“Seize Your Moment, My Lovely Trolls”:
News, Satire, and Public Opinion About Net Neutrality

PAUL R. BREWER
DANNAGAL G. YOUNG
JENNIFER L. LAMBE
LINDSAY H. HOFFMAN
JUSTIN COLLIER
University of Delaware, USA

This study examines the implications of messages within a fragmented media environment for public opinion about net neutrality. Drawing on media effects theory and an analysis of media messages, it argues that different forms of media use—including consumption of traditional news, partisan cable news, political satire, and streaming video services—can exert distinctive effects on public familiarity with and support for net neutrality. Moreover, it extends research on information subsidy and intertextuality to argue that political satire use can interact with other forms of media use in shaping public responses to complex policy issues such as net neutrality. Using original data from national telephone surveys conducted in 2014 and 2015, the analyses reveal that various forms of media use predicted familiarity with and support for net neutrality. The findings also suggest that exposure to political satire can shape the translation of information obtained from other sources into opinion.

Keywords: net neutrality, public opinion, news media, political satire, information subsidy, intertextuality

The debate surrounding net neutrality is complex in terms of both the technological issues involved and the values at stake (Cheng, Fleischmann, Wang, Ishita, & Oard, 2012; Wu, 2003). Legal scholar Tim Wu, who coined the term “net neutrality” in 2003, defines it as the “idea . . . that a maximally useful public information network aspires to treat all content, sites, and platforms equally” (Wu, 2016, para. 2). The salience of the issue has risen with the increasing popularity of video streaming services such as Netflix and Hulu. Free market proponents advocate allowing Internet service providers (ISPs) to
charge such content providers higher rates for swifter speeds. Meanwhile, net neutrality proponents argue that allowing ISPs to do so would reduce competition, innovation, and diversity in the information marketplace (see Hart, 2011; Powell & Cooper, 2011).

On one side of the debate, net neutrality supporters have used digital platforms (Herman & Kim, 2014; Lee, Sang, & Xu, 2015) and nontraditional entertainment programs (Becker & Bode, 2017) to urge the public to support a free and open Internet. On the other side, cable industry ISPs have run advertisements in outlets ranging from television (Fung, 2014) to websites (Koebler, 2014) in efforts to forestall government regulation of the Internet. After the Federal Communications Commission (FCC) considered a 2014 proposal that would have allowed ISPs to charge content providers premiums for faster speeds, President Barack Obama endorsed net neutrality in a November 10, 2014, statement calling on the FCC to prohibit the creation of such “fast lanes.” On February 26, 2015, the FCC approved rules defining broadband as a utility and implementing the protections favored by Obama. However, the agency subsequently repealed these rules under a new chair appointed by President Donald Trump.

A small body of research has examined public opinion about net neutrality. YouGov surveys conducted in November 2014 and February 2015 suggested little public familiarity with net neutrality, with only 46% of 2014 respondents and 52% of 2015 respondents saying that they had heard of the term (Moore, 2014; Moore & Jordan, 2015). The 2014 survey also found divided views among the public on “government regulations to achieve ‘net neutrality,’’” with 34% of respondents supporting such regulation, 28% opposing it, and 38% offering no opinion.

One recent experimental study demonstrated that exposure to news coverage can influence knowledge about net neutrality and that exposure to satirical comedy can do the same (Becker & Bode, 2017). Beyond this study, however, little research to date has systematically explored the consequences of media use for familiarity with or opinion about net neutrality. Understanding such consequences is important for its own sake, given how politicians and interest groups have communicated through a range of media to raise awareness of and shape opinion on the issue. At the same time, studying this topic provides an opportunity to advance our theoretical understanding of how various forms of media consumption—such as of news media, political satire, and streaming video services—can explain public opinion about complex policy issues. In the account that follows, we argue that public opinion on complicated technical issues such as net neutrality reflects not only partisan and ideological cues but also the multifaceted and sometimes intersecting media messages to which members of the public are exposed.

To this end, we draw from and extend research on media fragmentation across digital and cable news media (Tewksbury & Rittenberg, 2012) and its relationship to political polarization (Stroud, 2011) as well as research on how political entertainment shapes attitudes (Young & Gray, 2013). Building on accounts of the debate surrounding net neutrality (Lee et al., 2015) as well as the concepts of information subsidies (Gandy, 1980) and intertextuality (Gray, 2006), we also propose a mechanism through which use of nontraditional media forms—specifically, political satire—can interact with other forms of media use to influence the public. We then analyze data from two nationally representative surveys, conducted in fall 2014 and fall 2015, to show that public familiarity with and support for net neutrality reflect multiple
forms of media use—particularly of partisan cable news, political satire, and streaming video services. Moreover, we find interactive dynamics between uses of political satire and news media, consistent with the former’s role as an information subsidizer. The results illuminate the nature of public responses to the net neutrality debate while generating broader insights about how different forms of media use can explain public opinion about complex policy issues, both separately and in conjunction with one another.

The Net Neutrality Debate

The public debate surrounding net neutrality has played out in public forums, online spaces, and news coverage. Content analyses of congressional and FCC hearings on the issue found that net neutrality supporters focused on innovation and creativity while opponents emphasized wealth and profit (Cheng et al., 2012). Cluster mapping analyses of more than one million comments submitted to the FCC about net neutrality revealed two salient concerns: maintaining diversity of opinion online and protecting everyone’s ability to compete equally in the Internet marketplace (Hu, 2014; see also Freelon, Becker, Lannon, & Pendleton, 2016). An examination of data from digital news, Twitter, bit.ly, and Google Trends found that pro–net neutrality and mixed stories received the most links across platforms whereas anti–net neutrality stories received less attention (Faris, Roberts, Etling, Othman, & Benkler, 2016). A network analysis of online materials about the net neutrality debate revealed a similar skew while also highlighting the important role of nonprofit groups in framing the debate (Herman & Kim, 2014). One theme that emerges across studies is the importance of online advocacy in the net neutrality debate, particularly for nonprofits and citizens (Faris et al., 2016; Herman & Kim, 2014; Hu, 2014; Lee et al., 2015).

As advocacy groups and individual citizens have competed with corporations and interest groups to frame net neutrality (Canella, 2016; Cherry, 2007; Dunham, 2016; Kimball, 2016), media attention to the topic has grown. To capture this trend, we conducted LexisNexis searches for stories mentioning “net neutrality” in each year from 2012 through 2015 across television outlets (ABC, CBS, NBC, CNN, Fox News, and MSNBC) and major newspapers (The New York Times, The Washington Post, and USA Today). This analysis revealed that broadcast network evening news programs presented relatively little coverage of net neutrality, whereas cable news networks and leading newspapers presented more coverage of the issue (see Figures 1A and 1B). Based on past research showing that exposure to news coverage helps audience members learn about issues (Eveland, 2001; Graber, 1990), including net neutrality (Becker & Bode, 2017), we expect cable news use and newspaper use to predict familiarity with the topic at hand:

\[ H1A: \quad \text{Cable news viewers will be more familiar than nonviewers with net neutrality.} \]

\[ H1B: \quad \text{Newspaper readers will be more familiar than nonreaders with net neutrality.} \]

In contrast, the patterns of coverage we observed provide little support for expecting broadcast evening news use to predict familiarity with net neutrality.
In terms of how news outlets cover policy issues, the media environment in general and cable television in particular have fragmented along political lines. Fox News tends to frame its coverage to
appeal to conservative viewers, whereas MSNBC does the same for liberal viewers; meanwhile, broadcast
network news programs and CNN target a more mixed audience (Stroud, 2011; Tewksbury & Rittenberg,
2012). Research indicates that differences across news outlets in the nature of issue coverage can
contribute to differences in opinions among their audiences (Feldman, Maibach, Roser-Renouf, &
Stroud, 2011). Thus, the implications of net neutrality coverage for public opinion should depend on the
tone of that coverage across outlets.

We conducted a content analysis of all "net neutrality" stories from 2014 to 2015 on Fox (n = 20), MSNBC (n = 18), CNN (n = 32), and the evening news programs of ABC, CBS, and NBC (n = 4),
along with a randomly selected 25% sample from 2014 to 2015 for USA Today (n = 16), The Washington
Post (n = 32), and The New York Times (n = 40). The coding scheme categorized the tone of coverage as
predominantly anti–net neutrality, neutral/mixed, or predominantly pro–net neutrality. The primary coder
coded all stories in the sample. A second coder coded a randomly selected quarter subsample (25%; n =
41) of the stories coded by the primary coder. The level of intercoder reliability was satisfactory
(Krippendorff’s α = .77).

The analysis of television coverage (see Figure 2A) revealed that Fox News presented relatively
anti–net neutrality coverage (35% of stories, versus 55% that were neutral or mixed in tone and 10%
that were pro–net neutrality), whereas MSNBC presented relatively pro–net neutrality coverage (50% of
stories; the remainder were neutral or mixed in tone). Given such differences in coverage, we hypothesize
the following:

H2A: Fox News viewers will express less support than nonviewers for government regulation to ensure
net neutrality.

H2B: MSNBC viewers will express more support than nonviewers for government regulation to ensure
net neutrality.

Broadcast network evening news (100% neutral/mixed) and CNN (88% neutral/mixed, 12% pro)
covered net neutrality in a more neutral or mixed way (see Figure 2A). Likewise, neutral or mixed framing
of the issue dominated coverage in The New York Times (80%), The Washington Post (78%), and USA
Today (69%) (see Figure 2B). Given the overwhelming majority of neutral and mixed coverage of net
neutrality in these outlets, there is no strong basis for expecting opinion on net neutrality to vary
depending on CNN viewing or newspaper readership.
Figure 2A. Tone of television stories about net neutrality, by outlet.

Figure 2B. Tone of print stories about net neutrality, by outlet.

Political Satire: John Oliver and Stephen Colbert on Net Neutrality
While news outlets presented varying perspectives on net neutrality, satirists John Oliver (from HBO’s *Last Week Tonight*) and Stephen Colbert (from Comedy Central’s *The Colbert Report* and, subsequently, CBS’s *The Late Show*) used satirical humor to defend net neutrality and, in the case of Oliver, directly advocate citizen action on the issue. Oliver’s three segments on net neutrality from the period under study (June 1, 2014; June 15, 2014; and July 27, 2015) explain and simplify the issue through humorous analogy while presenting pro–net neutrality arguments. Of particular note, the June 1, 2014, episode of *Last Week Tonight* features a long segment dedicated to the issue of net neutrality. Oliver opens it by saying, “If you’ve turned on the news lately, you may have heard some worrying references to the Internet.” He then discusses how a new FCC proposal might place “at risk the basic principle of net neutrality”:

Yes, net neutrality. The only two words that promise more boredom in the English language are “featuring Sting,” and hearing people talking about is somehow even worse. . . . But here’s the thing, net neutrality is actually hugely important. Essentially, it means that all data has to be treated equally, no matter who created it. It’s why the Internet is a weirdly level playing field. . . . Ending net neutrality would allow big companies to buy their way into the fast lane, leaving everyone else in the slow lane.

He concludes the segment by exhorting Internet “trolls” to comment on the FCC proposal:

The FCC are literally inviting Internet comments at this address. . . . And at this point, and I can’t believe I’m about to do this, I would like to address the Internet commenters out there directly. . . . We need you to get out there and for once in your lives focus your indiscriminate rage in a useful direction! Seize your moment, my lovely trolls.

The segment, which has received more than 13 million views on YouTube to date, provoked considerable response. By the following day, the FCC website had crashed after receiving more than 45,000 comments on net neutrality (McDonald, 2014).

Similarly, a January 23, 2014, segment of *The Colbert Report* explains the issue while using the program’s characteristic irony to satirize anti–net neutrality arguments. At one point, Colbert denounces the idea of ISPs slowing down content and charging for fast lanes: “Folks, I will not stand for my content being held hostage for cash.” A feed buffering symbol then appears on the screen to interrupt his monologue (implying that his own cable company is blocking his content). After the video “resumes,” Colbert changes course: “Folks, I’ve rethought my position on net neutrality. What I meant to say was, like all Americans, I love my cable company.” On the same episode, guest Tim Wu argues that net neutrality is a “good thing.”

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1 *Last Week Tonight*, June 1, 2014. https://www.youtube.com/watch?v=fpbOEoRHyU

Extensive research indicates that political entertainment television can influence attentiveness, knowledge, and opinion among the public (Baumgartner & Morris, 2006, 2008; Cao, 2010; LaMarre, 2013; Xenos & Becker, 2009; Young & Hoffman, 2012). Political satire programs such as Last Week Tonight and The Colbert Report are particularly noteworthy for their level of issue content (Brewer & Marquardt, 2007) and capacity to clarify complex issues in ways that increase both perceived and actual issue knowledge (Hardy, Gottfried, Winneg, & Jamieson, 2014). In the case at hand, experimental research by Becker and Bode (2017) found that exposure to Last Week Tonight’s June 1, 2014, segment on net neutrality influenced knowledge about the issue. Building on such findings, we hypothesize the following:

H3A: Viewers of satirical comedy will be more familiar than nonviewers with net neutrality.

H3B: Viewers of satirical comedy will express more support than nonviewers for government regulation to ensure net neutrality.

In testing these hypotheses, we focus on the two political satirists who have addressed the issue most prominently: John Oliver (on Last Week Tonight) and Stephen Colbert (on The Colbert Report and then his less ironic, more traditional late-night talk program, The Late Show).

Information Subsidies, Intertextuality, and Satire in the Net Neutrality Debate

When the public is largely unfamiliar with a topic, as in the case of net neutrality, the role of creating and disseminating information takes on considerable importance. As formulated by Gandy (1980), the concept of “information subsidy” revolves around the notion that “routine [information] channels are heavily subsidized by those news sources who want to control the availability and interpretation of information about issues affecting their welfare” (p. 104, emphasis in original). Gandy’s work focuses on government organizations, public relations organizations, and public interest groups as information subsidizers. However, he also considers the role of nontraditional sources in the process, explicitly acknowledging the “considerable cross-fertilisation between the news and entertainment media” (p. 108).

Lee, Sang, and Xu (2015) observe that the power and resources of information subsidizers are particularly asymmetrical in complex debates involving telecommunications policy, which often pit diffuse, resource-scarce online grassroots groups, nonprofits, and citizens against well-funded, centrally organized corporations and lobbying groups. Yet this asymmetry is at least partially ameliorated by the decentralized nature of digital communication spaces, as regular citizens and unfunded entities can take advantage of the low barrier to entry to share information and mobilize (Lee et al., 2015; see also Herman & Kim, 2014).

One way in which activist groups facilitate online conversations involves the selection and dissemination of clips from nontraditional information sources such as political satire programs. An analysis of videos from two such programs, The Daily Show With Jon Stewart and The Colbert Report, illustrates how advocacy groups and citizens strategically use such clips to mobilize and persuade (Baym & Shah, 2011). Thus, political satire programs “facilitate the simultaneous distribution of movement
messages both vertically, through mass attention, editorially produced sites . . . and horizontally, through an assortment of topically specific dot.orgs and a vast range of resource-poor, individual-level micromedia channels” (Baym & Shah, 2011, p. 1033).

Although online networks provide advocacy groups platforms for engaging in policy debate and spreading information, digital spaces are not particularly effective at imposing hierarchy on a movement or centralizing the focus of a debate. The case of net neutrality suggests, however, that political satirists such as John Oliver may be able to take on these functions. We propose that political satire can play the role of information subsidizer, thereby filling the power vacuum often present in these digital spaces. By offering arguments in support of policy positions and presenting direct, mobilizing language, satire may interact with other information in the media environment to shape public opinion in a particular direction.

To understand the implications of this mechanism for public opinion, we build on the idea that “a text’s ultimate meaning is inherently tied to myriad texts in the symbolic environment” (Brewer, Young, & Morreale, 2013, p. 324). A key premise in the literature on intertextuality (Gray, 2006) is that audiences take meanings from previously encountered texts with them as they encounter new texts, interpreting the latter in light of the former. Research by Brewer et al. (2013) illustrates the potential consequences of intertextuality for opinion. This study found that viewers of The Colbert Report—which had extensively covered campaign finance issues arising in the wake of the U.S. Supreme Court’s 2010 Citizens United decision—exhibited distinctive effects on their opinions after exposure to traditional news coverage of Citizens United that specifically mentioned Colbert.

Presumably, some of John Oliver’s viewers had already learned about net neutrality from other media sources. Furthermore, watching his program may have inspired some viewers to seek out additional information on the topic (see Xenos & Becker, 2009). Among such viewers, Oliver’s satire may have clarified the complex issue through metaphor, analogy, and explicit directives. Thus, Oliver may have acted as an information subsidizer by helping viewers transform information into opinion (and, ultimately, for some, potential action). Building on this logic, we propose the following hypotheses about the intertextual effects of Last Week Tonight:

**H4A:** Last Week Tonight use will interact with news media use, such that people with higher levels of both will be particularly likely to report familiarity with net neutrality.

**H4B:** Last Week Tonight use will interact with news media use, such that people with higher levels of both will be particularly likely to express support for net neutrality.

**Streaming Video Service Use and Issue Relevance**

The use of streaming video services such as Netflix and Hulu is yet another factor that could shape public familiarity with and opinion about net neutrality. Given the importance of net neutrality to streaming video services, as evidenced by Netflix’s active lobbying on the issue, users of streaming video services may be more technologically savvy about the topic than nonusers and may perceive a greater stake in it. A large body of literature on persuasion indicates that people are particularly likely to engage
in active information processing when a topic is personally relevant (Petty & Cacioppo, 1979; Petty, Cacioppo, & Goldman, 1981). Furthermore, research shows that self-interest (Funk, 2000; Mutz, 1993) and personal experiences (Egan & Mullin, 2012; Gross & Aday, 2003) can influence public opinion. Thus, we hypothesize the following:

H5A: People who use streaming video services will be more familiar than nonusers with net neutrality.

H5B: People who use streaming video services will express greater support than nonusers for government regulation to ensure net neutrality.

Method

The data for this study came from two Princeton Survey Research Associates telephone surveys of representative samples of adults living in the continental United States. The first survey was conducted October 21–26, 2014 (N = 900), shortly before President Obama announced his support for enacting new FCC rules to ensure net neutrality. Interviews were conducted by landline (450) and cell phone (450, including 243 without a landline phone). The response rate for this survey (calculated using the American Association for Public Opinion Research’s RR3 formula) was 8% for both the landline and cell phone samples. The second survey was conducted November 11–17, 2015 (N = 901), eight months after the FCC had approved its new rules. Again, interviews were conducted by landline (451) and cell phone (450, including 274 without a landline phone). The response rate for this survey was 7% for the landline sample and 5% for the cell phone sample. The response rates for the surveys were low in historical perspective but comparable to typical response rates for recent surveys conducted by major national polling organizations (Pew Research Center, 2012). Measures for the key variables were as follows.

Dependent Variables

The surveys measured two dependent variables: self-reported familiarity with the issue (in 2014 and 2015) and policy opinion (in 2015). To introduce the issue, respondents in the 2014 survey were told, “The U.S. government is considering new rules for Internet service providers, which are companies like Comcast, Time Warner, and Verizon that provide access to the Internet.” Half of the respondents (n = 459) were then randomly assigned to be read the following statement: “Some people call this issue net neutrality”; the other half of the respondents (n = 441) were not read this statement. All respondents were then asked, “How much, if anything, have you heard about this?” Responses were coded as 2 (a lot), 1 (a little), or 0 (nothing at all).

Respondents in the 2015 survey were told, “This year, the U.S. government set new rules for Internet service providers, which are companies like Comcast, Time Warner, and Verizon that provide access to the Internet.” As in the 2014 survey, half of the respondents (n = 461) were then randomly assigned to be read the statement calling the issue “net neutrality” and the other half (n = 440) were not. All respondents were then asked how much they had heard about this, with responses coded as before.
Respondents in the 2015 survey who self-identified as Internet users \((n = 719);\) see below) were also asked how strongly they favored or opposed “government regulations to achieve net neutrality” (this item was modeled on the one asked by YouGov in 2014). Responses were coded as 3 (strongly favor), 2 (favor), 1 (oppose), or 0 (strongly oppose).

**Media Use Variables**

Except where mentioned below, measures for all independent variables were identical across the two surveys (the Appendix reports descriptive statistics for each survey). A series of four-category scales ranging from 0 (never) to 3 (regularly) captured how often respondents reported using each of the following: national network evening news programs such as ABC World News, CBS Evening News, or NBC Nightly News; the Fox News cable channel; CNN; MSNBC; The Colbert Report With Stephen Colbert (2014 only); The Late Show With Stephen Colbert (2015 only); Last Week Tonight With John Oliver; a daily newspaper; and news online. Streaming video use was measured by asking respondents whether they ever used “a streaming video service such as Netflix, Hulu Plus, or Amazon Prime Instant Video” (1 = yes; 0 = no).

**Control Variables**

Political ideology was measured on a five-category scale ranging from 0 (very liberal) to 4 (very conservative), and standard branching items yielded a seven-category scale for party identification ranging from 0 (strong Democrat) to 6 (strong Republican). In addition, each survey included measures for: political interest (an item asking how interested respondents were “in what is going on with politics and public affairs”; 0 = not at all, 3 = very); Internet use (an item asking respondents whether they used the Internet or e-mail at least occasionally; 1 = yes, 0 = no); question wording (a variable capturing whether respondents received the statement calling the issue “net neutrality,” included to assess the potential impact of hearing the label itself; 1 = yes, 0 = no); education (measured on a scale ranging from 0 to 7); sex (1 = female, 0 = male); and age (in years). Given the high number of missing values on income, this variable was not included in the analyses; however, adding it to the models did not substantively alter the key findings.

**Results**

Of the respondents in the 2014 survey, only 11% said they had heard a lot about the new rules for Internet service providers, whereas 44% said they had heard a little and 45% said they had heard nothing at all. Consistent with the results of the YouGov surveys (see above), much of the public was relatively unfamiliar with the topic. The 2015 results suggest a modest increase in familiarity from 2014 \((\chi^2 = 7.12, df = 2, p < .05)\), with 14% of 2015 respondents saying they had heard a lot about the new rules, 47% saying they had heard a little, and 39% saying they had heard nothing at all. Responses to the 2015 question about government regulation to ensure net neutrality indicated that opinion on the issue was divided, with a plurality of 48% opposed (27% opposed and 21% strongly opposed) versus 36% in favor (8% strongly favored and 28% favored) and 16% not answering (respondents who did not answer were excluded from subsequent analyses for this variable).
Two analyses examined which variables predicted self-reported familiarity with the issue: one for 2014 and one for 2015 (see Table 1). Given that the measure for familiarity was ordinal, these analyses used ordered logistic regression. Each analysis included the media use variables along with ideology, party identification, political interest, Internet use, the question wording manipulation, and the demographics. In addition, a set of hierarchical ordinary least squares regression analyses tested what predicted opinion in 2015 (see Table 2). These analyses included the same independent variables as the familiarity models, except for Internet use (given that only Internet users were asked this question).

| Table 1. Predictors of Having Heard About the Net Neutrality Debate. |
|--------------------|---|---|---|---|
|                    | B  | SE | B  | SE |
| Education          | 0.04 | 0.04 | 0.10* | 0.04 |
| Sex (1 = female)   | −0.42** | 0.15 | −0.53** | 0.15 |
| Age (in years/100) | 1.45** | 0.49 | 0.46 | 0.50 |
| Political ideology | 0.05 | 0.08 | −0.16* | 0.07 |
| Party identification | −0.04 | 0.05 | −0.01 | 0.04 |
| Political interest | 0.29** | 0.09 | 0.34** | 0.08 |
| Net neutrality wording | −0.22 | 0.14 | −0.40** | 0.14 |
| Internet user      | 0.38 | 0.30 | −0.41 | 0.28 |
| Broadcast network evening news use | 0.01 | 0.08 | 0.08 | 0.07 |
| Fox News use       | −0.08 | 0.07 | 0.13 | 0.07 |
| CNN use            | −0.13 | 0.08 | 0.10 | 0.08 |
| MSNBC use          | 0.03 | 0.08 | −0.31** | 0.09 |
| Online news use    | 0.22* | 0.09 | 0.24** | 0.09 |
| Newspaper use      | 0.20** | 0.07 | 0.14* | 0.07 |
| The Colbert Report use | 0.37** | 0.08 |     |     |
| The Late Show use  |     |     | 0.21* | 0.08 |
| Last Week Tonight use | 0.39** | 0.09 | 0.33** | 0.09 |
| Streaming video user | 0.48** | 0.17 | 0.39* | 0.17 |
| Constant 1         | 3.27 | 0.54 | 1.60 | 0.54 |
| Constant 2         | 5.99 | 0.57 | 4.21 | 0.56 |
| Nagelkerke pseudo $R^2$ | .24 |     | .21 |     |
| N                  | 812 |     | 774 |     |

*Note. B = ordinal logistic regression coefficients.  
* $p \leq .05$. ** $p \leq .01$. 
Table 2. Predictors of Favoring Net Neutrality Regulation (2015 Internet Users).

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
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<td>0.06** (0.02)</td>
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<td>Streaming video user</td>
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<td>0.02 (0.08)</td>
<td>0.02 (0.08)</td>
<td>0.03 (0.08)</td>
<td></td>
</tr>
<tr>
<td>Incremental $R^2$</td>
<td>0.04**</td>
<td>0.04**</td>
<td>0.04**</td>
<td>0.04**</td>
<td></td>
</tr>
<tr>
<td>Fox News use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fox News use</td>
<td>−0.13** (0.04)</td>
<td>−0.12** (0.04)</td>
<td>−0.15** (0.04)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental $R^2$</td>
<td>0.02**</td>
<td>0.02**</td>
<td>0.02**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Last Week Tonight use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Last Week Tonight Use ×</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fox News Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental $R^2$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.01*</td>
</tr>
<tr>
<td>Constant</td>
<td>1.70 (0.22)</td>
<td>1.12 (0.28)</td>
<td>1.22 (0.28)</td>
<td>0.89 (0.29)</td>
<td>0.95 (0.29)</td>
</tr>
<tr>
<td>Total $R^2$</td>
<td>.16</td>
<td>.19</td>
<td>.21</td>
<td>.24</td>
<td>.24</td>
</tr>
<tr>
<td>$N$</td>
<td>542</td>
<td>542</td>
<td>542</td>
<td>542</td>
<td>542</td>
</tr>
</tbody>
</table>

Note. Table entries are ordinary least squares regression coefficients; standard errors are in parentheses. 
* $p \leq .05$; ** $p \leq .01$. 
No form of cable news use (CNN, Fox News, or MSNBC) significantly predicted having heard about net neutrality in 2014. In 2015, Fox News users reported marginally greater familiarity with the issue than did nonusers ($B = 0.13, p = .06$), whereas MSNBC users reported lower familiarity ($B = -0.29, p < .01$) and CNN users did not differ from nonusers. In short, the results yielded little support for H1A. Consistent with H1B, newspaper use was positively related to having heard about the issue in both 2014 ($B = 0.20, p < .01$) and 2015 ($B = 0.14, p < .05$). Additionally, online news use was positively related to familiarity in both 2014 ($B = 0.22, p < .05$) and 2015 ($B = 0.24, p < .01$). Broadcast network evening news use did not significantly predict familiarity in either year.

Turning to the 2015 opinion results, Fox News viewers were significantly less supportive of government regulation to ensure net neutrality than non–Fox News viewers ($B = -0.12, p < .01$; see Table 2, Model 4). By itself, Fox News use accounted for 2% of the variance in opinion. Meanwhile, MSNBC use did not significantly predict opinion. Thus, the results supported H2A but not H2B. No other form of news media use was significantly related to opinion.

Satirical television use predicted both opinion and familiarity. In 2014, viewers of The Colbert Report ($B = 0.37, p < .01$) and Last Week Tonight ($B = 0.39, p < .01$) reported more familiarity with the issue than nonviewers. In 2015, similar relationships emerged for use of The Late Show ($B = 0.21, p < .01$) and Last Week Tonight ($B = 0.33, p < .01$). All of these relationships were consistent with H3A. Furthermore, viewing Oliver’s program was positively related to support for government regulation to ensure net neutrality ($B = 0.21, p < .01$). Last Week Tonight use explained 3% of the unique variance in opinion (compared with the 2% explained by Fox News use). Meanwhile, Late Show use was not significantly related to opinion. Thus, H3B received support in the case of Oliver’s program but not in the case of Colbert’s.

The finding that several forms of news media use predicted familiarity and that Last Week Tonight use did the same raises the prospect posited by H4A: that exposure to Oliver’s messages might reinforce positive relationships between news media use and familiarity. Similarly, the finding that both Fox News use and Last Week Tonight use predicted opinion suggests the possibility of a positive interaction between the two along the lines posited by H4B.

A series of analyses that added News Media Use × Last Week Tonight Use terms to the familiarity models in Table 1 yielded no evidence of any positive interactions in either 2014 or 2015 (not shown). Thus, the results did not support H4A’s prediction that exposure to Oliver’s humor would magnify the effects of news media exposure on familiarity.

In contrast, a model for opinion that included an interaction term for Last Week Tonight use and Fox News use revealed that the former moderated the relationship between the latter and support ($B = 0.08, p < .05$; see Table 2, Model 5) in a manner consistent with H4B. Among respondents who never watched Oliver’s program, those who regularly watched Fox News scored almost half a point lower on support than those who never watched Fox News (0.69 versus 1.14; see Figure 3). Meanwhile, those who regularly watched both scored higher on support than those who regularly watched Last Week Tonight but never watched Fox News (1.83 versus 1.56). This interaction explained an additional 1% of the variance.
in opinion (supplementary tests revealed that Last Week Tonight use did not significantly interact with any other form of news media use in explaining opinion).

![Figure 3. Support for government regulation to ensure net neutrality, by Fox News use and Last Week Tonight (LWT) use.](image)

Taken together, the findings here are consistent with an account in which exposure to critical coverage of net neutrality on Fox News fostered opposition to government regulation, while exposure to Oliver’s humor not only produced support but also mitigated the negative impact of Fox News. Not surprisingly, the two forms of media use were negatively correlated with each other ($r = -.08, p < .01$). This pattern presumably flowed in part from ideological and partisan differences among their audiences: Fox News use was positively correlated with conservatism ($r = .33, p < .01$) and Republican identification ($r = .27, p < .01$), whereas Last Week Tonight use was negatively correlated with each ($r = -.26, p < .01$ and $r = -.19, p < .01$, respectively). Yet Fox News use and Last Week Tonight use were not mutually exclusive. Among respondents who regularly or sometimes watched the former, 12% also regularly or sometimes watched the latter. For those watching both programs—who were statistically indistinguishable from other respondents on ideology but tended to be more Democratic ($\chi^2 = 21.97, df = 6, p < .01$)—Oliver’s take on the issue may have trumped that of Fox News.

As predicted by H5A, users of streaming video services were significantly more likely than nonusers to say they had heard about net neutrality in both 2014 ($B = 0.48, p < .01$) and 2015 ($B = 0.39, p < .05$). Contrary to H5B, however, streaming users and nonusers did not differ significantly in their opinions about net neutrality.
A number of the control variables predicted familiarity, opinion, or both. A gender gap on familiarity emerged in both years (2014: $B = -0.42, p < .01$; 2015: $B = -0.53, p < .01$), with women reporting less familiarity than men. Age was positively related to familiarity in 2014 ($B = 1.43, p < .01$). In 2015, education was positively related to both familiarity ($B = 0.10, p < .05$) and support for net neutrality regulation ($B = 0.05, p < .05$). No significant relationship emerged between ideology and familiarity in 2014 or between party identification and familiarity in either 2014 or 2015, but conservatives were significantly less likely than liberals to say they had heard about the issue in 2015 ($B = -0.16, p < .05$). Liberals expressed more support than conservatives for government regulation to ensure net neutrality in 2015 ($B = -0.09, p < .05$), and Democrats reported greater support than Republicans ($B = -0.05, p < .05$). Political interest was positively related to familiarity with the issue in both 2014 ($B = 0.29, p < .01$) and 2015 ($B = 0.34, p < .01$).

Finally, receiving the prompt that called the issue “net neutrality” had no effect on self-reported familiarity in 2014 or opinion in 2015 but exerted a negative effect on familiarity in 2015 ($B = -0.40, p < .01$). Proponents of net neutrality have debated among themselves whether using this specific terminology risks obfuscating the issue. For example, John Oliver argues in his June 14, 2014, segment that, if you want to do something evil, put it inside something boring. . . . And that’s why advocates should not be talking about “protecting net neutrality” . . . they should call it “preventing cable company [bleep]” because that is what it is.

The results presented here provide mixed evidence for whether labeling the issue “net neutrality” depressed self-reported familiarity.

In terms of fit, the Nagelkerke pseudo $R^2$ for the model of familiarity was .24 in 2014 and .25 in 2015. For the final model of opinion, the total $R^2$ was .24. Such modest fit statistics are not surprising in the context of an emerging and technical issue such as net neutrality.

Conclusion

The findings of this study illuminate the processes underlying public familiarity and opinion in the context of a complex, technical policy issue: net neutrality. Using two cross-sectional surveys conducted in 2014 and 2015, the analyses illustrate the importance of media use—including newspaper readership, partisan cable news, political satire, and streaming video services—in explaining familiarity with and opinion toward net neutrality. They also demonstrate how diverse forms of media consumption can interact to shape public opinion—an issue of increasing relevance given our hyperfragmented media environment.

The main effects of exposure to specific news outlets on issue familiarity and opinion largely reflect patterns one would expect given the findings about the relative amount and tone of coverage across such outlets. Reading newspapers (which presented relatively extensive coverage of the issue) was associated with greater familiarity, whereas watching broadcast evening news (which rarely mentioned the issue) was not. Additionally, viewing Fox News (which presented relatively anti-net neutrality coverage) predicted opposition to regulation, whereas consuming CNN and newspapers (which presented mostly mixed or neutral coverage) or broadcast evening news (which rarely covered the issue) was unrelated to
opinion on net neutrality. The one unanticipated finding was the negative relationship between MSNBC use and familiarity with net neutrality in 2015; an examination of the volume and tone of MSNBC coverage does not suggest any clear explanation for this anomalous result.

Political satire appears to have played a role in exposing viewers to the issue of net neutrality and shaping opinion on the issue. In 2014 and 2015, watching the satire of Stephen Colbert (The Colbert Report in 2014 and The Late Show in 2015) and John Oliver (Last Week Tonight) predicted greater familiarity with the issue. In 2015, watching Oliver’s show also predicted opinion on the issue, with viewers expressing greater support for regulation that would protect net neutrality (though viewing Colbert’s show did not, which could reflect a lower level of attention to the topic and/or the shift in style and content from The Colbert Report to The Late Show). In substantive terms, exposure to Oliver’s show explained 3% of the variance in opinion, whereas exposure to Fox News—the only other form of media use that predicted opinion—explained 2%. These findings offer support for the notion that Oliver’s “investigative satire” can carry influence beyond prompting viewers to submit comments to the FCC (see also Becker & Bode, 2017). Furthermore, they dovetail with findings that Stephen Colbert’s satire of another relatively arcane issue—campaign finance in the wake of the U.S. Supreme Court decision in Citizens United—increased viewer knowledge of the issue and swayed public opinion (Brewer et al., 2013; Hardy et al., 2014; LaMarre, 2013).

The interactive relationship between Fox News use, Last Week Tonight use, and support for net neutrality regulation helps to explicate the potential implications of “intertextuality effects” for public opinion about complex policy issues. The results suggest that political satirists such as John Oliver have the capacity to serve as information subsidizers, “controlling the availability and interpretation of information about issues” (Gandy, 1980, p. 104). Specifically, exposure to Oliver’s program interacted with exposure to Fox News such that people who watched both were particularly supportive of government regulation to ensure net neutrality. This result suggests that Oliver’s strong stance and explicit directives may have led viewers to reinterpret the relatively critical coverage of net neutrality from Fox News. At the same time, the results yielded little evidence that watching Last Week Tonight reinforced any of the positive relationships between news media use and familiarity.

Viewers’ own interests may have shaped their responses to the issue as well. Consistent with research on how issue relevance, self-interest, and personal experiences affect engagement with public policy (Funk, 2000; Gross & Aday, 2003; Mutz, 1993; Petty & Cacioppo, 1979), the analyses show that use of streaming video services predicted familiarity with the net neutrality debate. This finding highlights the political implications of the increasing use of such services. On the other hand, use of streaming services was unrelated to opinion on whether the government should take steps to protect net neutrality. One possible explanation for the contrast is that streaming video access enhanced users’ technological savviness—including about net neutrality—without necessarily providing the type of information that would shape opinion. It is also possible that some users of streaming services preferred fast lanes so as to maximize their viewing experience, without recognizing the likely increase in cost associated with such improved service.
In drawing conclusions from the present study’s findings, it is important to consider several potential limitations of its methods. First, the measures for key variables may be limited in several ways. The analyses relied on single-item indicators for a number of variables. These measures generally followed question formats developed in previous research. However, other studies could build on the results here by incorporating richer measures, particularly for public opinion about net neutrality. In examining issue familiarity, the study focused on self-reported familiarity; future studies could examine objective measures of knowledge about net neutrality as well (see, e.g., Becker & Bode, 2017). The study also relied on self-reports of media use, whereas additional research could examine self-reported media attention (see Chaffee & Schleuder, 1986).

Second, the analyses relied on cross-sectional data. Thus, one should be cautious in drawing causal inferences from the relationships observed. Although the analyses controlled for many of the key factors that one might expect to shape public familiarity with and opinion about net neutrality, they do not fully rule out alternative explanations (e.g., selective exposure to media driven by political attitudes, technological skills, and/or demographic factors). Future research could use approaches such as experimentation to provide stronger evidence that media messages influence public responses to net neutrality (see, e.g., Becker & Bode, 2017).

Third, the study focused on a relatively narrow time frame: 2014 and 2015 for issue familiarity and 2015 for opinion. This period encompassed the peak of the net neutrality debate prior to 2017. Yet controversies surrounding government policy toward the Internet will undoubtedly continue, particularly given the opposition to net neutrality expressed by the current president, Donald Trump, and the current FCC chair, Ajit Pai—the latter of whom led a December 14, 2017, vote to repeal the agency’s net neutrality rules. Media coverage of net neutrality has continued as well. For example, a June 15, 2016, segment of The Late Show features Tim Wu explaining the then new FCC regulations to Colbert as both men ride a roller coaster, and a May 7, 2017, segment of Last Week Tonight revisits the issue in the wake of Trump’s election and Pai’s appointment. Thus, future studies could reexamine public responses to net neutrality as the policy, political, and media landscapes surrounding it evolve.

More broadly, research could build on the approach developed here to help explain public responses to other emerging issues related to technology and politics, ranging from cybersecurity to the development of broadband infrastructure. The factors identified here—the fragmentation and polarization of news media, the potential for political satirists to serve as information subsidizers, the implications of intertextuality for media effects, and the impact of personally relevant digital media consumption—may play important roles across a broad range of policy domains. At the same time, these roles could vary substantially depending on the nature of the issue and the media messages surrounding it.

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3 The Late Show, June 15, 2016, https://www.youtube.com/watch?v=SiUV5jmfYEU; Last Week Tonight, May 7, 2017, https://www.youtube.com/watch?v=92vuuz77wak
References


### Table A1. Descriptive Statistics for Independent Variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Broadcast network evening news use (0 = never; 3 = regularly)</strong></td>
<td>1.92</td>
<td>1.74</td>
</tr>
<tr>
<td><strong>Fox News use (0 = never; 3 = regularly)</strong></td>
<td>1.46</td>
<td>1.35</td>
</tr>
<tr>
<td><strong>CNN use (0 = never; 3 = regularly)</strong></td>
<td>1.48</td>
<td>1.31</td>
</tr>
<tr>
<td><strong>MSNBC use (0 = never; 3 = regularly)</strong></td>
<td>1.21</td>
<td>1.07</td>
</tr>
<tr>
<td><strong>Online news use (0 = never; 3 = regularly)</strong></td>
<td>1.94</td>
<td>1.78</td>
</tr>
<tr>
<td><strong>Newspaper use (0 = never; 3 = regularly)</strong></td>
<td>1.87</td>
<td>1.70</td>
</tr>
<tr>
<td><strong>The Colbert Report use (0 = never; 3 = regularly)</strong></td>
<td>0.76</td>
<td>1.07</td>
</tr>
<tr>
<td><strong>The Late Show use (0 = never; 3 = regularly)</strong></td>
<td>0.63</td>
<td>0.96</td>
</tr>
<tr>
<td><strong>Last Week Tonight use (0 = never; 3 = regularly)</strong></td>
<td>0.36</td>
<td>0.41</td>
</tr>
<tr>
<td><strong>Streaming video user (0 = no; 1 = yes)</strong></td>
<td>41%</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Political ideology (0 = extremely liberal; 4 = extremely conservative)</strong></td>
<td>2.19</td>
<td>2.22</td>
</tr>
<tr>
<td><strong>Party identification (0 = strong Democrat; 6 = strong Republican)</strong></td>
<td>2.90</td>
<td>2.80</td>
</tr>
<tr>
<td><strong>Political interest (0 = not at all; 3 = very)</strong></td>
<td>2.12</td>
<td>2.23</td>
</tr>
<tr>
<td><strong>Internet user (0 = no; 1 = yes)</strong></td>
<td>83%</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Net neutrality wording (0 = no; 1 = yes)</strong></td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Education (0 = minimum; 7 = maximum)</strong></td>
<td>3.92</td>
<td>3.90</td>
</tr>
<tr>
<td><strong>Sex (0 = male; 1 = female)</strong></td>
<td>51%</td>
<td>49%</td>
</tr>
<tr>
<td><strong>Median age (in years)</strong></td>
<td>54</td>
<td>54</td>
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