 2.20$, $p = .031$, $d = .22$) on Facebook. Thus, based on this pretest, we can expect to see a higher CTR in this "Most Read" (vs. "Most Shared") condition, and this will not be due to the higher prevalence of "Most Read" labels on Facebook. We now proceed to the main study.

Method

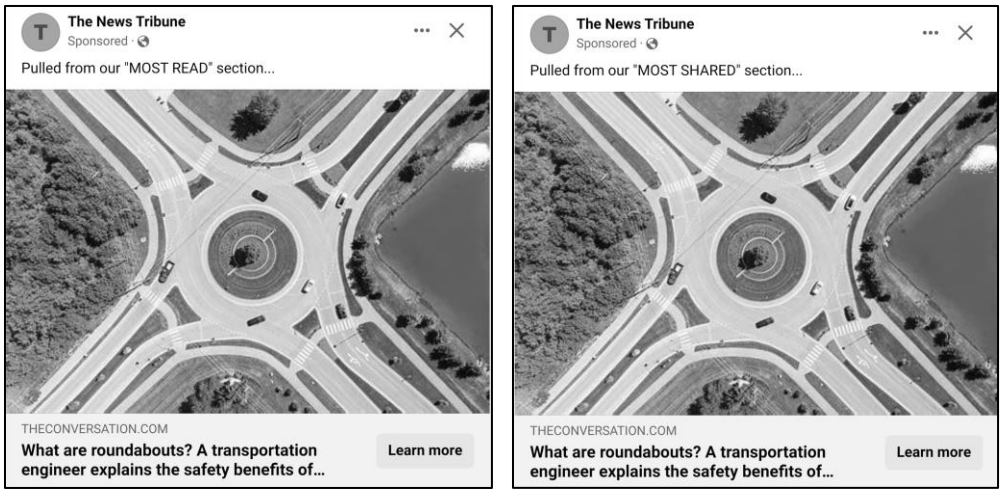
Facebook Ad Platform Settings. We conducted this study on the Facebook Ads platform, which offers various campaign objectives and performance goals for optimizing ad delivery. For the campaign objective, we selected "traffic," which aims to maximize traffic to the ad. For the performance goal, we selected "maximize number of link clicks," which targets users who are most likely to click the links in the ads. We specified a target audience of U.S. residents who were at least 18 years old. We limited ad placement to the Facebook Feed, which allowed us to avoid potential confounds from running the ad on other platforms, (e.g., Instagram), or areas of Facebook (e.g., video feeds). Our ad set featured two separate ads—one for each condition—and was set to run for four days at a budget of $10 per ad per day.

Focal Article. The target article was titled "What are roundabouts? A transportation engineer explains the safety benefits of these circular intersections" and was advertised by a news aggregator page, *The News Tribune*, which we created for the purpose of this study. When users clicked the link, they were redirected to the actual news article on *The Conversation'*s website. To manipulate the popularity label, the headline of the advertisement stated, "Pulled

from our ‘MOST READ [SHARED]’ section.” See figure 2 for the desktop ad and web appendix D for the mobile ad (which have the same image and text but slightly different dimensions).

FIGURE 2

AD STIMULI USED IN STUDY 1



Results

Our outcome of interest was unique CTR, the number of individuals who clicked on the ad as a proportion of the unique individuals who were exposed to the ad (i.e., reach). Because the campaign results are delivered in aggregate, we conducted *z*-tests to evaluate CTR differences between the conditions. As a measure of robustness, we also considered *total* CTR as a secondary measure. This utilizes the same numerator (clicks) but divides it by the total times an ad was shown (i.e., impressions). Although unique CTR is considered a better measure than total CTR because it reduces potential bias stemming from differences in exposure among consumers, we report both for thoroughness and transparency.

Unique CTR. Overall, 14,319 unique consumers were exposed to the news ads. The unique CTR was 5.69%. Consistent with our prediction, CTR was significantly higher when the advertisement promoted the MR article (6.32%) rather than the MS (5.10%, $z = 3.16$, $p = .002$).

Total CTR. Overall, the news advertisement was shown 15,060 times, and the total CTR was 5.41%. Consistent with the prior results, the MR article (5.93%) resulted in a significantly higher CTR than the MS article (4.91%, $z = 2.75$, $p = .006$).

Discussion

Study 1 offered preliminary evidence for the effect of popularity labels. Aligned with our hypothesis, the MR popularity label yielded a significantly greater CTR (unique and total) for a news article than the MS label. In fact, the relative lift ranged from about 21% (total CTR) to 24% (unique CTR). Of note, we conceptually replicated these results in a controlled lab experiment (see study S2 in web appendix E), suggesting these effects are not due to selection effects associated with Facebook's ad display algorithm.

Although we did not have direct insight into consumers' media consumption motives, the superior performance of "most read" over "most shared" is consistent with expectations derived from prior literature, which states that information acquisition motives are the dominant driver of news consumption (Rubin 1984, 2009). Furthermore, the subject matter of the highlighted article appears more aligned with information than entertainment, and the pretest confirmed that information (vs. entertainment) motives were more active when considering this particular

article. In the subsequent studies, we directly measure or manipulate motives to ascertain their role in guiding news consumption decisions. Having provided initial evidence of the relative advantage of the MR (vs. MS) label in a real-world setting, we now turn to the lab to bolster causality and provide insight into the underlying process.

STUDY 2: MEDIATION VIA EXPECTED INFORMATION AND ENTERTAINMENT VALUE

The objective of study 2 was to provide direct support for the underlying process. In line with prior literature, we propose that both expected information value and entertainment value will mediate article reading intentions. Thus, we manipulated whether an article was described as MR or MS, measured expected information and entertainment value as mediators, and measured reading intentions as the key outcome.

Method

Four hundred and two U.S. participants (50.25% women, M_{age} = 39.85, SD = 11.62) from MTurk were randomly assigned to the MR or MS popularity label condition. Sample size was predetermined, with a target of 400 participants, and there were no exclusions. Participants first read an introduction describing the different ways that news outlets organize their stories. To ensure elaboration on these points, they were asked open-ended questions about their most and least favorite labels and why. Next, participants were told to imagine searching for an article on "consumer technology trends" when they come across one under the "most read [shared] news

section." To assess reading intentions, participants responded to the questions "How likely would you be to click on this article?" and "How likely would you be to read this article?" on -3 (extremely unlikely) to +3 (extremely likely) scales (r = .92). To assess sharing intentions, participants responded to the question "How likely would you be to share this article?" using a similar 7-point scale. Measuring sharing intentions enables us to test, and rule out, an alternative explanation whereby popularity labels prime particular behaviors that consumers simply match. Under this account, encountering the label "most read" should increase reading intentions, while encountering the label "most shared" should increase sharing intentions.

To ensure that the popularity label manipulation did not alter participants' weighting of article attributes, we then measured how important it was that the article would provide them with *entertainment*, *knowledge*, and *things to share with other people* on 7-point scales (1 = not at all important, 7 = extremely important). Next, participants rated their expected information value (*important*, *informative*, *knowledge-filled*; α = .95), expected entertainment value (*entertaining*, *enjoyable*, *fun*; α = .92), and expected social value (can help you: *fit in with others*, *make friends*, *improve social interactions*; α = .93) on 7-point scales (1 = not at all, 7 = very much). We included expected social value to test a potential alternative mechanism based on the idea that people may draw different inferences about the social utility of content that is widely read versus widely shared. Following this, as a manipulation check, participants rated their agreement that they had imagined encountering an article in the MR and MS sections of a news website (1 = strongly disagree, 7 = strongly agree). Finally, they reported basic demographics. See web appendix F for the exact wording of all measures.

Results

Manipulation Check. As expected, a one-way ANOVA revealed that participants in the MR (vs. MS) condition reported higher agreement that they imagined encountering an article in the MR section of a news website (M_{MR} = 6.22, SD = 1.17; M_{MS} = 3.15, SD = 2.24; $F(1, 400)$ = 297.81, $p < .001$, $\eta_p^2 = .43$). Conversely, those in the MS (vs. MR) condition reported higher agreement that they imagined encountering an article in the MS section of a news website (M_{MR} = 2.59, SD = 1.97; M_{MS} = 6.11, SD = 1.25; $F(1, 400) = 456.02$, $p < .001$, $\eta_p^2 = .53$).

Importance of Article Attributes. Consistent with our expectations, one-way ANOVAs revealed nonsignificant effects of the popularity label on the *importance* of information value ($F(1, 400) = .13$, $p = .722$, $\eta_p^2 = .00$), entertainment value ($F(1, 400) = .06$, $p = .812$, $\eta_p^2 = .00$), and social value ($F(1, 400) = 1.54$, $p = .216$, $\eta_p^2 = .004$) when choosing an article. That is, although the labels may signal different levels of article attributes, they do not influence consumers' weighting of these attributes.

Additionally, to test the claim that information motives are the primary driver of news consumption, we conducted a mixed ANOVA with popularity labels as the between-subjects factor and attribute (information value, entertainment value, and social value) as the within-subjects factor. This revealed significant differences among the attributes ($F(2, 800) = 289.65$, $p < .001$, $\eta_p^2 = .42$). As expected, pairwise comparisons indicated that information value (M = 5.73, SD = 1.34) was rated as significantly more important than both entertainment value (M = 4.20, SD = 1.80, $p < .001$) and social value (M = 3.29, SD = 1.96, $p < .001$). There was no interaction with label ($F(2, 800) = 1.30$, $p = .273$, $\eta_p^2 = .003$. This further indicates that information motives are the default motive for news consumption.

Behavioral Intentions. Consistent with hypothesis 2a, a one-way ANOVA revealed that the MR label (M = .89, SD = 1.58) increased reading intentions relative to the MS label (M = .53, SD = 1.76; $F(1, 400) = 4.68$, $p = .031$, $\eta_p^2 = .01$). Furthermore, a one-way ANOVA on sharing intentions yielded a nonsignificant effect ($F(1, 400) = .76$; $p = .385$, $\eta_p^2 = .002$). This rules out the alternative explanation that there is a simple matching or priming mechanism at play, which would predict that MS increases sharing intentions relative to MR.

Expected Information, Entertainment, and Social Value. Supporting hypothesis 1a, a one-way ANOVA revealed that expected information value was significantly higher when the article was described as MR (M = 5.15, SD = 1.61) than MS (M = 4.75, SD = 1.63; $F(1, 400) = 6.11$, $p = .014$, $\eta_p^2 = .02$). Supporting hypothesis 1b, a similar analysis revealed that expected entertainment value was significantly lower when the article was described as MR (M = 4.44, SD = 1.43) than MS (M = 4.75, SD = 1.47; $F(1, 400) = 4.52$, $p = .034$, $\eta_p^2 = .01$). Lastly, an ANOVA on expected social value yielded a nonsignificant effect of popularity labels ($F(1, 400) = .21$, $p = .648$, $\eta_p^2 = .001$).

Relative Information vs. Entertainment Value. Given our interest in the relative attribute comparisons, we also computed a difference score of attribute value (expected information value – expected entertainment value). Thus, a positive (negative) score indicates an expectation that the article has relatively greater information (entertainment) value. In line with our previous analyses, a one-way ANOVA found that relative expected information (vs. entertainment) value

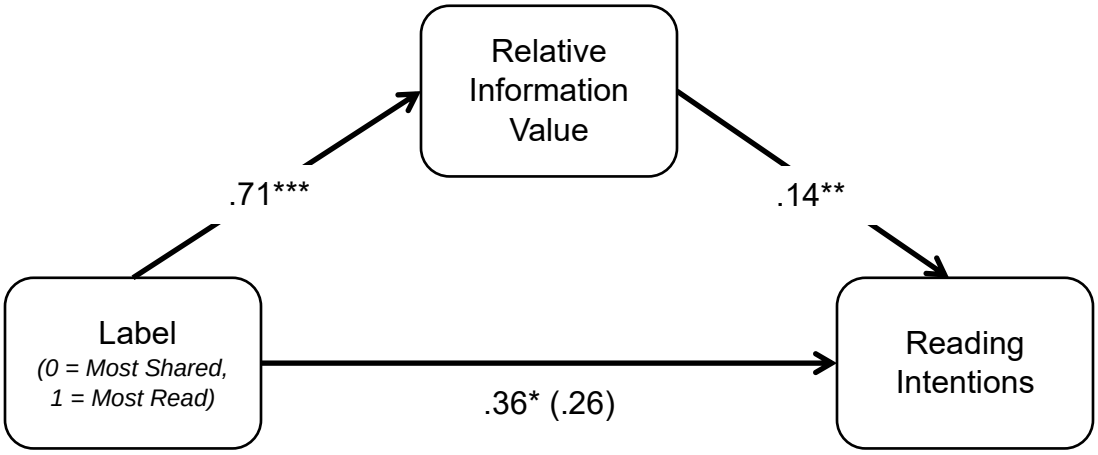
was significantly higher when the article was described as MR (M = .71, SD = 1.71) than when it was described as MS (M = .002, SD = 1.48; $F(1, 400) = 19.68$; $p < .001$, $\eta_p^2 = .05$).

Parallel Mediation via Expected Information and Entertainment Value. We conducted a parallel mediation analysis using PROCESS (Hayes 2018; model 4; 5,000 bootstrapped samples). Specifically, we tested whether expected information value and expected entertainment value mediated the effect of the popularity label (0 = MS, 1 = MR) on reading intentions. This model yielded a significant positive indirect effect through expected information value (b = .18, SE = .08, $CI_{95\%}$ = [.03, .34]) and a significant negative indirect effect through expected entertainment value (b = -.10, SE = .05, $CI_{95\%}$ = [-.21, -.01]). Describing an article as "most read" (vs. "most shared") increased the expected information value, which increased reading intentions; conversely, describing an article as "most read" (vs. "most shared") decreased the expected entertainment value and, consequently, reading intentions (see web appendix F).

Mediation via Relative Information vs. Entertainment Value. Our theory posits that the MR and MS labels differ in the *relative* information versus entertainment value that they convey. Accordingly, we additionally tested a mediation model that replaced the two parallel mediators with a single mediator—the computed difference score of information (vs. entertainment) value. This model also yielded a significant indirect effect through the relative information (vs. entertainment) value (b = .10, SE = .05, $CI_{95\%}$ = [.02, .21]) (see figure 3 and web appendix F). The MR label increased the relative expected information (vs. entertainment) value, which positively predicted reading intentions. Conceptually, these two mediation models tell similar stories, but given our focus, we plan to utilize the difference score in subsequent studies.

FIGURE 3

MEDIATING EFFECT OF RELATIVE INFORMATION VALUE (STUDY 2)



NOTE.—All coefficients are unstandardized, and the value in parentheses is the coefficient when including the mediator in the regression. *$p < .05$, **$p < .01$, ***$p < .001$.

Discussion

Study 2 provided direct evidence of our proposed mechanism: MR and MS labels signal different levels of information and entertainment value, and these expected attributes mediate consumers' intentions to read a news article. The results of study 2 also rule out an alternative explanation based on priming. Such a mechanism would predict that describing an article as "most shared" (vs. "most read") should increase sharing intentions, just as "most read" (vs. "most shared") increased reading intentions. However, we did not find evidence of this.

Rather than a priming mechanism, we proposed that MR and MS popularity labels differentially signal an article's information and entertainment value, and consumers' motives for reading the news determine their preference for more informative versus more entertaining

content. In the next study, we further examine this proposed process by measuring consumers' motivations for reading the news and testing their effects on the choice between articles with MR and MS popularity labels.

STUDY 3: THE UNDERLYING ROLE OF MEDIA CONSUMPTION MOTIVES

The objective of study 3 was to test the prediction that consumers' media consumption motives will influence their preferences for articles labeled as MR (vs. MS). Furthermore, we employed a choice paradigm to demonstrate the robustness of the phenomenon. Specifically, we measured participants' information acquisition and entertainment motives along with their choice between two articles described as MR and MS to assess whether motives predict choice.

Method

Two hundred and twenty U.S. MTurk participants (49.09% women, M_{age} = 40.83, SD = 13.55) completed a survey about media consumption. Sample size was predetermined, with a target of 200 participants, and four participants were excluded for failing the attention check, resulting in a final sample of 216.

Participants were told that they would select an article from *BBC News* and answer some questions about it. Next, participants reported their entertainment motives ("To what extent are you seeking an entertaining/amusing/enjoyable article?"; α = .87) and their information acquisition motives ("To what extent are you seeking a useful/important/educational article?"; α = .81) on 7-point scales (1 = not at all, 7 = very much), and we computed a relative measure of

information versus entertainment motives, as in study 2. For exploratory purposes, we also assessed their longevity motive: participants rated the extent to which they sought an article that "will be relevant in the future," "people [would] care about in the future," and "will be interesting to people for a long time" ($\alpha = .93$) on similar 7-point scales. Following this, participants chose between "the most shared article on bbc.com today" and "the most read article on bbc.com today."

To reinforce the cover story, participants were then presented with the article that they had supposedly chosen. Unbeknownst to participants, everybody was given the same article, regardless of their choice. After reading the article, participants rated their attitude toward the article, the quality of the article, and their likelihood of sharing the article. As these measures were included solely to bolster the cover story, we do not discuss them further. See web appendix G for complete details of all procedures.

Results

A chi-square goodness of fit test revealed that participants significantly preferred the MR article (57.87%) to the MS article (42.13%; $\chi^2(1, N = 216) = 5.35$, $p = .021$).

To test the key prediction that media consumption motives underlie preferences between MR and MS articles, we regressed article choice on the relative motive measure. This logistic regression yielded a significant positive effect of relative information (vs. entertainment) motives ($b = .35$, Wald $\chi^2(1, N = 216) = 15.05$, $p < .001$).[1] Thus, greater relative information motives,

[1] Including longevity motives in the model yielded a nonsignificant effect of longevity (b = .06, Wald $\chi^2(1) = .34$, p = .560), while the effect of relative motives remained significant (b = .33; Wald $\chi^2(1) = 10.76$, p < .001).

increased the likelihood of selecting the MR (vs. MS) article. See web appendix G for analyses using the raw motive measures rather than a difference score.

Discussion

Supporting hypotheses 2a and 2b, study 3 found that consumers' stated news consumption motives predicted their preferences between articles labeled MR (vs. MS). In study 2, consumers inferred an article's information and entertainment value from its popularity label, and these inferences mediated their reading intentions. Building on this, study 3 showed that consumers' own desire for information versus entertainment further drove their news article preferences. This suggests that congruency between one's own consumption motives and inferences derived from the labels is a critical driver of engagement. Thus, taken together, studies 2 and 3 provide convergent evidence for the mechanism through which popularity labels impact news consumption.

Notably, participants showed a baseline preference for an article labeled MR (vs. MS) popularity label, as the majority chose the MR article. However, article choice ultimately depended upon consumers' motives for reading the news—relatively higher information (vs. entertainment) motives increased choice of the MR article, while higher entertainment (vs. information) motives increased choice of the MS article. Correspondingly, when dichotomizing participants based on their choice, one-sample *t*-tests indicated that those who selected the MR article had a stronger relative information (vs. entertainment) motive (M_{diff} = .46, SD = 1.59, $t(124) = 3.22$, $p = .002$, $d = .29$); conversely, those who selected the MS article had a weaker

relative information (vs. entertainment) motive (M_{diff} = -.51, SD = 1.77, $t(90)$ = -2.74, p = .007, d = -.29).

In study 3, we did not directly measure expectations of the article's information and entertainment attributes. Rather, we assumed that participants' article expectations mirrored their choices—that is, people with stronger information (entertainment) motives would select the article that they expected to provide more information (entertainment) value. In the next study, we directly account for expected article attributes by measuring how news consumption motives affect the importance placed on an article's expected information versus entertainment value and, subsequently, preferences for articles labeled MR (vs. MS).

STUDY 4: MEDIA CONSUMPTION MOTIVES DETERMINE WEIGHTING OF ARTICLE ATTRIBUTES

Study 4 aimed to further explore the underlying role of news consumption motives by manipulating information acquisition versus entertainment goals and measuring how this influences the importance consumers place on an article's information and entertainment value. Using a choice paradigm like in study 3, we examined whether the relative importance of an article's information (vs. entertainment) value mediated the effect of motives on preferences for articles with less (vs. more) social popularity labels. Additionally, to test the assumption that information acquisition is the default motive for news consumption, we compare a no-motive control condition to the information acquisition and entertainment motive conditions.

Method

Three hundred and sixty-two participants (50.28% women, M_{age} = 39.75, SD = 11.60) from MTurk completed a survey about media consumption. Sample size was predetermined, with a target of 360 participants, but 10 participants were excluded for failing the attention check, resulting in a final sample of 352. As in study 3, participants were told that they would be selecting an article from *The Guardian* and asked some questions about it. In the control condition, they read, "Specifically, you should select the article that you personally prefer". In the information motive condition, they read, "Specifically, you should select the article that you think will be the most informative and educational to you." Lastly, in the entertainment motive condition, they then read, "Specifically, you should select the article that you think will be the most entertaining and amusing to you." Before they could advance, they were asked, "Which article are you supposed to select on the following page?" and chose from a list of the three motives. Participants could only advance once they made the correct choice for their condition.

On the next page, participants chose between "the most read article on theguardian.com today" and "the most shared article on theguardian.com today." They then rated the weight they placed on the article's information value ("...how important was it to you that the article was informative/educational/knowledge-providing?"; α = .96) and entertainment value ("...how important was it to you that the article was entertaining/amusing/enjoyable?"; α = .93) on 7-point scales (1 = very unimportant, 7 = very important). As in prior studies, we computed a difference score to create a measure of the relative importance of information (vs. entertainment) value.

As a manipulation check, participants then indicated what their assigned goal was in the study (1 = choose an article that I personally prefer, 2 = choose an article that will be most informative to me, 3 = choose an article that will be most entertaining to me). Finally, we

measured potential covariates and basic demographics. See web appendix H for complete details of all procedures.

Results

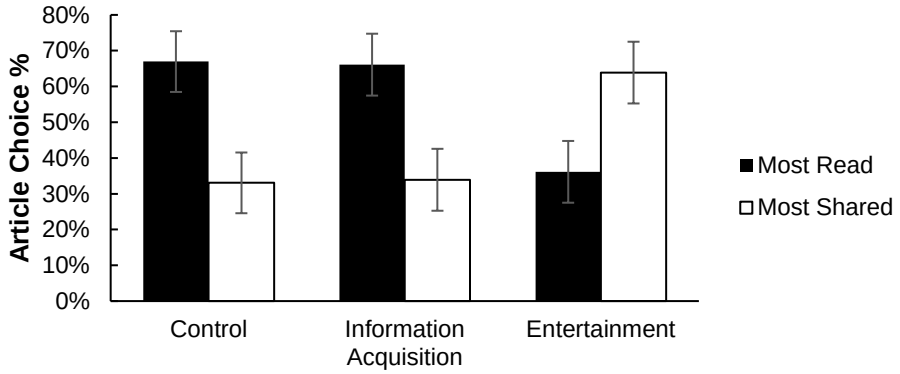
Manipulation Check. Confirming the effectiveness of our manipulation, a chi-square test revealed significant differences in the selected goals across the different motive conditions ($\chi^2(4, N = 352) = 640.42$, $p < .001$, Cramer's $V = .95$). As expected, participants in the information motive condition (99.13%) were significantly more likely to choose the information goal than those in the entertainment motive condition (3.36%, $z = 14.65$, $p < .001$) and the control condition (3.39%, $z = 14.61$, $p < .001$). Similarly, participants in the entertainment motive condition (95.80%) were significantly more likely to choose the entertainment goal than those in the information motive condition (0%, $z = 14.66$, $p < .001$) and the control condition (.85%, $z = 14.62$, $p < .001$). Lastly, participants in the control condition (95.76%) were significantly more likely to choose the control goal than those in the information motive condition (.87%, $z = 14.49$, $p < .001$) and the entertainment motive condition (.84%, $z = 14.62$, $p < .001$).

Article Choice. A chi-square test of independence revealed a significant effect of news consumption motives on article choice ($\chi^2(2, N = 352) = 29.58$, $p < .001$, Cramer's $V = .29$). Supporting hypothesis 2b, the percentage of participants who chose the MS article was significantly higher in the entertainment motive condition (63.87%) than in both the information acquisition condition (33.91%, $z = 4.58$, $p < .001$) and the control condition (33.05%, $z = 4.75$, $p < .001$). That is, activating an entertainment motive significantly increased the preference for an

article with a more (vs. less) social popularity label (see figure 4). Notably, there was no significant difference in article preferences between the control and information acquisition conditions (z = .14, p = .89).

FIGURE 4

EFFECT OF NEWS CONSUMPTION MOTIVE ON ARTICLE CHOICE (STUDY 4)



NOTE.—Error bars represent the 95% CI.

We also examined participants' article preferences within each goal condition. Supporting hypothesis 2a, participants in the information acquisition condition had a significant preference for the MR (vs. MS) article, with 66.09% choosing the former over the latter ($\chi^2(1, N = 115) = 11.90, p < .001$). A similar pattern arose in the control condition, where 66.95% chose the MR (vs. MS) article ($\chi^2(1, N = 118) = 13.56, p < .001$). However, in the entertainment condition, this preference was reversed: here, 36.13% chose the MR (vs. MS) article ($\chi^2(1, N = 119) = 9.15, p = .002$). Thus, preferences for the article labeled MR (vs. MS) prevailed under an information acquisition motive but not under an entertainment motive.

Relative Weighting of Article Attributes. A one-way ANOVA revealed a significant effect

of news consumption motives on the relative importance of an article's expected information (vs. entertainment) value ($F(2,349) = 185.00$, $p < .001$, $\eta_p^2 = .52$). Planned contrasts demonstrated that, compared to the control condition ($M = .42$, SD = 1.76), an information motive significantly increased the relative weighting of the article's information (vs. entertainment) value ($M = 2.73$, SD = 2.05; $t(231) = 9.27$, $p < .001$, $d = 1.21$). Similarly, compared to the entertainment motive condition ($M = -2.33$, SD = 2.22), an information motive increased the relative weighting of the article's information (vs. entertainment) value ($t(232) = 18.13$, $p < .001$, $d = 2.37$). Conversely, compared to the control condition, an entertainment motive significantly decreased the relative weighting of the article's information (vs. entertainment) value ($M = -2.33$, SD = 2.22; $t(235) = -10.58$, $p < .001$, $d = -1.37$).

Additionally, we conducted one-sample *t*-tests comparing the mean relative attribute weightings to zero in each of the three motive conditions. The mean relative weighting was significantly greater than zero in both the control condition ($t(117) = 2.59$, $p = .011$, $d = .24$) and the information motive condition ($t(114)$ 14.31, $p < .001$, $d = 1.33$), indicating that participants placed more importance on the article's expected information value than on its expected entertainment value. However, in the entertainment motive condition, the mean relative weighting was significantly less than zero ($t(118) = -11.47$, $p < .001$, $d = -1.05$), indicating that participants placed more importance on the article's expected entertainment value than on its expected information value.

Mediation via Relative Weighting of Article Attributes. Using PROCESS (Hayes 2018; model 4; 5,000 bootstrapped samples), we tested whether the relative importance of an article's information (vs. entertainment) value mediated the effect of news consumption motives on

article choice. This analysis yielded a significant indirect effect whereby an information (vs. entertainment) goal increased the relative weighting of the article's information (vs. entertainment) value, which consequently increased the choice of the MR article (b = 1.21, SE = .33, $CI_{95\%}$ = [.64, 1.93]).

We also tested mediation using the control group as the reference category. Here, an information goal (vs. control) increased the relative weighting of the article's information (vs. entertainment) value, which consequently increased the choice of the MR article (b = .55, SE = .16, $CI_{95\%}$ = [.29, .90]). Conversely, an entertainment goal (vs. control) decreased the relative weighting of the article's information (vs. entertainment) value, which consequently decreased the choice of the MR article (and, correspondingly, increased the choice of the MS article) (b = -.66, SE = .18, $CI_{95\%}$ = [-1.06, -.35]). See web appendix H for analyses using the raw importance measures rather than the difference score.

Taken together, these results support hypotheses 2a and 2b. When consumers hold information acquisition goals, they place relatively higher importance on an article's potential information (vs. entertainment) value, which increases preferences for the less social label. However, when consumers hold entertainment goals, they place relatively higher importance on entertainment (vs. information) value, thereby increasing preferences for the more social label.

Discussion

Building on the previous studies, Study 4 directly manipulated, rather than measured, news consumption motives to test how they influence consumers' weighting of article attributes and their preferences for the popularity label MR (vs. MS). In doing so, we provided additional

evidence for our proposed mechanism. In combination with studies 2 and 3, we have provided substantial evidence of the underlying role of expected information and entertainment value and have demonstrated that the importance of these attributes depends on consumers' specific goals for reading the news. Naturally, consumers with information acquisition motives placed greater emphasis on an article's expected information value, leading them to choose the article described as MR—a less social label that conveys higher information value. In contrast, those with entertainment motives placed greater weight on an article's expected entertainment value, heightening preferences for the MS article—a more social label that conveys higher entertainment value.

The results of this study also help illuminate consumers' baseline news consumption motives and suggest that information acquisition motives predominate. Supportively, article preferences did not significantly differ in the control and information motive conditions. Moreover, in the control condition, the mean relative attribute weighting was significantly greater than zero, suggesting that even in the absence of any explicitly primed goals, consumers prioritized information value over entertainment value.

In study 5, we take a more subtle approach to examining the role that news consumption motives play in shaping consumers' preferences for widely read (vs. widely shared) articles. We manipulate whether participants choose an article for others (vs. for themselves), which should promote preferences for more indulgent (i.e., entertaining) content (Lu et al. 2016; Lu et al. 2013). From a practical standpoint, many consumption decisions are made for others or with others in mind (Liu, Dallas, and Fitzsimons 2019), and choices for others often diverge from choices for oneself (Kurt and Inman 2012; Polman 2012). Accordingly, it is important to understand whether media choices made for oneself mirror choices made for others.

STUDY 5: CHOOSING FOR ONESELF VERSUS OTHERS

The objective of study 5 was to demonstrate the context-dependent nature of preferences between less and more social popularity labels using a more subtle manipulation of news consumption motives. Rather than directly manipulating goals as in study 4, we asked participants to choose an article for themselves and to also choose what they believe others would prefer. Critically, this self-other manipulation helps test the notion that MS popularity labels signal an article's entertainment value, a key aspect of our theorizing. When making decisions on behalf of others, consumers tend to favor more indulgent alternatives (Lu et al. 2016; Lu et al. 2013). Thus, insofar as MS (vs. MR) popularity labels convey an article's enhanced entertainment value, choosing for others (vs. oneself) should increase preferences for articles with such labels (i.e., the more indulgent option).

Method

Two hundred and fifty U.S. MTurk participants (47.60% women, M_{age} = 37.24, SD = 12.70) completed this study. As in studies 3 and 4, participants were told that they would choose an article to read (here, from *New York Magazine*) and then answer some questions about it. Next, participants chose between the "the most read article on nymag.com today" and "the most shared article on nymag.com today." Unlike the previous studies, participants chose both what they personally preferred and what they think most people would prefer, and we counterbalanced the order of these choices. Participants then read the article that they purportedly chose for

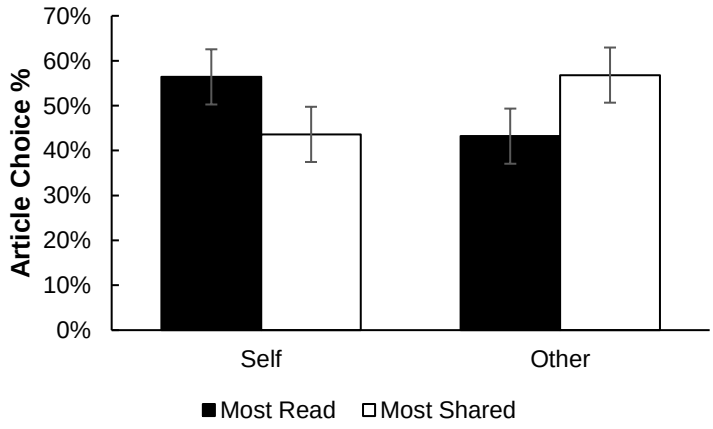
themselves and completed article comprehension measures, followed by demographic measures (see web appendix I).

Results

We conducted a pair of chi-square goodness-of-fit tests to evaluate preferences for oneself and preferences for others. As predicted, we found that when choosing for oneself, the majority of people (56.40%) preferred the "most read" article to the "most shared" article, which was significantly higher than chance ($\chi^2(1, N = 250) = 4.10$, $p = .043$). Conversely, when choosing for others—that is, in a context that should heighten entertainment motives—the majority (56.80%) preferred the "most shared" article to the "most read" article, and this too was significantly higher than chance ($\chi^2(1, N = 250) = 4.62$, $p = .032$; see figure 5). Furthermore, self-other order did not influence choices for oneself ($\chi^2(1, N = 250) = .17$, $p = .678$) or choices for others ($\chi^2(1, N = 250) = 2.24$, $p = .134$).

FIGURE 5

ARTICLE CHOICE FOR ONESELF AND OTHERS (STUDY 5)



NOTE.—Error bars represent the 95% CI.

Critically, we also conducted McNemar's chi-square test for repeated categorical measures. Supporting hypothesis 2b, this revealed that choosing for others (vs. oneself) significantly decreased the proportion who selected the MR article and, correspondingly, increased the proportion who selected the MS article ($\chi^2(1, N = 250) = 12.96$, $p < .001$). Thus, an article labeled as MS (vs. MR) was more attractive when entertainment motives were more likely to be active.

Discussion

The results of study 5 are consistent with our prediction that entertainment motives will strengthen preferences for news articles denoted by more social (vs. less social) popularity labels (hypothesis 2b). Participants significantly preferred the MR article to the MS article when they were choosing for themselves (i.e., when they should be less desirous of entertaining options). However, when choosing what they believed most others would prefer—that is, when the desire for entertainment should be stronger (Lu et al. 2016)—this preference was reversed. These results underscore the idea that consumers infer entertainment value from the label MS (hypothesis 1a). Given that consumers tend to make more indulgent choices on behalf of others (Lu et al. 2016; Lu et al. 2013), it follows that they should prefer MS articles (i.e., more entertaining articles) when choosing for others, as we observed. Importantly, these results conceptually replicate the findings from studies 3 and 4 using a less direct operationalization of entertainment motives.

Admittedly, these results may also be driven by expectations unrelated to an article's entertainment or information value. Specifically, "most shared" (vs. "most read") may simply be a stronger signal that an article is a safe choice for others, as it indicates that many people believed that others would appreciate it (hence their decision to share it). Critically, this explanation need not include inferences about the entertainment value of the article—the mere status of being widely shared suffices. However, this account is not necessarily inconsistent with our theorizing; it does not address *why* the article was shared to begin with, and the article's entertainment value may still ultimately be at the root of the sharing decision.

STUDY 6: THE MODERATING EFFECT OF TEMPORAL VARIATION IN INFORMATION MOTIVES IN THE FIELD

Rounding out our empirical package, study 6 employed another Facebook Ads field study. Specifically, to provide theoretically and managerially relevant moderation, we capitalized on an exogenous event that should impact information motives. Our theory proposes that the pursuit of information is the prevailing motive for reading the news, although there is heterogeneity in media consumption motives at any given time. Furthermore, we posited that the fit between consumers' motives and the popularity label they encounter should influence their news article choices. To explore this in a field context, we exploited natural temporal variation in the presumed information motive for reading a particular news article and measured how this influenced clicks on an MR versus MS article.

Specifically, the article contained a brief story followed by recipe recommendations for Thanksgiving. We used the same paradigm as study 1 but ran the ads for the article at two

different time periods: immediately *before* and *after* Thanksgiving. We reasoned—and confirmed in a pretest—that consumers' motive to obtain information about Thanksgiving recipes should be especially strong leading up to the holiday, but this motive should decline after the holiday passes because such recipes are less relevant in the immediate aftermath. Accordingly, we predicted that the MR (vs. MS) recipe article should have a higher CTR before Thanksgiving, but this effect should attenuate after Thanksgiving.

Pretest

We recruited 100 U.S. participants from MTurk. Two people who did not answer all key questions were exclude from analyses, leaving a sample of 98 participants (40.82% women, M_{age} = 40.37, SD = 10.81). Participants were shown the news article without a popularity label and asked the pair of questions, "If someone clicks on this article before Thanksgiving, to what extent do you think they are seeking information [entertainment]?" (1 = not at all, 7 = very much). They were then asked the same pair of questions regarding perceived motives if the article was clicked *after* Thanksgiving (see web appendix J).

A 2 (timing: before vs. after) x 2 (motive: information vs. entertainment) repeated measures ANOVA revealed a significant interaction ($F(1, 97) = 42.29$, $p < .001$, $\eta_p^2 = .30$). Pairwise comparisons indicated that participants expected stronger information (vs. entertainment) motives both before Thanksgiving ($M_{info} = 6.17$, SD = .99; $M_{ent} = 3.76$, SD = 1.73; $t(97) = 11.09$, $p < .001$) and after Thanksgiving ($M_{info} = 5.38$, SD = 1.27; $M_{ent} = 4.29$, SD = 1.75; $t(97) = 4.82$, $p < .001$). Furthermore, consistent with our theorizing, information motives were significantly stronger before (vs. after) Thanksgiving ($t(97) = 6.42$, $p < .001$), while

entertainment motives were significantly stronger after (vs. before) Thanksgiving ($t(97) = -3.77$, $p < .001$). Taken together, the pretest suggests that we can expect to see attenuation of the effect of the popularity labels after Thanksgiving, but we should not expect to see a reversal.

Main Study Method

Procedure. This study was conducted on the Facebook Ads platform and followed a similar procedure to study 1 with a few exceptions. We used the same optimization, targeting, and budget settings as study 1. Operationally, we used separate campaigns for the pre- and post-holiday periods. Unlike study 1, which used a single ad set comprising two different ads, each campaign (pre- and post-holiday) in study 6 used two ad sets—one for the "most read" ad and one for the "most shared" ad. We did this to utilize Facebook's dedicated A/B testing feature. Thus, this method provides tighter controls than study 1 and, in demonstrating the core effect across both methods, indicates the robustness of our basic finding.

As previously noted, we exploited an external event—the Thanksgiving holiday—to capture differences in information motives for reading an article about seasonal cuisine. We ran the first ad campaign over the four days leading up to Thanksgiving and the second campaign over the four days following Thanksgiving. We ran no ads on Thanksgiving Day itself. The target article was titled "Creamy Baked Mac and Cheese a reader's family swears by, plus a fresh take on Sweet Potato Casserole." Users who clicked on the link were redirected to the actual news article. Like study 1, we manipulated popularity labels using headlines that stated, "Pulled from our "MOST READ [SHARED] recipes section." See figure 6 for the web stimuli and web appendix J for mobile stimuli.

FIGURE 6

AD STIMULI USED IN STUDY 6

Results

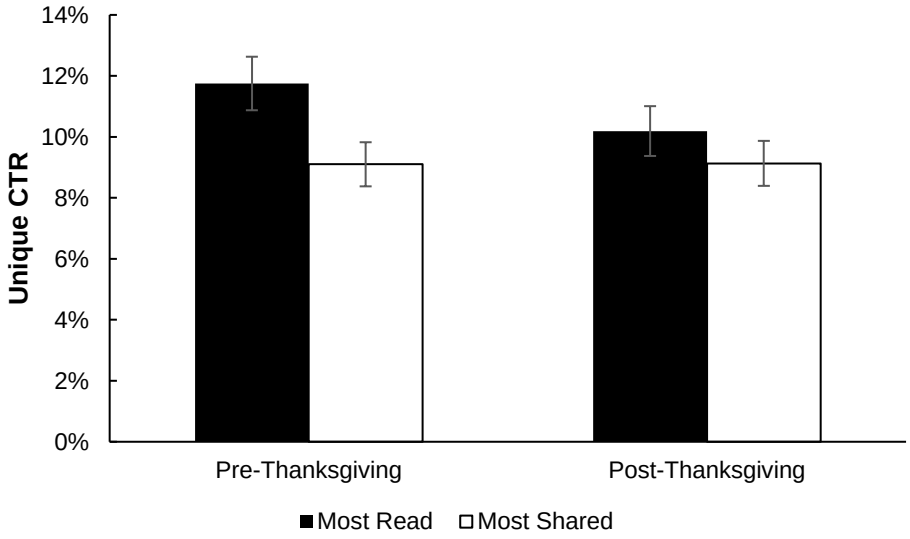
As Facebook only provides aggregated click-through data, we conducted a chi-square test comparing the CTR across all four conditions, followed by *z*-tests for pairwise comparisons. Like study 1, we report the results for unique CTR as well as total CTR.

Unique CTR. Overall, 22,360 unique consumers were exposed to the news ads, and the unique CTR was 9.98%. A chi-square test indicated significant differences in unique CTR across the four conditions ($\chi^2(3, N = 22{,}360) = 28.21$, $p < .001$) (see figure 7). To probe this effect, we conducted a series of *z*-tests. As predicted, before Thanksgiving, the MR label yielded a

significantly greater CTR (11.75%) than the MS label (9.10%, $z = 4.60$, $p < .001$). However, after Thanksgiving, this effect was attenuated: the MR label yielded a unique CTR of 10.19%, while MS had a unique CTR of 9.13% ($z = 1.89$, $p = .058$).

FIGURE 7

UNIQUE CTR PRE- AND POST-THANKSGIVING



NOTE.— Error bars represent the 95% CI.

Examining the other set of contrasts provides additional insight into what is driving the effect. The MR article had a significantly higher CTR before versus after the holiday ($z = 2.55$; $p = .011$), whereas there was no significant difference in the CTR of the MS article before versus after the holiday ($z = .07$; $p = .944$). These results are consistent with the motive inferences obtained in the pretest: The MR (vs. MS) label garnered a higher CTR before the holiday—when information motives should be stronger—but this effect weakened after the holiday—when information motives should subside.

Total CTR. Overall, the news advertisement was shown 26,619 times, and the total CTR was 8.38%. The omnibus chi-square test yielded a significant difference in total CTR among the four conditions ($\chi^2(3, N = 26{,}619) = 26.31$, $p < .001$). Mirroring the results for unique CTR, before Thanksgiving, the MR label generated greater total CTR (9.81%) relative to the MS label (7.78%, $z = 4.15$; $p < .001$). After Thanksgiving, this effect persisted, albeit smaller (P_{MR} = 8.58%, P_{MS} = 7.57%; $z = 2.15$; $p = .032$).

As with unique CTR, we also examined the other set of contrasts. The MR label yielded a significantly higher total CTR before versus after the holiday ($z = 2.38$, $p = .017$), while there was no significant difference in MS across time periods ($z = .47$, $p = .638$). Thus, the pattern of results held across both measures of engagement.

Discussion

This study returned to the field and used the natural temporal variation in reading motives for a particular type of news to demonstrate the moderating effects of motives on consumers' response to different popularity labels. In doing so, we demonstrated a robust preference for the MR article over the MS article, but we also demonstrated that this effect is stronger when the news article can satisfy information motives (i.e., a Thanksgiving recipe article encountered before versus after the holiday). Naturally, this study holds important implications which we address in the General Discussion.

GENERAL DISCUSSION

Over the past 15 years, news industry advertising revenues have fallen precipitously, and circulation revenues have not risen enough to offset this (Pew 2021b). To weather this storm, it is imperative that news outlets understand how different tactics drive audience engagement. As consumer engagement begets advertising revenue, media companies are routinely seeking ways to attract and maintain attention (Lewis 2017). We proposed and found that news popularity labels significantly impact news engagement, and label preferences systematically differ as a function of consumers' active goals for news consumption.

Nine studies, including surveys, a content analysis, lab experiments, and field experiments, supported this account. Building on distinctions between the information and entertainment functions of news media (Rubin 2009; Wright 1960), we demonstrated that the popularity label "most read" sends a stronger signal of an article's relative information (vs. entertainment) value (pilot study and study 2), while "most shared" does the opposite. Moreover, at a baseline, consumers generally prefer content curated under a "most read" (vs. "most shared") popularity label (studies 1-6). However, when entertainment motives are dominant, this pattern attenuates and can even reverse (studies 3-6). Importantly, these effects were robust to different media outlets (e.g., *The BBC, New York Magazine*) and different operationalizations of news consumption motives (i.e., manipulating and measuring motives). Additionally, we supported the theorized mechanism via both mediation (studies 2 and 4) and moderation (studies 5 and 6) and ruled out an alternative process based on priming and matching (study 2).

Underscoring the functional value of popularity labels, we showed how news media outlets can leverage the labels to drive advertising response (studies 1 and 6) and explored how these labels fit into the broader constellation of factors that drive news consumption (study 6).

Specifically, study 6 examined temporal variation in the desire for informative articles and revealed that time can dictate the information value of news content and interact with popularity labels to drive engagement.

Contributions and Implications

Chiefly, this research makes the substantive contribution of demonstrating the effects of different types of popularity labels on news consumption, a topic that has been largely neglected in the literature. Responding to calls for additional research on consumers' news media decisions (Mende et al. 2021), we found that the labeling of popular news content can have a major impact on whether consumers will read it. Specifically, popularity labels can signal an article's information and entertainment value and, ultimately, impact consumption decisions.

From a practical standpoint, these findings can help news outlets decide how best to promote their most popular content. By identifying the goals that most readers have when they visit the website, news outlets can employ the optimal type of popularity label. For outlets whose readers largely seek entertainment (e.g., outlets focusing on pop culture news), it may be more advisable to highlight popular articles using more social labels. Conversely, for outlets whose readers seek information (e.g., outlets focusing on political news), less social labels may prove more effective in driving clicks. According to our content analysis (study S1), most major news outlets use some type of popularity label to promote their articles. However, many rely on labels that are at odds with their audiences' primary motives. Our research suggests that they may be underutilizing the labels at the extremes of the sociality spectrum (i.e., "most read" and "most shared")—labels that strongly convey their content's information or entertainment value.

Relatedly, our findings suggest that media outlets may be able to shape consumers' perceptions of their content based on the type of popularity label they use. If outlets wish to appear more serious and educational, using less social labels like "most read" might help them achieve this. On the other hand, if they wish to appear more entertaining, using more social labels like "most shared" may be the more successful route. Rather than taking drastic measures to alter brand associations, media outlets can apply subtler means like the strategic use of popularity labels. Notably, some outlets may want to evoke both types of perceptions and should consider using different popularity labels in the different sections of their website (e.g., "most read" in *world news* and "most shared" in *pop culture*).

Beyond the managerial implications for increasing media engagement and shaping brand perceptions, this work may prove valuable in efforts to counter the spread of misinformation. Given the far-reaching effects of news on consumers' everyday lives (Ecker et al. 2022; Han et al. 2019; Relihan et al. 2023), the threat of misinformation looms large. By understanding how popularity labels affect what news people consume, policymakers and media platforms can strategically use, or avoid, specific labels to guide consumers' attention away from less credible stories and toward more reliable information.

Regarding theoretical contributions, this work advances the understanding of popularity by demonstrating that it can reflect a continuum of behaviors differing in sociality and examining the consequences for consumer decision-making. Prior research has found that sources of social influence may differ in meaningful ways (John et al. 2017; Watson et al. 2018), but the notion that popularity itself can take many forms that vary in underlying sociality is a novel idea that helps refine the conceptualization of the construct. Building on prior distinctions between less social and more social online behavior (Hoffman et al. 2017), we show that this classification

can be applied to the general construct of popularity to illuminate when and how popularity cues influence media consumption behavior.

Future Directions

This research opens up several avenues for future inquiry. First, we focused specifically on consumers' inferences about information and entertainment value because these attributes reflect the chief functions of news (Wright 1960). However, it is possible that different popularity labels also signal other attributes that may shape news consumption decisions. For example, entertainment value is not the sole determinant of what is widely shared. Rather, consumers are also more likely to share content that is positively valenced, high arousal, and widely relatable (Berger and Milkman 2012; Berger 2014). Thus, more social popularity labels may also convey these other attributes. In a different direction, given the proliferation of misinformation on social media (Lazer et al. 2018), emphasizing that an article is widely shared (vs. widely read) may raise doubts about the trustworthiness of the article. As much of consumer behavior is multiply determined, future research could examine the breadth of inferences drawn from popularity labels, including valence, arousal, relatability, credibility, ephemerality, and a more nuanced understanding of interestingness.

Another promising direction for additional research would be to further explore the situational and dispositional factors that make people more amenable to consuming news content that has been widely shared or that generally reflects more social popularity. Outlets often encourage consumers to share their content, and research has explored the factors that drive consumers to share content (Berger 2014), but less is known about factors that affect the

attractiveness of content known to be widely shared (i.e., articles labeled "most shared"). For example, it would be beneficial to understand how specific platforms and modalities (e.g., news websites vs. news mobile apps vs. social media platforms) influence the appeal of shared content. Regarding dispositional factors, individual differences in the fear of missing out (Przybylski et al. 2013) may heighten consumers' sensitivity to popularity labels and strengthen pursuit of widely shared content. Likewise, distinctiveness motives and the need for uniqueness (Tian, Bearden, and Hunter 2001) may increase consumers' aversion to popularity labels and widely shared articles.

A third opportunity for further research is investigating how popularity labels influence consumption of different types of media. Our nine studies exclusively examined the consumption of news articles. Companies focusing on other types of media, such as videos, music, and podcasts, similarly use engagement metrics and popularity labels to generate interest in their content (e.g., most shared videos; most streamed songs). It would be useful to understand how popularity labels operate in these contexts.

Finally, this research may have implications for the widespread use of social proof in industries beyond media (e.g., retail). Many marketers default to conveying a product's popularity by relying solely on sales metrics (e.g., "top seller" designations). However, it may be useful to explore how highlighting other cues of popularity—specifically, indicators with a social basis, such as the amount of online discussion or number of product links shared—can influence consumers' purchase behavior in retail contexts. Relatedly, comparing a superlative popularity label (e.g., "Most purchased") to a numerical calculation (e.g., "1,000+ purchases") is a ripe area for future research.

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