

**Developing and Assessing Brief Questionnaire Measurements of Political Media and
Discussion**

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This is a pre-copyedited, author-produced version of an article accepted for publication in Communication Research Reports. The accepted manuscript (AM) is the final draft author manuscript, as accepted for publication, including modifications based on referees' suggestions, before it has undergone copyediting, typesetting and proof correction. This is sometimes referred to as the post-print version. The version of record,

Long, J. A., (2024). Developing and assessing brief questionnaire measurements of political media and discussion. *Communication Research Reports*. doi: 10.1080/08824096.2024.2407598

will be available online at:

<https://doi.org/10.1080/08824096.2024.2407598>

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Abstract

Measuring communication is among the most difficult and consequential issues in the discipline. Even the most promising methods tend to have serious drawbacks in terms of feasibility, accuracy, or scope. This study develops two brief questionnaire measures to assess the frequency and partisan orientation of political media exposure and discussion. Addressing the challenge of accurate self-reporting in survey research, especially under time constraints, cognitive interviews were conducted to refine the measures. Initial quantitative validity evidence suggests moderate correlations with related constructs, indicating the measures' potential utility in capturing meaningful variation in political communication behaviors.

Keywords: political communication, measurement, cognitive interviews, media exposure, discussion

Developing and Assessing Brief Questionnaire Measurements of Political Media and Discussion

The measurement of communication, especially but not only of media exposure, is a central challenge to the field (e.g., de Vreese & Neijens, 2016; Eveland et al., 2009). Research documenting measurement error (Scharnow, 2019), bias (Prior, 2009), and other problems in this type of measurement has become nearly a subfield unto itself. In some cases, it may be possible to use seemingly more objective measurements for a single medium (like using logs of social media use; Parry et al., 2021), but even when possible these choices may be infeasibly costly and are not without their own drawbacks for accuracy, detail, privacy, and so on (Christner et al., 2022; van Driel et al., 2022). For interpersonal communication, the challenge is potentially greater since the ground truth is harder to establish without digital logging (Morey & Eveland, 2016). Nevertheless, these concepts remain central and quantitative research moves forward via a mixture of designs that try to avoid these problems such as by manipulating communication experimentally or simply using the best tools available. In the context of political communication, where not just the amount but kind of communication tends to be of great interest, the difficulties in producing usable measurement only increase. The present study aims to provide an option by developing, via cognitive interviews, a pair of brief questionnaire measures for assessing the frequency and partisan orientation of both political media and discussion.

In the context of survey research, especially when questionnaire space is limited, the challenges of measuring exposure via self-reports are compounded by an acute need to minimize the time and effort required to respond. Furthermore, the goal of capturing meaningful variation from one time point to the next — or one person to another — requires measures that allow for a

variety of responses. General best practice for asking respondents to report the frequency of behavior advises against allowing for precise estimates because such behaviors are not remembered in their particulars (episodically), but in terms of their approximate rate of occurrence (semantically), making it difficult to report the amount precisely (e.g., Menon, 1994). The solution in these cases is usually to give a coarse set of options, like “not at all,” “a little,” “some,” and “a lot.” Although a coarse set of choices such as the aforementioned may be adequate to make distinctions *between* participants who are expected to differ from one another considerably in terms of their typical levels of communication, many research goals require a measure that allows *within*-participant distinctions as well. For instance, suppose Participant A may range from 0 to 15 minutes of media exposure per day in a typical week while Participant B ranges from 3 to 6 hours per day. With a coarse set of choices, one would expect Participant A to respond “not at all” or “a little” each day while Participant B would probably say “a lot” each day. This distinguishes the two from each other well but makes it difficult for Participant B to respond in a way that reflects their substantial variation in exposure. This is not just a limitation relating to within- and between-person comparisons, since there is plenty of between-person variation lost from coarse response choices as well; it may just be particularly problematic for repeated measures designs.

Cognitive Interviewing

Despite the reliance on self-reported measures of communication in the discipline, measures are rarely subjected to a routine part of professional survey development: cognitive interviewing. This technique has been recommended to improve communication research (Humphreys et al., 2021) but is only occasionally used in communication (e.g., van Deursen et al., 2016) and minimally for measures of communication exposure/activity (Morey & Eveland,

2016). A cognitive interview, which is a 1-on-1, face-to-face interview between researcher and subject, involves asking the subject to respond to questionnaire measures and using a semi-structured interview to explore the subject's thought process as they respond. Interviews assess the extent of comprehension, how memory is searched, and how these are synthesized into a response (Willis, 2005). Of particular interest is identifying sources of response error and making changes to the measures to address them. This study employed the *verbal probing* method (Willis, 2005), in which the interviewer asks specific questions about aspects of the response process rather than relying on the respondent to narrate the entirety of their thought process (Willson & Miller, 2014). Importantly, subjects are not asked to *evaluate* the measures, but are merely expected to describe what they understand them to mean and what considerations were brought to bear when responding.

Cognitive interviewing is a qualitative method and requires the interviewer to make on-the-fly judgments about appropriate questions to ask and the researcher — who, in the present study, is also the interviewer — to identify themes in the responses in a way similar to grounded theory methodology (Charmaz, 2014). Since the goal is to develop better questionnaire measurements, decisions must be made about making changes to the measures over the course of the study as well as whether enough subjects have been interviewed to feel confident in the final product.

Materials and Methods

This study includes 16 cognitive interviews over the course of 3 days with subjects drawn from the student research participation pool at a large midwestern research university in the United States. This is a typical sample size for cognitive interviews (Willis, 2005) and was based on when the researcher judged saturation to have been reached (i.e., no new substantive issues

were being raised). Before each interview, subjects were told the purpose of the study — the need to see if the measurements are well-understood and capable of generating accurate responses. After this, subjects responded to the two measures under investigation using pen and paper. Once complete, the interview would begin. A series of verbal probes were used to guide discussion. They are reported in full in the Supplementary Appendix. These planned questions provide a semi-structured interview; in some cases, subjects would (in effect) answer some of the planned questions in the course of responding to another. Unplanned questions were also asked based on participant responses.

Initial measures were developed to begin the interviewing process and are available in the Supplementary Appendix. They aimed to be easy to answer quickly while still tapping into the key constructs under study: in this case, partisan media exposure and political discussion. Each question begins with a time anchor to prompt respondents to think about the targeted time period, aiming to trigger *episodic* recall (remembering the actual behaviors) rather than estimation based on perceived typical behaviors (Burton & Blair, 1991). The question then elicits the time spent with communication about “news or politics.” The inclusion of the term “news” is to briefly address prior findings that laypeople tend to have a narrow conceptualization of what is political (Fitzgerald, 2013) that is focused on the actions of politicians; those engaged in the most political communication have more expansive definitions that include most news, thereby exaggerating the differences in the measured amount of communication (Morey & Eveland, 2016).

As discussed further in results, these initial measurements were later revised based on early interviews and then subjected to further investigation. To provide initial quantitative validity evidence, a few analyses are provided of data collected in a longitudinal study. Full

details of the data collection for that study (N = 270 subjects, T = 21 daily surveys) are included in the Supplementary Appendix.

Cognitive Interview Results

Estimating Time Spent on Communication

The first concern was the process by which subjects came up with time estimates and whether these could reasonably be assumed accurate. There was heterogeneity in the stated processes. Multiple subjects mentioned anchors they had available to aid estimation, such as one who looked at her digital calendar to remember how much time there was in the passing period when she remembered reading news. Another had spoken on the phone and was able to look at his call log to determine the length of the call as a basis for an estimate. Yet another knew the entirety of his political media exposure was on YouTube from a specific channel whose videos are reliably of a specific length. Others had less or no external information available to self-verify their estimates, or at least were not interested in accessing such information.

When asked to give a range of estimates to capture their overall uncertainty, respondents gave ranges that struck the interviewer as not particularly broad. More noteworthy is the response was rarely the mid-point of the range of uncertainty, although this is not necessarily evidence of inaccuracy in the initial point estimate. For example, one subject reported spending 5 minutes talking about politics and then provided a range estimate of 5 to 10 minutes. Another estimated 30 minutes, then provided a range of 20 to 30. The widest time range provided, in this case for media exposure, was from 20 minutes to 1 hour and 15 minutes, from a respondent whose initial point estimate was 30 minutes. Overall, the ways respondents described their strategies to estimate the time spent communicating were credible and likely to produce reasonably accurate estimates, albeit with imprecision.

Distinguishing Categories of Communication

Another area of emphasis in evaluating the measures was whether the respondents understood the distinction between the two broad categories of communication — talking about politics and seeing or hearing political content — in the potentially difficult cases of social media use. Respondents consistently made this distinction with apparent certainty and agreed, for instance, that seeing content (both links to sources and one's own opinions) shared by people they know on a social media platform belongs in the media use category. All agreed that direct interactions on these platforms would qualify as discussion. Examples of such interactions would be commenting on a Facebook post, replying to tweets, and more direct methods such as direct messaging. These understandings are in line with researcher expectations. The apparent ease by which participants came to these conclusions is striking given the many complexities researchers have enumerated about the issue (e.g., Flanagin, 2017).

An additional categorical distinction explored in the interviews, and embedded into the the measurement, regards the partisanship of sources. For discussion, respondents typically expressed confidence in the partisan leanings of the people to whom they talk. When asked how they come to these conclusions, respondents often said it was apparent from opinions expressed about policy. In a few cases, the signals were far clearer, like a respondent who said he spent time each day in a group chat among members of his local College Republicans group. Respondents were more uncertain when it came to media sources, particularly in terms of identifying sources that are non-partisan. Some expressed a belief that all sources are biased. The interviewer did not notice any clear category errors (e.g., FOX News is non-partisan, BBC supports Republicans) when probing about specific sources, although of course reasonable people may disagree in some cases. The goal of the media question's wording including some

examples was to hedge against the possibility of respondents ascribing idiosyncratic categories onto the sources they were exposed to.

In this sample, social media platforms comprise a major source for political information and news, which typically includes both traditional media and people expressing their opinions. Respondents indicated that they usually know the partisan preferences of people they follow on social media, either from their offline relationships or by noticing patterns in their posts. Although these measures will not allow for a clear idea of the specific sources respondents are exposed to, and there will be cases in which the same source may be categorized differently across respondents, this scheme appears suitable for the purposes of distinguishing between different kinds of partisan and non-partisan communication.

Finally, probing was devoted to exploring which kinds of topics were considered “news and politics” by respondents. The inclusion of the term “news” in the question wording appeared to expand respondents’ definitions of what topics were relevant. Most topics mentioned would fall under any reasonable definition of politics; edge cases are topics more relevant at the sub-national level, like crime news, which are appropriately political in this researcher’s view. Despite the prompt not including any further definition of “news,” participants did not raise topics like celebrity gossip that sometimes are covered by news sources but are not usually considered relevant to the study of political communication.

Revisions to Items and Final Measure

As expected, the interviews revealed some shortcomings in the measures as originally constructed. Given the extent to which respondents seemed to feel that “news” was a broader category than “politics,” the first item’s prompt was altered to read “news or politics” rather than “politics or news.” Most significant is a change to the response format. The original measures

asked respondents to report the time they spent on each form of communication separately for non-partisan, Republican-favoring, and Democrat-favoring sources. The goal behind this response format was to simultaneously allow for granular responses without prompting respondents to think explicitly about the ratio of in-party vs. out-party communication, which could trigger desirability biases. However, respondents typically explained their estimation processes as starting with an estimate of the total time spent communicating followed by an estimate of the proportion of time with each partisan category. To adapt the items to the respondents' cognitive process, they are first asked to give an estimate of the total time communicating and then the proportions of time with each category. The final items are the following:

- **Yesterday**, how much did you talk (online or offline) about news or politics?
 [] hours [] minutes
 - And about what percentage of that time was with people who...
 - Are Republicans, support Republicans, or have a conservative point of view
 _____ %
 - Are Democrats, support Democrats, or have a liberal point of view
 _____ %
 - Do not support Republicans or Democrats and do not have a particularly conservative or liberal point of view
 _____ %

- **Yesterday**, how much time did you spend reading, watching, listening to, or hearing about the news or political content, including posts you saw on social media?
 [] hours [] minutes
 - And about what percentage of that time was the content from sources that...

- Sources that tend to favor the Republican party or conservative viewpoints. Examples of sources like this include *FOX News, Breitbart News, The Daily Wire/Ben Shapiro*.
_____ %
- Sources that tend to favor the Democratic party or liberal viewpoints. Examples of sources like this include *MSNBC, Huffington Post, Mother Jones*.
_____ %
- Sources that do not tend to favor one political party or ideology over another. Examples of sources like this include *USA Today, Politico, Yahoo! News*.
_____ %

Interviews Assessing Revised Format

The final 10 interviews evaluated these revised questions and did not reveal any new problems specific to them. These interviews proceeded with identical procedures with the exception of using the revised items. When explaining their strategy for producing time estimates, participants continued to start with an overall estimate of time spent communicating. This suggests the revised format meets its goal of more closely matching the cognitive processing of respondents when it comes to recall. The revised wording does not guarantee response accuracy and participants still shared some uncertainty about the exact timing, as before. When implementing in an electronic survey, it is recommended to force the percentage responses to sum to 100% to reduce respondent burden.

Respondents continued to dwell on the partisanship of their communications, stating this took more effort to determine than the amount of time. A common theme of comments on this area was uncertainty about the existence of truly non-partisan media. Some felt that media content they encountered was itself non-partisan even if the source was not consistently so.

When asked to give examples of such cases, participants offered mainstream sources such as the New York Times as ones they counted as non-partisan in their response due to the unbiased nature of the content they saw even if they believed the source itself had a bias. As a counterexample, a participant offered Ben Shapiro as someone they felt was in fact unbiased but still followed the question wording's guidance by categorizing his YouTube content as conservative. These beliefs about bias is a threat to the validity of any measurement of this kind, but respondents seemed to blend their own beliefs about the source with the categorization scheme implied by the question wording. In other words, they seemed to accept a distinction between sources that are overtly ideological/partisan and those which may be biased but aim to be non-partisan. On the other hand, participants felt confident in their determination of the partisanship of people they talked to, including those known only through social media.

Quantitative Validity Evidence

In the longitudinal study, the average respondent spent 26.0 minutes per day discussing news and politics ($SD = 36.2$; $Mdn. = 14.0$) and 34.5 minutes per day with news and political media ($SD = 47.9$; $Mdn. = 18.7$). As for partisanship, participants report about 36% of time with media as being with nonpartisan sources, 43% with left-leaning sources, and 20% with right-leaning sources. For discussion, respondents reported 18% of time with non-partisans or those who do not support either major party, 53% of time with Democrats, and 29% with Republicans. Note that the sample was 70% Democrat and 30% Republican (including those who "lean" towards one of the parties). The time spent with media and time spent with discussion are highly correlated in the data at the between-subjects level, $r = .84$. This suggests that for some applications, it may be convenient or appropriate to average or sum the two measures to represent overall communication or engagement with politics.

To provide initial validity evidence beyond the interviews, I conduct some tests of correlations between the proposed measures (averaged over the 21 days in the study) with several, related measurements taken at the beginning of the study. For discussion, the amount of measured media exposure reported had a moderate correlation with a self-report of attention paid to politics ($r = .46, p < .001$) and the amount of measured political discussion likewise had moderate correlations with self-reports of number of days of discussion in a typical week ($r = .49, p < .001$) and number of people one typically discusses politics with ($r = .39, p < .001$). These are arguably evidence of convergent validity. For evidence of predictive validity, and to assess the partisan component, we look to percentages of in-party communication. In-party discussion correlates moderately with a measure of political identity strength¹ ($r = .47, p < .001$) and in-party feeling thermometer ($r = .40, p < .001$). In-party media correlates with identity strength ($r = .30, p < .001$) and in-party feeling thermometer ($r = .25, p < .001$) less strongly than for discussion. These results are summarized in Table 1.

As another approach to providing quantitative information about measurement validity, one can calculate test-retest reliability. This must be offered with a caveat, however. One goal for granular response choices is to uncover everyday variation in communication. Therefore, the assumption underlying the daily data collection was that respondents should not give the same response each day because the amount of communication may change. In other words, the quantity being measured is (often) somewhat different each day, making it difficult to distinguish unreliability and true change. I will report both ICC(3,1) and ICC(3,k), using the terminology of Shrout and Fleiss (1979). The former assesses the reliability per day while the latter assesses the participant averages. For total time spent on discussion, the ICC(3,1) is .57 and the ICC(3,k) is

¹ Based on a measure developed by Bankert and colleagues (Bankert et al., 2017).

.97. In other words, at each individual measurement the reliability is apparently low — likely due partly or mostly to actual changes — but in the longer term the average of all measurements appears to be reliable, suggesting the participant averages distinguish between individuals well.

This pattern repeats with time spent on media, with an ICC(3,1) of .64 and ICC(3,k) of .97.

Overall, based on the cognitive interviews and these results, the measures clearly tap into what they are intended to measure, but it is likely the measures of discussion do so with less error than for media.

Table 1*Correlations between measurements and theoretically relevant variables*

Variable	1	2	3	4	5	6	7	8	9
1. Total media	1								
2. Total discussion	.84	1							
3. % in-party discussion	.10	.16	1						
4. % in-party media	.15	.17	.43	1					
5. Attention	.46	.45	.16	.14	1				
6. Days talked/week	.43	.49	.27	.17	.67	1			
7. # people talk/week	.30	.39	.15	.07	.44	.54	1		
8. Identity strength	.05	.12	.47	.30	.22	.25	.18	1	
9. In-party feeling thermometer	-.02	.03	.40	.25	.10	.17	.11	.64	1

Note: Correlations of importance for validity evidence are highlighted in bold.

Discussion

This study aimed to develop brief questionnaire measures of political media exposure and discussion that allow for meaningful variation in responses over time and between persons. The cognitive interviews revealed that respondents use reasonable strategies to estimate time spent communicating about politics and news, and the measures capture the intended constructs. Revisions to the items, including changes to the response format and question wording, adapted the measures to respondents' thought processes. Quantitative evidence provides further support for the validity of the new measures, especially for political discussion.

The research has some limitations. First, the study relied on a relatively small, non-representative sample of college students. Testing the measures with larger and more diverse samples would bolster confidence in their broad applicability. Second, the accuracy of the time estimates, though examined thoroughly in the interviews, was not verified against any objective benchmarks. Future research could explore whether these self-report measures correspond with data from smart phone logs, experience sampling, or other approaches. The proposed measures make references to “news or politics,” but the extent to which these represent a single category may be specific to context and future work should consider whether news and politics can/should be measured separately. This approach may also be suited to other categories of communication (e.g., science or health). The measures tested here also rely partly on respondents to determine whether their communications are partisan. This is potentially fraught, especially for media sources, given lay discussions about alleged bias. These participants seemed to understand approximately what the norms are for categorizing media, even when it conflicted somewhat with their own beliefs. More research, perhaps using qualitative interviews, would be valuable to better understand the processes by which sources are understood to be partisan or not.

Finally, this study focused narrowly on developing the measures themselves and provided only preliminary quantitative validity evidence. To more fully validate the measures and demonstrate their usefulness, future work should embed them in substantive investigations of communication phenomena. For instance, political communication is often studied as a driver of outcomes like affective polarization and political participation. These measures can be used in place of the sometimes ad hoc measures used in research on those topics and may be especially useful for hypotheses regarding different effects of partisan vs. non-partisan communication. The common format across media and discussion also makes it more straightforward to study differential effects of media and discussion. Another potential area of research that could benefit from this measurement format is how political media use and political discussion might influence one another. The measures should be especially valuable for those using longitudinal designs that require non-demanding measures to test theories relating to stability and change of these concepts (e.g., Long, 2023).

References

- Bankert, A., Huddy, L., & Rosema, M. (2017). Measuring partisanship as a social identity in multi-party systems. *Political Behavior*, *39*(1), 103–132. <https://doi.org/10.1007/s11109-016-9349-5>
- Burton, S., & Blair, E. (1991). Task conditions, response formulation processes, and response accuracy for behavioral frequency questions in surveys. *The Public Opinion Quarterly*, *55*(1), 50–79.
- Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). SAGE.
- Christner, C., Urman, A., Adam, S., & Maier, M. (2022). Automated tracking approaches for studying online media use: A critical review and recommendations. *Communication Methods and Measures*, *16*(2), 79–95. <https://doi.org/10.1080/19312458.2021.1907841>
- de Vreese, C. H., & Neijens, P. (2016). Measuring media exposure in a changing communications environment. *Communication Methods and Measures*, *10*(2–3), 69–80. <https://doi.org/10.1080/19312458.2016.1150441>
- Eveland, W. P., Jr., Hutchens, M. J., & Shen, F. (2009). Exposure, attention, or “use” of news? Assessing aspects of the reliability and validity of a central concept in political communication research. *Communication Methods and Measures*, *3*(4), 223–244. <https://doi.org/10.1080/19312450903378925>
- Fitzgerald, J. (2013). What does “political” mean to you? *Political Behavior*, *35*(3), 453–479. <https://doi.org/10.1007/s11109-012-9212-2>
- Flanagin, A. J. (2017). Online social influence and the convergence of mass and interpersonal communication. *Human Communication Research*, *43*(4), 450–463. <https://doi.org/10.1111/hcre.12116>

- Humphreys, L., Lewis, N. A., Sender, K., & Won, A. S. (2021). Integrating qualitative methods and open science: Five principles for more trustworthy research*. *Journal of Communication, 71*(5), 855–874. <https://doi.org/10.1093/joc/jqab026>
- Long, J. A. (2023). Stability as an outcome in communication research. *International Journal of Communication, 17*, 5954–5971.
- Menon, G. (1994). Judgments of behavioral frequencies: Memory search and retrieval strategies. In N. Schwarz & S. Sudman (Eds.), *Autobiographical Memory and the Validity of Retrospective Reports* (pp. 161–172). Springer New York.
- Morey, A. C., & Eveland, W. P., Jr. (2016). Measures of political talk frequency: Assessing reliability and meaning. *Communication Methods and Measures, 10*(1), 51–68. <https://doi.org/10.1080/19312458.2015.1118448>
- Parry, D. A., Davidson, B. I., Sewall, C. J. R., Fisher, J. T., Mieczkowski, H., & Quintana, D. S. (2021). A systematic review and meta-analysis of discrepancies between logged and self-reported digital media use. *Nature Human Behaviour, 5*(11), Article 11. <https://doi.org/10.1038/s41562-021-01117-5>
- Prior, M. (2009). The immensely inflated news audience: Assessing bias in self-reported news exposure. *Public Opinion Quarterly, 73*, 130–143. <https://doi.org/10.1093/poq/nfp002>
- Scharkow, M. (2019). The reliability and temporal stability of self-reported media exposure: A meta-analysis. *Communication Methods and Measures, 13*(3), 198–211. <https://doi.org/10.1080/19312458.2019.1594742>
- Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin, 86*(2), 420–428. <https://doi.org/10.1037/0033-2909.86.2.420>

van Deursen, A. J. A. M., Helsper, E. J., & Eynon, R. (2016). Development and validation of the Internet Skills Scale (ISS). *Information, Communication & Society*, *19*(6), 804–823.

<https://doi.org/10.1080/1369118X.2015.1078834>

van Driel, I. I., Giachanou, A., Pouwels, J. L., Boeschoten, L., Beyens, I., & Valkenburg, P. M. (2022). Promises and pitfalls of social media data donations. *Communication Methods and Measures*, *16*(4), 266–282. <https://doi.org/10.1080/19312458.2022.2109608>

Willis, G. B. (2005). *Cognitive interviewing: A tool for improving questionnaire design*. SAGE.

Willson, S., & Miller, K. (2014). Data collection. In *Cognitive Interviewing Methodology* (pp. 15–33). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781118838860.ch3>