

Do People Consume the News they Trust?

Incidental News Usage and the High-Choice Media Environment

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ABSTRACT

It is reasonable to expect trusted news organizations to have more engaged users. However, given the lowest levels of trust in media and the several intermediaries involved in digital news consumption, recent studies posit that trust and usage may not be related. We argue that while trust may not relate to overall news usage, given that much of it is incidental, but it could still explain intentional usage. We correlated passively metered usage from digital trace data on 35 national news outlets in the US with their trustworthiness from a nationally representative survey, for three discrete months. We find no association between trust and overall user engagement, but a positive relationship between trustworthiness and direct visits, the latter a measure of intentional usage. These relationships held for outlets despite their partisan leanings, multi-platform presence and their mainstream nature.

CCS CONCEPTS

• **Human-centered computing** → **User studies**; • **Information systems** → *Traffic analysis*;

KEYWORDS

trust; news media; online news; rational choice; trustworthiness; media choice; media use

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†This project began as Katie’s MA thesis at University of Missouri, Columbia.

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CHI 2019, May 4–9, 2019, Glasgow, Scotland UK

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ACM ISBN 978-1-4503-5970-2/19/05...\$15.00

<https://doi.org/10.1145/3290605.3300770>

ACM Reference Format:

Harsh Taneja and Katie Yaeger. 2019. Do People Consume the News they Trust?: Incidental News Usage and the High-Choice Media Environment. In *CHI Conference on Human Factors in Computing Systems Proceedings (CHI 2019), May 4–9, 2019, Glasgow, Scotland UK*. ACM, New York, NY, USA, 10 pages. <https://doi.org/10.1145/3290605.3300770>

1 INTRODUCTION

For news to fulfill its role in a democracy, it is important that people trust the news media. Decreased trust in news organizations, dependent on attention, not only can lead to damaged brand equities and images, but also has financial consequences [18]. News consumers who place more importance on trustworthiness are more engaged with news, are more likely to pay for news [28], and participate more in democratic citizenship. Historically people are known to consume news from organizations they trust. However, eroding audience trust is a major problem facing news organizations today [20]. In 2016, only 32 percent of Americans trusted the news media a great deal or a fair amount - the lowest percentage since 1972, when Gallup started measuring trust in the news [34]. Despite this, news remains an important part of public life.

In a digital-centric world with more sources of information easily accessible to news consumers than ever before, a large part of news consumption tends to be incidental, facilitated through discovery via search engines and social media feeds [6]. Thus, in a highly fragmented news environment, trust in news organizations and a preference for them are not correlated [7]. Given these two considerations - all-time-low trust in news media and a digital news environment where several intermediaries influence choice - our study revisits the relationship between trustworthiness and usage, focusing on two questions: Is trust in news organizations associated with user engagement, and is usage of more trusted news organizations more intentional than usage of less trusted ones? In doing so our study departs from prior studies. We use a theoretical framework that integrates sociologically-based theories of trust, theories of media choice, and previous research on media credibility, skepticism and attention. Given that much of news exposure online is incidental [6], our framework considers people’s

news usage as shaped by a variety of structural factors in addition to rational choice [42]. Relying on passively recorded metered usage data from comScore, instead of questionable self-reported usage [27, 37], this study operationalized usage through two distinct measures: user engagement, which we define in terms of exposure factoring in both usage frequency and time spent with an outlet by an average user [23, 24], and direct visits (user visits to news websites directly upon logon). We correlated these with measures of self-reported audience trust in 35 news sources collected by the Pew Research Center. We found no relationship between trustworthiness and engagement, but a significant positive one between trustworthiness and direct visits. Controlling for outlets' political ideology and multi-platform presence did not alter the relationship between trust and direct visits; however, this relationship does differ somewhat for mainstream and non-mainstream news sources.

2 TRUST, NEWS ORGANIZATIONS AND MEDIA CHOICE

Trust in Media Institutions and News Usage

As a sociological concept, trust is a relational transaction over time between a truster and a trustee [9]. This definition assumes both want to satisfy individual interests and neither will behave opportunistically [9, 15]. Trust includes expectations that the trustee is reliable, and the truster will benefit from interacting with the trustee [9]. In the context of news, audiences expect news organizations to be reliable in order to benefit from consuming the news. Thus, trusting news organizations involves believing in journalism as a professional practice and trusting what news organizations deem as important and therefore choose to cover [17, 21, 34]. This is an example of institutional trust, or trust in public and private establishments; in media, these establishments can be news organizations [44]. This study focuses on institutional trust of news organizations.

Historically, scholars have examined news media trust through credibility, sometimes using trust and credibility synonymously. For example, in some early studies, terms like "trustworthy" and "high credibility," as well as "untrustworthy" and "low credibility," are used interchangeably when describing sources [10]). In turn, newer research uses "trust" but draws heavily from credibility research [16, 40, 41]. Trust and credibility are not necessarily different, mutually exclusive concepts [31]. Some studies even consider credibility, with accuracy and objectivity, to be components comprising trust [40].

Prior studies have associated news media trust and usage with mixed results, some finding a positive relationship [40, 44] and others less so [41]. In either case, specific factors appear to mediate the association. One such factor is

the media platform itself [11]. For example, a study found a positive association between trust of newspaper reporters and attention to newspapers, but not between content trust or institutional trust and attention [44]. It also found a significantly positive association between institutional trust and attention and significantly negative association between online news trust and attention, the latter of which could represent a shift in attention to online content or embrace of television by people who distrust it [44]. Further, the study found no association between Internet news trust and attention, which may be explained by a more critical evaluation of Internet news credibility than traditional news credibility, or by difficulty determining the trustworthiness of Internet news [44].

Others have examined the relationship between news media skepticism and news exposure, finding that the mainstream status of the news organization makes a difference. Two related studies found skepticism to be negatively associated with mainstream news channel exposure and positively associated with non-mainstream news channel exposure [40, 41]. These imply a positive association between trust and mainstream news exposure and negative association between media trust and non-mainstream news exposure. The 2003 study also found no significant difference between skeptics' and non-skeptics' overall news consumption levels but that skeptics consumed less mainstream news and more non-mainstream news than non-skeptics. These findings suggest greater mainstream news consumption by people who trust news more in general. Reasons for this, as [40] posited, could be that in accordance with the uses and gratifications theory, motivations unrelated to trust could make trust less relevant, or that there are fewer alternatives for skeptics of mainstream news.

Yet other research has looked at relationships between news media skepticism and online news exposure. A two-part study by [39] found a significantly negative association between online news exposure and skepticism, which supports a positive relationship between trust and general news media use. When incorporating mediators of mainstream and non-mainstream news - defined as corporate-backed and independent news sources, respectively - both parts found a negative correlation between mainstream online news exposure and skepticism, and only the second part found a positive relationship between mainstream news skepticism and non-mainstream news usage [12, 39]. These findings suggest news type impacts the relationship between trust and exposure. Because the two parts of this study collected data and recruited participants differently, revisiting this question with a consistent, more representative sample could clarify these inconsistencies [39].

Using "mainstream" or "non-mainstream/alternative" as a classification requires further elaboration. Although [40, 41]

studies classify news organizations according to channel and content, there is no universal agreement on which characteristics are "mainstream" or "non-mainstream." These terms can be difficult to define, particularly because something considered non-mainstream in one time and place could be considered mainstream in another [4]. Alternative news organizations can offer social critique, challenge power structures, share radical viewpoints and advocate for change, with more of a focus on analysis than general reporting; mainstream media organizations can be fairly conventional and formulaic with more of a focus on reporting [13]. Some even argue that mainstream and non-mainstream news organizations are on a spectrum [13]. In this study, non-mainstream news organizations refer to those focusing more on analysis and opinions, some of which might share radical viewpoints or advocate for change, and mainstream news organizations refer to ones that produce more formulaic reporting, in the context of the news media landscape from early 2014 to mid-2015.

A principal limitation of many of the studies just reviewed is their heavy reliance on the heavily criticized and misused uses and gratifications framework. For this study, the greatest concern is the assumption the audience always actively selects what to consume; in reality, news consumers are on a spectrum between active and passive, complicating the concept of news media usage [1]. Most studies applying the uses and gratifications (U&G) framework make a somewhat simplistic assumption that all consumption is intentional and driven by rational choice. This is problematic because people do get incidentally exposed to news, and that news may be from organizations they do not trust. Thus, there is a limit to how rational decisions can be; in other words, most decision-making reflects at best bounded rationality [30]. To clarify, the U&G framework itself does not make these assumptions, but the studies that apply it to explain media use do. The framework itself is quite useful, especially to study computer-mediated communication, and has been reconfigured to adapt better to the news media environment [33].

Further, people may not always remember consuming news from organizations they do not trust. When people self-report usage, they may report using news organizations they trust more than news organizations they do not or using news organizations they trust more. In the context of today's news environment, offering consumers even more choices than when these studies were conducted, and with heavy interventions by algorithmic curation, this assumption is even more problematic. What is required instead is a more comprehensive framework to examine the relationship between trust and usage, which we introduce in the following section, that accounts for both intentional and incidental exposure to news.

The Contemporary News Environment

Since previous studies were conducted, the news environment has experienced major changes [23, 36], which could impact the purported trust-usage relationship. First, because of the lower barrier to entry online, new information sources are frequently created, providing more choices than ever before. News consumers have greater access to these online sources than traditional news organizations, which were constrained by physical distribution. People also access information differently, relying on algorithmically curated distribution and thus incidentally getting exposed to news [6]. These developments have weakened the relationship between trust and preference for a news source, as shown in a recent multi-country study [7]. Our study builds on this study and furthers the investigations into the trust-usage relationship. In doing so, we offer three significant departures. Before that, it is important to clarify that unlike prior studies, the unit of analysis in our study is news organizations and not the individual users.

First, despite a weakening relationship between an outlet's trustworthiness and people's preference for it, we contend that trust could be a factor in using a news organization regularly and including it in a repertoire. Despite the tremendous choice and autonomy digital media provide, aspects of people's social lives (structures) such as habits, routines, language and geography explain their choices as much as or to a greater extent than preferences [42]. Hence, given an abundance of options, people resort to well-defined news repertoires [45] of media they regularly access that incorporate media usage across multiple platforms [14, 36]. Repertoires reflect both individual characteristics, such as content preferences and demographics, as well as structural factors, such as audience availability and access to platforms [14, 29, 36]. More importantly, they reflect habitual usage because news consumers are not making new decisions to evaluate these sources [19].

Studies about relationships between trust and usage - and related concepts such as credibility, skepticism and exposure - suggest a relationship exists between trust and engaged usage, though it is difficult to determine whether trust in a news organization would cause people to use it regularly, or whether people would end up trusting a news organization they use repeatedly. Thus, without suggesting any causality, our study aims to determine whether trustworthiness of news organizations, among people aware of them, is associated with their usage in the news environment. This led to the following broad question:

RQ1: Does trustworthiness of a news organization correlate with its user engagement?

Further, acknowledging that a large proportion of online

news usage is incidental, which has weakened the trust-usage relationship, we argue that trust would still have a positive association with "intentional" news usage. In the context of online news, we consider visits to an outlet that are direct, rather than mediated through search engines and social media, to be representative of its intentional usage. This led to the following hypothesis:

H1: The trustworthiness of a news organization is positively correlated with its intentional usage, as measured through direct visits.

Traditional news platforms provided limited options for consumers and might have led skeptics to use mainstream news sources they didn't trust because there were few or no alternatives [40]. The Internet provides skeptics with more alternatives to mainstream news, which could shift usage of mainstream news to alternative information sources and eventually impact trust. Previous research also suggests that political views impact consumers' impressions of news sources, as well as what news sources they consume and for how long [3, 8, 32]. These patterns can be considered instances of people making rational decisions about which news source to choose based on their ideological predispositions, as well as avoiding cognitive dissonance based on consumption of counterintuitive information. If people think some news sources are less biased, and if they like the content, they could be more likely to use those news sources even if they don't express trust for them. Consequently, when seen in the aggregate, partisan news sources may have more engaged usage than non-partisan sources when controlling for trust, especially when it comes to direct visits. In sum, the trust-usage relationship may differ for outlets having a multi-platform presence or a partisan leaning, as well as for mainstream and non-mainstream news outlets. This led to a further question:

RQ2: Does a) being a mainstream news source, b) having an affiliation with a political ideology or c) being a multi-platform news source moderate the trust-usage relationship?

3 METHOD

Data

We obtained trust measures from the Pew Research Center's "Polarization and Media Habits" report, which asked a large, nationally representative sample of consumers about 36 news sources [22]. The Pew Research Center, a nonpartisan fact tank, surveyed 2,901 Internet users who are part of its American Trends Panel about news trust and usage between March 19 and April 29, 2014 [22]. Survey respondents selected which of 36 news sources they had heard of, then which they generally trusted for government and political news. The report includes percentages of panelists - overall

and by political ideology - who trust, distrust, neither trust nor distrust, and have not heard of each news organization. The Pew Research Center determined respondents' political ideologies using a 10-question scale the center has been using in research since 1994 [22].

A major limitation of most prior studies investigating the trust-usage relationships is their reliance on self-reported exposure, resulting in potentially inaccurate usage estimates [26]. Therefore, we obtained usage measures from ComScore for the same news sources for which Pew captured trust data. In November 2016, ComScore, a global online audience measurement panel, reported measuring online usage data for more than 250,000 digital properties and more than 1 million people in the US. It uses Unified Digital Measurement methodology, combining usage data from panels and server logs, to collect data for its Media Metrix analytics. We used two Media Metrix reports: Key Measures, which reports aggregate usage, time spent and average usage frequency for each website, and Source/Loss, which reports the sources of incoming and outgoing traffic for each website (i.e., for Website B it would indicate the number of users who were on Website A immediately before visiting B, or the number who went to Website C immediately after visiting B).

We collected these measures for the 36 news organizations for October 2014, December 2014 and July 2015. These months account for potential usage variations. In the few months between when the Pew Research Center conducted its study and when ComScore data were collected, some audience trust levels could have changed for specific news sources if some of the people surveyed had experiences with bias or inaccuracy [28]. However, it likely would not have changed significantly, as Gallup reported no change in overall news media trust between 2014 and 2015 [34].

Of the 36 news sources in the Pew study, we excluded "The Sean Hannity Show" because ComScore did not report usage of its website during our study duration. Further, because both "The Colbert Report" and "The Ed Schultz Show" ceased airing in July 2015, we excluded these two for this period alone. Although our sample of 35 outlets is small, we were limited by the number of outlets that Pew measured trust for. We mitigate this concern by analyzing comScore data for 3 discrete months.

ComScore has a panel of 1 million people, and each month they report usage from a random sample of 250,000 "in-tab" users. Therefore, even though we analyzed data for 35 media outlets, our effective combined sample size was 103 data points on media outlets' trust and usage across the three time periods. Even though ComScore and Pew don't survey the same respondents, both use telephonic random-digit dialing as their sample frames and project the results to the overall US adult population. Thus, they are comparable when analyzed in the aggregate as done in this study. This research

design of comparing variables from equivalent but different sources is used across social sciences. Two applications in communication research are to predict box office sales using electronic word of mouth and to predict voter turnout using social media sentiment.

Measures

For ascertaining engagement, ComScore provides for each month "average minutes," or the time spent by a user on average, as well as the "average usage days" a user visits a news website. Table 1 shows that average usage days and average minutes have a high positive correlation, so it would be redundant to model both separately. Therefore, we multiplied the two measures to form one "engagement" variable that captures both frequency of visiting and time spent.

Table 1: Correlation Matrix Between Usage Variables

Avg Usage Days	Avg Minutes	Direct Visits
1	0.84***	0.11
0.84***	1	0.08
0.11	0.08	1

*** $p < .001$.

Further, we considered "intentional" usage as the percentage of direct visits, or the percentage of visits to a website upon "Logon," from comScore's Source/Loss report. The latter, we argue, is a robust measure of intentional usage because it eliminates visits to a news website when a user was on a search engine, social media website or other linked website immediately prior. This measure may not capture all intentional usage, but it surely eliminates most incidental usage. We rounded all monthly usage measures to the tenth decimal place.

The primary independent variables in this study were trustworthiness of a news source, measured as the overall percentage of Pew Research Center study respondents who have heard of and trust a news organization, interacted with one of three months. We computed the trust scores among those who have heard of the news outlet (rather than among all users) since our dependent variables also capture variance of usage among those who use a news outlet and not its reach among the total online population.

We controlled for three moderating variables. The first, mainstream, was coded as a binary variable. For the purpose of this study, non-mainstream news organizations refer to those focusing more on analysis and opinions, and mainstream news organizations refer to ones that produce more formulaic reporting, in the context of the news media landscape from early 2014 to mid-2015 [13].

The second, political ideology, was determined by the primary ideology of each news organization's consumers; it can be difficult to assign political ideologies to news organizations, and the literature on partisan selective exposure supports the idea of using audience ideologies [25]. We obtained political ideology measures from a Pew Research Center study that asked respondents to self-report which news sources they use in a typical week and segmented usage percentages by political ideology [22]. To simplify political ideologies, we combined percentages of "consistently liberal" and "mostly liberal" consumers to form the percentage of "liberal" consumers, and the percentages of "consistently conservative" and "mostly conservative" consumers to form the percentage of "conservative" consumers. We then coded these ideologies as binary variables in accordance with the highest ideological percentage.

The Pew Research Center excluded ThinkProgress, Daily Kos, Mother Jones and "The Ed Schultz Show" from its audience ideology report because of their small sample sizes [22]. To determine the composition of audiences to these websites by political ideology, we replicated ideological percentages from news organizations with similar news values, and overlapping audiences (from ComScore) were much greater than one would expect by chance alone [43]. Thus, based on their similar liberal dispositions, predominant online presence and much greater audience overlap than expected, we mirrored Slate's ideological audience composition to ThinkProgress, Daily Kos and Mother Jones. Likewise, we applied MSNBC's composition to "The Ed Schultz Show" because the latter airs on MSNBC. We also controlled for a third binary variable: whether a news organization is on multiple platforms or is only online.

4 RESULTS

Associations Between Trustworthiness and Engagement

We ran a series of regressions using pooled cross-sectional data. As already noted, because ComScore data do not necessarily measure the same respondents each month and we are using monthly aggregates at the website level, we did not use a repeated measures regression. Since our dependent variable for engagement was skewed to the right, we used its logarithm.

Table 2: Regression Model to Explain Trustworthiness and User Engagement

Variable	Estimate	Standard Error	Pr(> t)
(Intercept)	2.945	0.402	6.421***
Trust * October	0.013	0.0136	0.351
Trust * December	0.012	0.0134	0.143
Trust * July	0.0125	0.0133	0.374

$N = 103$. *Multiple* $R^2 = 0.0217$. *Adjusted* $R^2 = -0.008$. *** $p < .001$.

Table 2 reports the results of the first model, which predicted the user engagement with news organizations based on how trustworthy they were, in each month. The model was not significant ($F(3,99) = 0.7323$, $p > .05$) with an R^2 of 0.02171. Trustworthiness, it turns out, did not significantly predict regular use in either month. This answers RQ1, which asks whether trustworthiness correlates with user engagement. Because this initial relationship is not significant, we did not further model this dependent variable.

Associations Between Trustworthiness and Direct Visits

Table 3 reports the results of the regressions testing the relationships between trustworthiness and direct visits, as well as moderating and control variables. Instead of testing all variables at once, we incrementally included variables to run a series of models in which we could control for fixed effects.

In the first model, we ran a regression to predict the percentage of users who visit a news website directly based on the trustworthiness of the news organization, incorporating interactions with months. We found significant positive coefficients for trust for all three months. This supports H1. We then included dummy control variables for political ideology (with ideologically mixed as the reference) and multi-platform presence. All three trust-month coefficients remain significant, consistent with the initial regression; the conservative ideology variable is slightly significant; and the liberal ideology and multi-platform variables are not significant. The significance of the relationship between trustworthiness and direct visits did not change.

Next, we included an additional dummy variable to test for whether the news outlet is mainstream. A regression between direct visits and mainstream news was not significant. Thus, we only retained its interaction terms with the trust variables for each month. In this model, the trust-month coefficient for July is positive and slightly significant, and the conservative ideology variable is significant, with all other variables insignificant. The variance inflation factors of the

Table 3: Regression Models to Explain Trustworthiness and Direct Traffic

Variable	Beta (1)	T	Beta (2))	T	Beta (3)	T
Trust * Oct	0.042	2.072*	0.059	2.383*	0.0123	0.256
Trust * Dec	.0587	2.772**	0.074	2.383**	0.007	0.154
Trust * Jul	0.102	4.839***	0.117	2.978***	0.096	1.909
Conservative			1.459	1.861	2.085	2.241*
Liberal			0.474	0.760	0.647	1.015
multi-platform			-0.350	-0.571	-0.405	-0.657
Trust * Oct * mainstream					0.039	0.999
Trust * Dec * mainstream					0.062	1.605
Trust * Jul * mainstream					0.008	0.197
Mainstream Intercept	3.495	5.478***	2.743	2.883**	3.140	3.149**
R^2	0.2066		0.2374		0.2617	

$N = 103$. *** $p < .001$.

mainstream interactions with the trust-month variables and control variables, ranging from 1.278 to 8.038, show that no serious multicollinearity issues were encountered despite the use of interaction terms as independent variables. Thus, trustworthiness mattered more for direct visits to a source being mainstream than for a non-mainstream source only in July, but the difference is insignificant in other months.

In summary, these analyses found that trustworthiness of a news source does not correlate with its user engagement, answering RQ1. It offers support for H1, which hypothesizes trustworthiness is positively correlated with direct visits. Finding political ideology and multi-platform presence do not moderate the relationship between trust and direct visits, and that being a mainstream news organization did moderate the relationship for one month, answered RQ2.

5 DISCUSSION

Our study revisits the relationship between trustworthiness and usage of news organizations in a high-choice environment at a time when trust in news media is at an all-time low. Traditionally trust has been one driver of people using specific news outlets, but recent studies suggest that this relationship could have weakened [7]. Because lots of news consumption is incidental - influenced by search engines, social media and related algorithmic interventions - we posited that the relationship between an outlet's trustworthiness and its usage needs to be revisited and empirically examined, specifically accounting for the differences between incidental and intentional news usage. In doing so, we departed from prior studies both theoretically and methodologically. First, recognizing that self-reported usage is unreliable in a high-choice media environment, ours is one of the first media trust studies to employ passive usage measures. Further, we used two usage measures, one capturing user engagement, and the other capturing intentional usage (direct visits). Hence, the approach adopted by the study aligns with the fragmented and curated contemporary news environment.

In this section we first discuss the major findings. Then, we highlight some methodological choices of the study design and the consequent limitations. Finally, we reflect on the overall contributions for the scholarly community as well as implications for news organizations.

Trust and News Usage

Because recent studies had already hinted at a weakened trust-usage relationship, we evaluated the relationship between trust and user engagement, contending that a trusted news outlet may still attract frequent and engaged visitors. However, our analysis finds no significant relationship between trustworthiness of a news source and the user engagement it drives, adding to the discourse on the weakened trust-usage relationship. Although differing from most early research in its unit of analysis, these findings do align with and extend more recent studies that found no association between online news trust and attention [44] or between trust and source preference [7].

The lack of a relationship between engagement and trustworthiness adds to the general understanding that visiting news websites is not necessarily an intentional process; people often inadvertently visit websites through getting exposed incidentally. Based on our findings, even engaged visitors could be visiting sites due to a combination of habit and responsiveness of algorithms to past behavior instead of being driven by trust [6]. This finding also suggests that even though previous research found significant associations between lack of exposure and skepticism, or distrust [39], the opposite, an association between usage and trust, may not be a natural corollary. In other words, trustworthiness of a news source may not positively impact how long people spend on its website or how often someone visits it, even if distrust does adversely impact these variables.

Second, we find that trustworthiness of a news source has a positive association with direct visits; the more a news source is generally trusted, the more direct website traffic it receives (upon logon). Thus, consistent with the ideas of rational choice and selective exposure, a positive association between trustworthiness of a news source and its intentional usage (as measured through direct visits) continues to exist. Therefore, when people visit news websites directly upon logging on, they are more likely to visit websites they trust. This finding highlights differences in determinants of both incidental and intentional news usage and adds to this burgeoning literature [38], [6].

Third, we provide evidence that, at least in one month, being a mainstream news source could impact the trust-usage relationship, but results did not replicate in other months and thus are overall inconclusive. Because the relationship between trustworthiness and direct visits changes only when

mainstream news is interacted with trust in July, we are unable to conclude whether it moderates the relationship. Thus, unlike prior studies [39] [7], we are unable to conclude that skeptics consume more non-mainstream sources. However, definitions of mainstream and non-mainstream are neither time invariant nor consistent across studies. Likewise, our definition differs from these prior studies, which could have resulted in a different finding.

Finally, we were not able to confirm whether multi-platform presence and political ideology significantly impact the relationship between trust and direct visits. We found that being a news source with a majority conservative audience has a slightly significant positive correlation with the percentage of direct visits it receives, but not so for a source with a majority liberal audience. When tested with interactions between trustworthiness, month and mainstream media, conservative ideology increases in significance, and all trust-month variables decrease in significance, with only July remaining significant.

A relationship between conservative news and mainstream news could explain why we found the conservative variable significant. In our sample, there are 20 "liberal" news sources and six "conservative" news sources; five of the latter are also non-mainstream. Assuming the presence of partisan selective exposure (especially for direct visits) and that the prevalence of non-mainstream conservative news sources is reflected across the news environment, conservatives may have more motivation to visit news sources that confirm pre-existing beliefs, some of which may be non-mainstream. Also, if conservatives are more skeptical of what they perceive to be "liberal" news sources, which had much greater representation in our sample and were often coded as mainstream media, then they could be more likely to use "conservative," often non-mainstream sources that reaffirm existing beliefs. This would align with the research from [39–41] that mainstream news skeptics consume more non-mainstream news than non-skeptics.

We found that the relationship between trustworthiness and direct visits does not change when controlling for partisanship. However, multiple factors should be considered in order to interpret this finding. First, in this study, the trustworthiness measures are of people who have heard of - not necessarily people who use - a news source. If the study used trustworthiness measures segmented by political ideology, results could differ. Second, news sources did not self-identify the political ideologies; they may not acknowledge political biases or realize subtle ones. Instead, this study uses the primary identity of people who reported using news sources weekly, collected as part of the Pew Research Center study, under the assumption that partisan selective exposure helps drive media choice. It does not account, however, for

news sources that have nonpartisan coverage and coincidentally might have a predominantly conservative or liberal audience, or for people who read varying news sources to understand viewpoints across the political spectrum. Third, Pew Research Center and ComScore data come from different samples of the same population, so there could be different results if the same population were surveyed. In any event, these findings add to media choice and usage literature by suggesting a news source's political ideology could impact usage measures but not alter any relationship between trustworthiness and usage.

In all of our models, we observed a stronger relationship between the percentage of trustworthiness and direct visits for July 2015 than for the other months in our sample. One reason could be that several notable events occurred that month, such as the Greek referendum and the Iranian nuclear deal, though we believe these events were not numerous or significant enough for a U.S. audience to fully explain this usage difference. Therefore, this difference could reflect changing usage patterns at different periods of the year and justifies our use of pooled cross-section models in which we interacted trust with months. These differences suggest that usage habits are inconsistent across months and that multiple, perhaps non-consecutive, months should be examined in future research when collecting samples from different time periods.

Future work could also use more updated data. The Pew Research Center data were collected in early 2014, and the ComScore data were collected from late 2014 to mid-2015. These trust and usage measures occurred before the 2016 United States presidential election season, when trust and usage of news sources, particularly those with politically charged articles, could have changed. Also, newer online news sources such as Breitbart have potentially expanded in audience size, and other influential news sources could have been created since the data were collected. Collecting trust and usage data after this time period could provide more updated insights into today's news environment that news organizations could use to develop better strategies for reaching and engaging with their audiences. Comparing the relationship between trustworthiness and usage before and after the election could also test whether the election impacted trustworthiness and usage of news organizations.

Measuring Incidental and Intentional News Usage

It is common knowledge that a significant part of Internet usage is driven by hyperlinks, especially links that people encounter on social media. Therefore, as already noted, a large part of news usage is incidental. However, it is also difficult to measure incidental news usage and clearly distinguish it from intentional news usage. Recent studies have attempted this through surveys by asking people whether

they consider social media as a source of news [6]. Surveys have long been considered blunt and unreliable instruments to measure media behavior [26, 27]. Using them to isolate incidental news usage from intentional usage is even more problematic. Our study therefore makes such an attempt using behavioral data. To summarize, using web traffic data from a third-party audience measurement panel, we consider a visit to a website as "intentional" if people visited it directly upon login. This measure effectively isolates all incidental viewing.

It is worth mentioning, however, that this measure of direct traffic is perhaps too strict. It eliminates from intentional viewing any visits to a site other than those upon login. Therefore, in all likelihood this measurement choice suppressed somewhat the level of intentional visits to the various news website in the sample. As already noted, it does a fine job of eliminating any possible incidental usage, but it perhaps also eliminates some intentional visits. For instance, if a user visits WashingtonPost.com immediately after visiting a bank's website, that visit is most likely intentional. Therefore, instead of eliminating all indirect visits, this measure could selectively eliminate visits from social media, search engines, email and portals. Because these websites accounted for most of the indirect visits in our data, this wouldn't have affected our results much, but at least theoretically this is an important limitation that future studies should address. One way would be to offer two to three ways to operationalize this measure and compare the relationship between trust and intentional visits.

Combining Attitudes and Behaviors

This study differed from previous ones in its unit of analysis being media outlets rather than individuals, which limits causal interpretations. We used data from two independent national samples to look at relationships between trustworthiness and usage for media outlets. Although these data allow us to control for neither demographics nor motivations, they answer questions that are different yet related to user-level studies that link trust in and usage of media outlets. However, future research could also construct similar representative data sets to examine the impact of gender or other demographic factors on the relationship between trustworthiness and usage for the overall population.

To minimize potential discrepancies between sample populations, future studies could use the same sample population for all measures, asking participants which news sources they trust and installing tracking software to passively measure news usage. By doing this, researchers could better identify trust of news organizations by different population segments, not just using general trustworthiness of news sources. This would help establish how user traits and motivations interact with trust to impact usage of news sources. That said,

such an experiment would be quite expensive if it is to be conducted at a generalizable scale.

Optimistically, this limitation could be considered an important contribution of the study. Both behaviors and attitudes are important in social research more generally as well as for studies in the domain of human-computer interaction. However, methods such as surveys, while quite suitable for measuring attitudes, are quite blunt for measuring complex behaviors. Our study thus offers a useful template for how passively tracked behavioral data could be combined with self-reported attitudinal data. This combination or "fusion" is quite common in media industry and commercial marketing research [35]. The validity of data fusion is contingent on finding a good matching variable that effectively allows the fusion of two data sets that measure different samples of the same population. This is a greater challenge when studies focus on individuals as the level of analysis. In this study, because the level of analysis was news organizations, data sets for both the national survey by Pew and Comscore could easily be "fused" at the level of the news organization because they both represented the same population of American (U.S.) adults.

Implications for News Organizations

A lack of trust can lead to damaged brand images and equities, and decreased revenue, especially as the Internet has lowered the barrier to entry for information sources and led to a high-choice news environment that made countless alternatives easily accessible to news consumers. As news organizations implement strategies designed to increase trust, how can they best measure the impact of their efforts? Our study results have implications on how news organizations could - and shouldn't - gauge how much they are trusted and measure the effectiveness of strategies to improve trust. Additionally, because many news organizations track passive usage through website analytics and may not have the time or resources to collect self-reported audience data, it may be easier for news organizations to directly apply these findings to their day-to-day work, such as placing more importance on direct visit percentages than on engagement in evaluating trust. This study's results are first steps that could lead to further research in this area, not studied extensively.

Online advertising for most news organizations earns less revenue per user than offline advertising [2]. Therefore, "paywalls" in some form are inevitable for the news industry's future. However, people are more likely to pay for a news organization if they trust it [5]. Further, our study finds that trusted organizations attract more direct traffic - i.e., intentional usage - than those less trusted. With the growth of paywalls, one would expect direct traffic to websites of news organizations to increase even further. Therefore, as online news continues its transition to a paid product, the role of

trust in helping news organizations attract and retain paid subscribers is becoming increasingly important.

If trust in news organizations overall has been reduced, this has implications for not only the news industry but also democracy itself. If people don't trust news media, which as an institution is believed to promote civic participation and create an informed citizenry, then it could play a different or less crucial role in the democratic process moving forward.

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