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Triggering participation: Exploring the effects of third-person and hostile media perceptions on online participation



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ABSTRACT

Using a 2×3 mixed between-within subjects experiment (N = 102), we tested how the presence of online comments affects self-other differences and perceptions of media bias, as well as factors predicting subjects' likelihood of commenting on an online news story. We found that (a) presence of comments lowers self-other differences and consequently attenuates the third-person effect, and (b) perceptions of media bias significantly predict likelihood of commenting. Additionally, we found that subjects were more likely to comment on stories they found biased against their position as a form of corrective action, and that subjects were more likely to share and like stories they found biased in favor of their position as a form of promotional action.

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1. Introduction

The study of the antecedents and effects of online behavior has applications to psychology, health promotion, deliberative democracy, journalistic enterprise, and various types of marketing. In journalism studies, there has been much debate about the promise and pitfalls of comments on online news articles. On one hand, comments are devices that increase web traffic and profits, in addition to providing an important forum for policy discussion and debate. On the other, concerns abound about the lack of reader engagement on some stories, and about the excessively vitriolic, spurious, and/or off-topic commentary on other stories.

Meanwhile, in fields such as health communication and marketing, researchers and practitioners are interested in how participation with media content changes the effect of the message (Schweisberger, Billinson, & Chock, 2014; Shi, Messaris, & Cappella, 2014; Sparks & Browing, 2011). They are asking questions such as: How do we prompt the target audience to engage constructively with the message? Does that engagement lend the message some of the power of interpersonal communication? Does it lower the perception of self-other differences? Does it increase self-efficacy? And, ultimately, does it lead to more

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effective interventions? For instance, can it help overcome policy differences on key issues such as gun rights and gun control?

Answering any of those questions requires a more sophisticated understanding of the psychological processes involved behind comment behavior. We believe that key determinants include a potential commentator's position on any given issue, the relationship of that position to the content of the news article, and the extent to which the potential commentator believes others will be affected by the news content.

2. Theory

2.1. Online participation

The Pew Internet & American Life Project's "Understanding the Participatory News Consumer: How Internet and Cell Phone Users Have Turned News into a Social Experience" found that 61% of Americans get at least some of their news online, second only to television at 78%, and well ahead of print newspapers at 50% (Purcell, Rainie, Mitchell, Rosenstiel, & Olmstead, 2010). The report concludes that the social-functionality of online news sites drives consumption. Fifty-two percent of online readers share links to news articles by email and on social networking sites, while 75% of online news readers utilize those links to help them discover news content (Purcell et al., 2010).

Among various features of online news sites, this study mainly focuses on online comments. Commenting is one of the most

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common forms of online participation, and is a signature characteristic of online news portals. Santana (2011) found that 95% of American newspapers with online websites allow readers to comment, a result of the sections being seen as both popular and profitable. Goode (2009) sees the audience's growing influence as an important check on the power of elites, calling it a democratizing force. Although the number of commentators is relatively low – about 25% of online readers in the Pew study, with less in most other studies – the number of news consumers who read comments is far greater (Diakopoulos & Naaman, 2011).

Concerns about comments abound. Diakopoulos and Naaman (2011) found that readers of Sacramento Bee's online site found many of the comments offensive. Journalists at the paper expressed concerns about "personal attacks on sources or reporters, flaming, propagation of misinformation, and the tarnishing the reputation of the paper" (Diakopoulos & Naaman, 2011, online resource without page numbers). Jim Brady, the first executive editor of WashingtonPost.com, said shortly after the launch of the site that he hoped it would "build a community to talk about the news and not just read it" (Howell, 2007, no page number). But he acknowledged that the conversation turned out to be "more of a free for all." As Kristina Ackermann (2010), managing editor of the trade magazine Editor & Publisher writes.

"In theory, the ability to comment gives readers, bloggers, and citizen journalists the chance to chime in on a story: to check facts, clarify points, share personal experiences, even pick a side and argue their case. All this while boosting the number of clicks on the paper's website, making it more appealing to advertisers. The hiccup in this theory is ... newspapers have opened themselves up to hate-filled rants and profanity-laden arguments that would make even the saltiest of sailors blush" (p. 44).

Some news outlets have recently unplugged their comment sections, and others are considering various levels of facilitation. moderation, or outright restriction on commentary (Beauton, 2012: LaBarre, 2013). When Popular Science disabled its commenting section, it cited communication research that found exposure to nasty online comments increased opinion polarization on the issue of nanotechnology (Anderson, Brossard, Scheufele, Xenos, & Ladwig, 2014; LaBarre, 2013). Nonetheless, fears of angering readers by suppressing comments and the revenue they generate are keeping these rollbacks in check (Beaujon, 2012). Indeed, some news outlets have begun evaluating reporters based on the number of comments their stories receive, increasing scholarly interest in the triggers of commenting behavior. Moritz and Munno (2012), for instance, found that some story frames generated more comments than others. What's even more apparent is the opposite relationship: comments can impact other readers' perception of the news story itself, providing competing frames from which to interpret the story (Thorson, Vraga, & Ekdale, 2010).

The importance of comments goes well beyond the developing digital business model for news organizations. Comments are dialogic, and that makes them different from other online behaviors that have been broadly dubbed as participatory, such as sharing, tagging, and liking content. Discourse has long been recognized as crucial to the proper functioning and legitimation of democracy, and so too has the press's role in informing, sparking, capturing, and hosting those discussions (Lasswell, 1941; Siebert, Peterson, & Schramm, 1956; Schudson, 2011). As Lasswell writes, "democracy depends on talk" (1941, p. 81). With more and more discourse taking place online, the tenor and inclusiveness of the digital debate may have significant influence on the quality of our national discourse in general (Gimmler, 2001). This is particularly

important as political polarization grows and trust in government diminishes (Nabatchi, 2010).

New, participatory, online news consumption behaviors like the comment, then, are changing our national discourse, creating new challenges and opportunities for the press, opening the door to participation for some citizens, and perhaps closing it for others. It also provides a new frontier for examining, expanding, and challenging traditional communication theories that examine the processes and effects of news creation and dissemination as linear, unidirectional, and largely within the control of stable organizations (Schudson, 2011; Shoemaker & Voss, 2009). Research on how online comments affect audiences' perceptions of online news content is growing (Anderson et al., 2014; Antonopoulos, Veglis, Gardikiotis, Kotsakis, & Kalliris, 2015; Hoffman, Jones, & Young, 2013; Ksiazek, Peer, & Lessard, 2014; Oeldorf-Hirsch & Sundar, 2015: Pentina & Tarafdar. 2014: Stavrositu & Kim. 2014). This study seeks to continue this line of research focusing on the third-person effect (TPE) and the hostile media perception (HMP).

3. TPE and HMP

First proposed by sociologist Davison (1983), the third-person effect posits that people tend to assume others are more vulnerable to persuasive media messages than they are. For the past 30 years, the third-person effect has generated substantial research interest in a variety of contexts, including news (Salwen, 1998), commercial content (Gunther & Thorson, 1992), health (Henriksen & Flora, 1999), entertainment (Gunther, 1995; Salwen & Dupagne, 1999), and political communication (Pan, Abisaid, Paek, Sun, & Houden, 2006; Wei & Lo, 2007). A meta-analysis of 372 effect sizes from 106 studies found a very robust average effect size of d = .646 (r = .307), (Sun, Shen, & Pan, 2008).

Hostile media perception predicts that people with strong attitudes and group identifications tend to perceive that media are biased against their side of a social issue, even if the news report is neutral (Giner-Sorolla & Chaiken, 1994; Perloff, 1989; Vallone, Ross, & Lepper, 1985). Ample support for the effect has been found in different types of media (Coe et al., 2008), message contexts (Lee, 2012), issue domains (Gunther & Liebhart, 2006), and political systems (Chia, Yong, Wong, & Koh, 2007). A recent meta-analysis also found a clear link to hostile media perception across 34 studies with an average effect size of r = .296 (Hansen & Kim, 2011).

Given that both are based on perceptual biases about the effects of media messages, the theoretical link between the TPE and HMP has received much scholarly attention. For instance, Vallone et al. (1985) found that the level of involvement with a topic enhances the third-person effect. The level of involvement can be defined as a position of strong opinion or attitudes toward a certain issue (Perloff, 2002), which is the basic premise of HMP. Perceptions of media bias have also been found to influence the magnitude of TPE (Cohen, Mutz, Price, & Gunther, 1988; Gibbon & Durkin, 1995), attesting to a clear link between the two theories. Studies focusing on the concept of perceived reach (Gunther & Schmitt, 2004; Gunther & Liebhart, 2006) showed that when the subjects surmised that the content would have a greater influence on others (i.e. newspaper article vs. college student essay), the subjects scored the content as more biased.

The fundamental premise underlying the two theories is a lack of knowledge about how others perceive or react to any particular media message. When reading newspapers or watching television news, traditional news consumers did not have any direct information about what others thought about the news. A rich body of research has discussed how this ignorance influences media effects, employing the concept of *presumed media influence*. Scholars have suggested that people tend to assume media effects

on other people, and subsequently, changes in their attitudes or behaviors (Cohen & Tsfati, 2009; Gunther, Bolt, Borzekowski, Liebhart, & Dillard, 2006; Gunther & Christen, 2002; Gunther & Storey, 2003). For instance, Gunther and Storey (2003) found that ordinary women's attitudes towards health clinic workers changed after they listened to a radio health campaign directed at health clinic workers. The attitude change was influenced by their perception of the impact the radio campaign would have the workers, even though they had no direct knowledge of this effect. Similarly, Cohen and Tsfati (2009) found that when voters' perceive that news media can persuade others to switch votes, they are more likely to vote strategically to either conform to or counterbalance the media effects on others.

Since digital content often incorporates direct user feedback through commenting, sharing, and liking, consuming content in a digital environment may decrease uncertainty about the content's effect on others, and therefore change the effect of the content on the subject. As Messing and Westwood (2014) note, the socialization of online news fundamentally alters the context in which people read news. User participation such as readers' comments allows people to be informed about how others think and react to the news on a real-time basis (Houston, Hansen, & Nisbett, 2011; Lee, 2012; Lee & Jang, 2010). This notion is central to our investigation, as we are interested in how the presence of comments affects the magnitude of TPE and HMP, and why.

We started with two competing predictions for the role of online comments. First, it is possible that comments would provide a clue that the audience is, in fact, paying attention to a specific news story (increased perceived reach). In this case, the comments could increase self-other differences (TPE) and perceptions of bias (HMP). On the other hand, online comments may decrease uncertainty about how others react to media messages, thus lowering TPE and HMP.

3.1. Corrective and promotional action

Historically, most scholarship dealing with both TPE and HMP has revolved around how messages are received and interpreted by the audience. Although TPE includes a behavioral component (McLeod, Detenber, & Eveland, 2001), the behavioral consequences of self-other discrepancies were primarily about attitudes than actual actions; for example, their support for the censorship of pornography because of its perceived effect (Tal-Or, Cohen, Tsfati, & Gunther, 2010). However, there is a growing body of research into how TPE and HMP work together to influence audience actions. This scholarship is not just interested in what audiences believe about the media messages, but rather the actions of those audience members based on these beliefs (Sun et al., 2008).

Scholars have suggested that audience members who perceive media content as biased (HMP) and who believe it will have a large effect on others (TPE) are often motivated to take corrective action. Corrective actions are defined as methods taken by audience members to try and override third-person effect (Rojas, 2010). If a reader, for instance, believes that others are likely to be influenced by a news story the reader perceives as harmful or hostile to his or her own position, then taking a corrective action can be seen as a means of balancing the perceived effect of the media message. Rojas (2010) defined the term this way:

"Instead of trying to prevent potential media effects by censoring media content, people would engage in reactive actions to have their own views be heard and counterbalance those perceived media effects. In sum, corrective behaviors are political behaviors that are reactive, based on perceptions of media and media effects, and seek to influence the public sphere" (p. 347).

Examples of corrective action would be writing a letter to the editor and posting public comments to a social-media platform or in the story's comment section. The public aspect of the action is important – a corrective action must be taken publicly, since the aim is to counter the media message. The growth of the internet and social media has increased the number and type of venues for audience members to take potential corrective actions (Bowman & Willis, 2003).

Rojas (2010) found that both perceived media effects and perceived media bias were positively related to the taking of corrective behaviors. In other words, both TPE and HMP play a role in a person's willingness to take corrective action. Similarly, Lim and Golan (2011) found that if a person believes they are able to influence others, they are more likely to take corrective action in the social-media sphere. Even if a certain population is not the target of a message, people within that population can still be indirectly influenced by it and assume that the message will have an influence on others. That indirect influence can also lead to a desire for corrective action (Gunther & Storey, 2003).

Most scholarship in this area is focusing on the notion of corrective actions, an effort to counter a perceived negative. However, the explosion of online tools and social-media platforms also allows audience members to recommend stories to their friends and followers (Hermida, Fletcher, Korell, & Logan, 2012). Online actions are not always negative, and the same comment sections that can be filled with corrective actions can also be filled with promotional ones – people agreeing with the story and using social media to share it, and thereby advance their point of view. While research in this area is growing, there is a gap in the literature in understanding how promotional actions can be seen when examined through the lens of TPE and HMP. That gap is one that this study works to fill.

The shifting focus from perceptions to behaviors has also lead to research that examines TPE and HMP on partisan news content, as opposed to deliberately neutral news content (Arceneaux, Johnson, & Murphy, 2012). The Archeneaux study found that stories that reinforce the reader's world view – pro-attitudinal – are more likely to trigger promotional action than neutral stories. Meanwhile, stories that challenge the reader's world view – counter-attitudinal – are more likely to trigger corrective action. This new tact of research also brings non-partisans and moderates into focus as potentially interesting subjects, whereas with the presentation of neutral stories to a nonpartisan or ambivalent reader was unlikely to produce an effect.

4. Guns and comments

As we will discuss in detail in our methods section, we test and expand the theories underpinning this study with a mixed between-within group experiment. We have chosen the debate on gun policy in the U.S. following the Sandy Hook Elementary School shootings on which to build our stimulus materials. We have chosen this topic due to its currency, because we are confident that a sample would yield plenty of passionate subjects on both sides of the debate, and because it has implications for current policy discussions in a variety of arenas.

It should be noted that the gun-rights/gun-control dichotomy is not a perfect one as it is possible to be in favor of both. However, we found in pre-testing and in the experiment itself that people were able to place themselves on the gun-rights/gun-control spectrum. We hope that our use of "pro-gun rights" and "pro-gun control" does not cause confusion. It has been suggested that we use "anti-gun" and "anti-gun control" to describe the positions. But in this manuscript, we have opted to stick with the language we used in the experiment itself, which was designed to avoid the

perception of any bias on the part of the researchers as the result of referring to one of the positions in the negative tone.

4.1. Hypotheses and research question

Our review of the literature in this area has led us to the following hypotheses and research question:

H1a. The presence of online comments increases TPE and HMP.

H1b. The presence of online comments decreases TPE and HMP.

H2a. Readers are more likely to take promotional action – i.e., like the story – if it is pro-attitudinal.

H2b. Readers are more likely to take corrective action – i.e., dislike the story – if it is counter-attitudinal.

RQ1. What are the factors that can predict participatory behavior?

5. Method

To test these hypotheses, the study utilized a 2×3 mixed between-within subjects experimental design. The between subjects conditions were stories with comments and stories without comments. In the within subjects conditions, readers were given three stories, one pro-gun rights, one pro-gun control, and one neutral. The varying biases of the stories, along with the presence or absence of comments, were the manipulated variables in the experiment. Subject variables, including demographics and positions on gun policy, were collected before exposure. Measures of media effects, third-person effects, and perceived story bias – the experiment's dependent variables – were obtained immediately after reading each of the three stories.

5.1. Sample

Our sample was drawn in two ways. The first was via a random selection of email addresses from the email system of a mid-sized Northeastern university. The email database has 37,716 addresses in it, consisting of most current faculty, staff, and students at this university, along with alumni still using their .edu accounts. We randomly generated lists of email addresses from this database, and started sending the link to the experimental survey instrument along with recruitment text on April 15, 2013. Over the next week, a total of about 6000 emails were sent, although many bounced back as inactive. Additionally, three tweets with the link were tweeted with the hashtags #gunrights and #guncontrol.

It is important to note that our study is not designed to survey people on their attitudes toward gun policy so that we can extrapolate the attitudes of average Americans. Rather, we want to see how the participatory actions of online news readers change when confronted with pro- and counter-attitudinal stories, and whether the presence of comments mediates that effect via third-person effect. So we sought a sample that contained subjects with a variety of perspectives on gun policy, including individuals with strong positions on both sides of the gun-control/gun-rights debate. Through random assignment, we then see how the manipulation of story bias and the presence of comments affect our outcome variables.

The recruitment text in the email and the consent form on the experimental instrument itself both made note drawings for several Starbucks gift cards and a Kindle to entice participation. We

thought this important because in addition to partisans on gun control, we wanted to ensure some participants with neutral or weak positions on the topic. Both the recruitment and consent forms explain that the study is meant to examine the media's treatment of gun control and gun rights issues. The words "comments" and "bias" were not mentioned.

5.2. Procedures

Subjects who responded to the recruitment letter accessed the experiment via a SurveyGizmo link. After agreeing to participate, we measured several subject variables, including age, level of educational attainment, and gender. We also measured, on an 11-point scale, the subject's political orientation on a scale that ranged from extremely conservative to extremely liberal, as well as their party affiliation, and, as a basic measure of political activity, whether they voted in the 2012 presidential election. We measured their frequency of news consumption in days per week and minutes per day, a measure that is later converted to minutes per week. We used a three-item scale measure of media credibility that measures, on an 11-point scale, the subject's perceptions of news story's accuracy, fairness, and trustworthiness.

In essence, the experiment had three phases: pre-stimulus test, stimulus, and post-stimulus test. Our pre-stimulus measures allow us to know (1) how strongly partisan the subject is on the issue of guns, (2) the directionality of that position (gun rights vs. gun control), (3) their general evaluation of media bias on the issue of guns, and (4) the extent to which they generally see others as influenced by media messages in absolute terms, and compared to themselves. By then exposing the subjects to stories that are both proand counter-attitudinal and measuring these same items again, we can see how the stimuli effect both perceptions of media bias and perceptions of self-other differences.

Pre-stimulus test. We establish the subject's baselines for media bias on the issues of gun control and gun rights with a three-item scale measure of their general impression of the reporting on both gun control and gun rights. Much of the seminal work on media bias and the hostile media effect use scale measure that employ either 9- or 11-point scales to measure perceived media bias (Gunther & Schmitt, 2004; Gunther & Christen, 2002; Perloff, 1989; Vallone et al., 1985). The most popular appears to be the 11-point scale that uses zero as the neutral point and -5/+5 as representing extremely bias reports more favorable to one side or another. We adopt this 11-point scale in the current study, with -5 indicating the subject found the story extremely bias in favor of gun rights, and +5 indicating they found it extremely bias in favor of gun control. We also extended the 11-point scale to most of our other measures as well (such as political orientation and self-other differences) to aid in interpretation.

We used a seven-item scale to measure of subjects' strength of stance on gun rights/control issues. We ask subjects to compare their own stance to those of the strongest gun rights and gun control advocates that they know, and then ask them their level of agreement on several items including the banning of semi-automatic weapons, and on whether they see the Second Amendment as an individual or group right by asking for their agreement with the statement, "The second amendment provides an absolute guarantee that all individual Americans have the right to bear arms." These items were also measured on an 11-point.

Finally, the pre-stimulus section of the questionnaire asks subjects to rate, again on an 11-point scale, the extent to which the media's coverage of gun-rights and gun-control affect their own

viewpoints, those of their best friend, those of the average member of their Facebook network, and those of the average U.S. citizen.

Analysis of pre-stimulus test shows that there exists a statistically significant relationship between all three measures of gun positionality with the pre-test general measure of perceived media bias on the media's gun coverage. Using the Pearson's correlation procedure to test the full -5 to +5 gun position scale against media bias, a significant relationship was found at the .001 level (r=-.647, p<.001). The gun rights group found media to be biased in favor of gun control (r=.384, p=.015), while the gun control group found just the opposite: media is biased in favor of gun rights (r=-.393, p=.003). This suggests a classic hostile media effect even before exposure to specific stories.

The analysis also found that position on the gun issue (R^2 = .415, p < .001) is the most important factor in predicting pre-test perceptions of media bias, with political orientation (R^2 = .047, p < .006) also contributing to the picture (Tables 11 and 12).

Stimulus. Subjects then are randomly assigned to either the comment condition, or the no comment condition. In both conditions, the subjects are shown the same three articles, in random order. One article was written with a strong pro-gun control bias, one with a strong pro-gun rights bias, and the third with a neutral, balanced presentation.

At the bottom of each article, subjects may or may not encounter a series of comments (which were pre-tested for bias and realism) that are designed to appear as if they were written by previous readers of the online news articles. Where comments were encountered, there was a mix of agreement and disagreement, as well as thoughtfulness, anger, and superficiality. Subjects in both conditions have the opportunity to leave an actual comment of their own at the end of the article via an empty comment box. Subjects were not compelled to comment. The subjects were then asked a series of questions asking the likelihood that they would comment, like, dislike, or share the story if they encountered it on an actual news platform. They then rated it for bias, and were asked how much the article affected them, would affect their best friend, their average Facebook friend, and the average American. This battery was asked after each of the three stories.

Variables. The subject's position on guns, when used in our tests, is always used as independent variable, as is the between-subjects comment/no comment condition. Likewise, subjects' self-reported likelihood of participation (comment, like, dislike, and share) is always used as a dependent variable. Assessments of effects on others and of the bias in the stories are used as either an IV or DV, depending on the test.

5.3. Stimulus materials

One of our team members, an experienced journalist, surveyed recent coverage of the gun rights-gun control debate. He selected three actual stories that employed a balanced presentation. He adjusted those stories to fit the neutral condition, mostly by shortening them so that they would not appear overwhelming within the experimental instrument. He then utilized the pro-gun control aspects of each story to create stories that were biased in favor of gun control, and did the same to construct stories that were biased in favor of gun rights.

This process gave us nine stories, three neutral, three pro-gun rights, and three pro-gun control. We then pre-tested these stories with 17 colleagues who have diverse views on guns and had them evaluate the articles for realism and bias. Ultimately, we selected the story deemed the most neutral, the one most bias toward gun rights, and the one most bias toward gun control. All three articles were bylined with the generic AP abbreviation for the Associated Press, and were written in AP style.

6. Results

One-hundred and sixty-two people answered at least one question from the survey, although 26 of those did not make it to the random assignment variable and therefore were not exposed to any of our stimulus materials. They were eliminated from the analysis. The remaining partial responses were compared to the complete responses using repeated measure GLMs on a variety of key variables including gun positions, political orientation, gender, and age. No significant differences were found. The decision was then made to eliminate all partials who did not answer the post-test questions for at least two of the story conditions.

The resulting sample of subjects who completed the full experiment consisted of 102 subjects comprised of 60 men and 42 women. The sample had a mix of students (n = 47) and workers (n = 48), with just a few unemployed or retired subjects. Seventy-four percent of the sample voted in the 2012 election, with 35 reporting that they were registered Democrat, 21 as Republican, 36 as a third-party or no party, and the remaining 10 not registered to vote at all. See Tables 1–3 in the Appendix A for additional demographic and subject measures.

6.1. Comparison of groups

To ensure that subjects assigned to each condition did not vary from each other significantly, a series of ANOVAs were then run to compare the subjects who were assigned to the "with comments" condition (n = 53) to those in the "no comments" condition (n = 49). There were no differences found on the key variables including gun position, evaluation of media credibility, and the pre-test scores of perceived media bias on guns and the effects of that media coverage on others. The cross-tab chi-square procedure was also run comparing the gender of each group. There were no significant differences found on any of these variables between the two conditions.

6.2. Scale items

A seven-item gun position scale (n = 98, M = .36, $\alpha = .946$) was calculated with -5 representing a person who is extremely in favor of gun rights, +5 a person extremely in favor of gun control, and 0 representing a neutral position. The mean indicates that our sample was, on average, slightly in favor of gun control. Depending on the test, this scale was sometimes used as is, others as an absolute value (which represents strength of position without regard to directionality), and sometimes as a nominal variable, so that those who scored higher than 0 formed the gun-control group (n = 56, M = 2.84), while the absolute value of those who scored below 0 formed the gun-rights group (n = 41, M = 3.01). A three-item media credibility scale was also created (n = 101, M = .06, $\alpha = .903$). See Table 4 for more detail on the scales.

6.3. Hypotheses testing

Our first set of hypotheses predicts that the exposure to comments will alter the subject's evaluation of the effect on the story on others (TPE) as well as their perceptions of the story's bias (HMP). We found two reasonable theoretical explanations for the effect comments would have on these evaluations: (1) that comments would signal that the story was being read and taken seriously by its intended audience, thus increasing TPE and HMP (H1a), or (2) that the presence of comments would decrease uncertainty about the effects of the story on the audience, decreasing TPE and HMP (H1b).

We ran a series of repeated measures GLM to test these hypotheses. Results indicated statistically significant main effects of the comment/no comment condition at .01 level F(1,84) = 6.457, p = .013, $\eta^2 = .071$ and the interaction between news story and gun position F(2, 168) = 13.735, p = .000, $\eta^2 = .141$. The data suggest that the presence of comment has impact on the direction and degree of the third-person effect. When there was no comment, people perceived that others will be more negatively influenced by the story than themselves. It confirms the classic third-person effect. When there was comment, however, the third-person effect disappeared or diminished. For gun right story, people perceived that others will still be more negatively influenced than themselves, but the social distance decreased. For neutral and gun control stories, people perceived that others will be more positively influenced by the story than themselves. In sum, with comment, the third-person effects disappeared or diminished. Figs. 1.1–1.3 graphically represent these patterns. See Table 5 for more on the means and standard deviations.

The data also suggest that respondents favoring gun control think that both self and others, on average, will be positively affected by the neutral story and gun-control story, but negatively affected by gun-rights story. On the contrary, respondents favoring gun rights think that both self and others, on average, will be positively affected by the neutral story and gun rights story, but negatively affected by the gun control story. In sum, respondents viewed that both self and others will be positively affected by neutral or pro-attitudinal story, but negatively affected by the counter-attitudinal story. See Table 6 for more on the means and standard deviations.

As for the impact of the presence of comments on perceived media bias, results indicated statistically significant main effects of news story, F(2, 180) = 94.880, p = .000, η^2 = .513. However, there were no statistically significant main effects of condition or the interaction between news story and condition. This suggests that the presence of comments does not influence perceived media bias, but the level of perceived media bias does differ by news story. See Tables 7 and 8 for more on the means and standard deviations. In sum, H1b was partially supported.

Our second series of hypotheses predicts that the type of behavior a person engages in with a story will be determined by whether or not the story is pro- or counter-attitudinal. We hypothesized

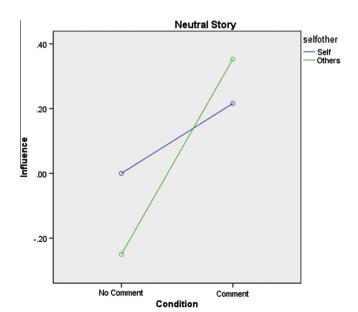


Fig. 1.1. Main effects of the comment/no comment condition on perceived influence of the news story (neutral story).

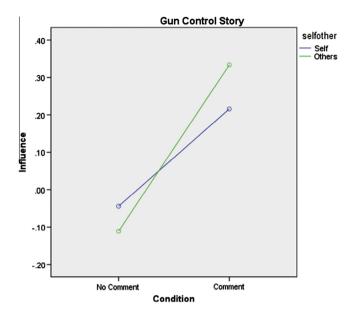


Fig. 1.2. Main effects of the comment/no comment condition on perceived influence of the news story (gun control story).

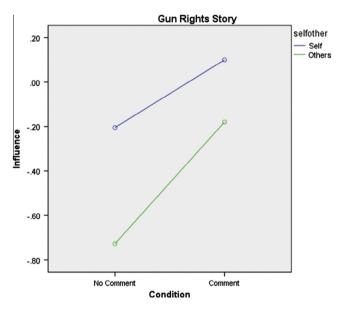


Fig. 1.3. Main effects of the comment/no comment condition on perceived influence of the news story (gun rights story).

that readers are more likely to take promotional action – i.e., like the story – if it is pro-attitudinal (H2a), and that readers are more likely to take corrective action – i.e., dislike the story – if it is counter-attitudinal (H2b). We ran a series of ANOVAs to test these hypotheses. For these tests, the subjects were broken up into a gun-rights group (below 0 on the gun-position scale) and a gun-control group (above 0). These groups were the independent variable in the ANOVAs, with various types of participatory behaviors as the DVs.

Groups encountering pro-attitudinal stories were significantly more likely to perform a promotional action. So the gun rights group reading the story biased toward gun rights was significantly more likely to "like" the story than the gun control group, F(1, 90) = 9.808, p = .002. The pattern held when the two groups encountered the story biased in favor of gun control, with the gun control group more likely to give the story a thumbs up than

the gun rights group, F(1, 91) = 5.632, p = .020. The opposite was true with disliking, the corrective behavior. Gun control proponents were significantly more likely to say they would give a thumbs down to a story that was intentionally biased against their position than the gun rights group, F(1, 90) = 9.808, p = .002. The opposite was true on the story intentionally biased in favor of gun control, F(1, 90) = 19.249, p = .001. So H2a and H2b were supported. See Tables 9 and 10 for more on the means and standard deviations.

6.4. Exploring the research question

To explore research question 1, which seeks to understand more broadly the factors that drive participation with online news content, a series of regression models were built using focal variables such as perceptions that the story is biased, the perceived effect of the story on average citizens, political orientation, and position on gun policy as the independent variables, and the various participatory behaviors (likelihood of commenting, liking, disliking, sharing and an overall participation measure) as the dependent variables. What emerges from these models is a clear indication that perceived story bias is a significant predictor of participatory behavior, with all participation measures showing statistically significant increases as bias toward either side increases. The role of some of the other variables seems more nuanced and dependent on the specific behavior being examined.

For instance, when setting the overall participation measure as the dependent variable, total bias (the absolute value of the bias scale measure across all conditions) is significant at the .01 level (β = .572, p = .003). The other significant variable in this model is strength of position on guns (β = .213, p = .043), while impact on the average citizen approaches significance. The model overall is also significant (Adjusted R^2 = .081, p = .031). We see a similar pattern with almost all the participatory DVs. The disliking the story model was also significant (Adjusted $R^2 = .111$, p = .010), with total bias as the only significant measure within the model (β = .380, p < .001), and gun position strength approaching significance. The like a story model approached significance (Adjusted R^2 = .061, p = .065), with perceived bias ($\beta = .216$, p < .046) and strength of gun position (β = .224, p = .035) as significant positive predictors, and impact on others as a negative predictor ($\beta = -.229$, p = .034). The sharing a story model also approaches significance (Adjusted $R^2 = .051$, p = .091), with total bias ($\beta = .248$, p = .023) and impact on citizens (β = -.226, p = .023) showing significance and strength of gun position approaching significance. The likelihood of commenting model does not approach significance, although once again total bias is a significant predictor (β = .245, p = .026).

7. Discussion

The purpose of this study was to explore the relationship between subjects' position on an issue interacted with the slant of a story and the presence of comments to affect their perceptions of the contents effects on others and their motivation to take various types of participatory behaviors. Using the gun-control debate in the United States as the basis, this study allowed us to explore third-person effects and hostile-media effects and their relationship to participatory behavior.

First, the data offer continued support for hostile media effect. The evaluation of story bias is clearly linked to the strength of a partisan's position on an issue. In our experiment, partisans on both sides of the gun debate evaluated a neutral story as biased against their position. Both gun-rights and gun-control partisans

were able to see stories in their favor as biased, but they saw stronger bias in stories that were counter to their positions.

Second, this study extends previous research on HMP and TPE in relation to behavioral outcomes. The data show that perceptions of bias are a significant predictor of all the participatory behaviors this study examined. Perceived effect of the story on others also plays a role. For instance, we found a mostly negative relationship between perceived effect of the story on others and linking or sharing. It indicates that if perceived effect on others increases, people are less likely to take promotional actions. Nevertheless, unlike perceived media bias, perceived effect on others did not work as a significant predictor of corrective behaviors.

These findings provide a broader theoretical model for the roles of HMP and TPE in inducing participatory behaviors. The findings suggest that HMP and TPE can have different levels and directions of impact on behavioral outcomes. Although comparing HMP and TPE in this context is beyond the scope of this study, it deserves further research. This study also expanded previous research (Gunther & Storey, 2003; Lim & Golan, 2011; Rojas, 2010) by showing that HMP and TPE are not only related to corrective actions, but also to promotional actions. Given that the valence of online actions is not always negative, understanding the theoretical link between HMP, TPE, and promotional actions can be an important addition to studies of online journalism.

Third, our study suggests that a person is more likely to engage in promotional behavior (liking or sharing a story) if they feel the story reflects their own attitudes, and that they are more likely to engage in corrective behavior (thumbs downing a story) if it runs counter to their attitudes. A person's attitude on gun-control strongly influenced their belief in media bias.

Finally, comments in this study reduced third-person effect. Partisans saw stories that ran counter to their position as having less of a negative impact in the comment condition, and they also perceived a smaller gap between the effect of the story on themselves, and the effect of the story on others. This suggests that comments act as a cue to how others perceive the story, and therefore reduce uncertainty in making self-other comparisons. The existence of comments does not seem to change participatory behavior in and of itself.

Although this study focuses on the social-psychological mechanisms that trigger participatory behaviors, it may have some practical implications for digital journalists and other media practitioners. Our findings suggest that comments may decrease TPE and HMP. Therefore, the presence of existing, constructive comments on a news story may curtail additional comments that try to undermine the news report by arguing that it is biased or by trying to distract readers with spurious commentary. Therefore, if a digital news portal can cultivate a community of commentators who quickly offer constructive comments on a story, it may help spark a more constructive discourse overall. It may also help web and discussion managers at news sites understand the reasons behind the negative comments their stories receive, and perhaps to help steer the conversation in a more constructive direction. For instance, would directly discussing cognitive biases such as HMP in a comment section change, for the better, the tenor of subsequent comments? Or, perhaps more realistically, would knowledge of HMP at least help the discussion managers and journalists themselves understand and cope with the onslaught of negative commentary? Likewise, PR practitioners and marketers may want to consider including comments as part of their initial campaign, rather than simply waiting to see what comments come their way. It would be fascinating to further explore whether the right mix of comments would defuse some of the self-defense mechanisms employed unconsciously by audience members and thus leave them more open to the message.

A limitation of the study was that it did not measure participants' pre-existing attitude towards online comments on news stories. Comments are an established part of the online news environment, so savvy online readers may have preexisting opinions about them. Those opinions may influence whether or not they decide to comment themselves. If, for example, a person has a negative opinion of online comments and does not think they are worthwhile, they may be less likely to leave a comment, and vice versa. Future research could involve testing for participants' opinions of online comments and seeing if that influences desire to take part, as well as their perceived efficacy in commenting – in other words, do they think they have the ability to influence others by commenting?

Another limitation is the artificiality of the experimental platform. The stories read as real news stories would, and were formatted roughly the same. But we did not attempt to create the illusion that the story was being read on an actual news platform. Doing so would potentially make the experimental environment more realistic. However, it would also introduce a whole new set of confounds since, in addition to a reader's attitudes and story's actual factual content, the platform on which the story appears – from its reputation as news source to structural elements such as design – also likely play a role.

A potential confound in the current study was its timing. The first wave of emails with the link to the experimental instrument was sent just hours before the Boston Marathon bombing, and

Table 1 Descriptive statistics for nominal variables (N = 102).

Variable	Frequency	Percer
Gender		
Male	60	58.8
Female	42	41.2
Transgender	0	0
Educational attainment		
No high school degree	1	1
High school degree	1	1
Some college but no degree	27	26.5
Associates degree	2	2
Bachelor's degree	34	33.3
Work beyond the bachelor's	10	9.8
Master's degree or higher	27	26.5
Employment status		
Full-time	37	36.3
Part-time	11	10.8
Retired	1	1
Unemployed	2	2
Student	47	46.1
Other	4	3.9
Party affiliation		
Democrat	35	34.3
Republican	21	20.6
Third party	5	4.9
Registered to vote but not enrolled in a party	31	30.4
Not registered to vote	10	9.8
Did you vote in 2012?		
Yes	74	72.5
No	28	27.5
Condition		
Without comments	49	48
With comments	53	52
Gun control groups ^a		
Gun control	56	54.9
Gun rights	41	40.2

^a Based on a 7 item, 11-point scale, that ranged from -5 (extremely pro-gun rights) to +5 (extremely pro-gun control), with subjects scoring less than 0 placed in the gun rights group and respondents scoring higher than zero being placed in the gun control group. (N = 97).

there was a steady stream of gun policy news during the entire study period. It is impossible to know how these events may have affected or results, although we think they may have balanced themselves out a bit and are not sure it matters either way. Our initial instinct when the bombing happened was to anticipate a lower response rate as people became absorbed in the coverage, whereas the gun policy news may have helped us recruit partisans concerned about where the public debate was headed. Likewise, the early bombing coverage seemed to reinforce the value of the news media as a force that can bring the nation together, but frustration with the coverage quickly grew. Most importantly, measuring attitudes toward the media and toward guns was not the point of the study. Rather, we wanted to see how those measures influenced participatory news behaviors. So even if these events altered the precise placement of a subject on the gun positionality or media credibility scales, it seems unlikely that that the overall relationships between those variables and participatory behavior would change.

Table 2Means and standard deviations for single-item interval variables not used in scales.

Variable	n	М	SD
Age	102	27.50	10.16
Average minutes of news exposure per day	100	40.97	48.64
Political orientation ^a	102	.45	2.46
Gun policy is an important issue ^b	100	.29	3.61
How bias is the media's coverage of guns ^c	100	1.84	2.35

 $^{^{\}rm a}\,$ On a scale of -5 (extremely conservative) to +5 (extremely liberal) scale with 0 indicating neither liberal nor conservative.

Table 3Means and standard deviations for third-person effect variables.

<u> </u>			
Variable	n	М	SD
To what extent are people influenced by gun coverage? ^a You Best friend Average Facebook friend Average citizen	100 99 85 100	.14 05 59 80	
To what extent will people be influenced by the story you ju You Best friend Average Facebook friend Average citizen Social distance score (Citizen – Self, absolute value)	st read	1? ^b	
To what extent will people be influenced by the story you ju You Best friend Average Facebook friend Average citizen Social distance score (Citizen – Self, absolute value)	st read	1? ^c	
To what extent will people be influenced by the story you ju You Best friend Average Facebook friend Average citizen Social distance score (Citizen – Self, absolute value)	st read	1? ^d	
Average social distance score across all stories and conditions	100	94	2.87

^a On a scale of -5 (extremely negatively influenced) to +5 (extremely positively influenced) with 0 representing no influence of coverage.

^b On a scale of -5 (strongly disagree) to +5 (strongly agree).

 $^{^{\}rm c}$ On a scale from -5 (extremely bias in favor of gun rights) to +5 (extremely bias in favor of gun control), with 0 indicating no perceived bias.

^b Same scale as 'd' for the story constructed to be neutral.

 $^{^{\}rm c}$ Same scale as 'd' for the story constructed to be pro-gun rights.

d Same scale as 'd' for the story constructed to be pro-gun control.

Another difficulty is the comments themselves. Comments are more than just a condition – they are content in and of themselves. We took care to pre-test the comments and to use a balanced mix of positions and attitudes under all the stories in the comment condition. But it is difficult to know how the specific content of the comments may or may not have influenced subjects' evaluation of the stories. For instance, did the mix of positions on guns expressed in the comments dilute perceptions of a story's bias when the story was constructed to be intentionally biased toward one side? We found that comments reduced TPE and HMP. Is this because they signaled to the subject the effect the content was having on other readers, thus reducing uncertainty in making a third-person evaluation of the content's influence? Or did they simply conflate the content of the story with the content of the comments? A future experiment might help unravel this knot by altering the condition by type of comments - all pro-guns, all pro-control, mix, no comments, etc.

Appendix A

See Tables 1-12.

Table 4Means, standard deviations and alphas for scales and scale items.

Scale/Item	N	M	SD	α
Media credibility scale	101	.06	6.34	.903
1. News media is fair ^a	101	18	2.29	
2. News media is accurate ^a	101	.41	2.20	
3. News media is trustworthy ^a	102	22	2.47	
Gun position scale		2.52	22.56	.946
1. I support the assault weapons bana	102	.39	4.20	
2. 2nd Amendment guarantees individual right to bear arms ^b	101	.30	3.70	
3. We'd be safer if more law-abiding citizens had guns ^b	102	-1.02	3.83	
4. I support restrictions on ammunition purchases ^a	101	.66	3.98	
5. I am a strong supporter of gun rights ^b	102	.12	3.69	
6. I am a strong supporter of gun control ^a	102	.70	3.77	
7. Place yourself on this gun position scale c	101	.37	2.94	
Gun position absolute value	97	2.91	1.47	
Gun rights group scaled, absolute value	41	3.01	1.61	
Gun control group scaled	56	2.84	1.36	

 $^{^{}a}$ On a -5 (never) to +5 (always).

Table 5Means and SDs for two outcome variables at self and others.

	No comment		Comment	
	M	SD	M	SD
Self influenced				
Neutral	.12	.65	.23	1.06
Gun control	10	1.30	.17	1.34
Gun rights	28	1.24	.10	1.02
Others influenced				
Neutral	23	1.48	.38	1.84
Gun control	18	2.32	.35	2.24
Gun rights	80	1.92	.00	1.91

Note. Neutral (N = 88), gun control (N = 88), gun rights (N = 88).

Table 6Means and SDs for influence score of each story by gun position.

	Gun control group		Gun rights group	
	М	SD	M	SD
Self influenced				
Neutral	.15	1.01	.22	.68
Gun control	.56	.98	69	1.41
Gun rights	38	1.19	.39	.87
Others influenced				
Neutral	02	1.81	.28	1.54
Gun control	.65	1.89	67	2.57
Gun rights	40	2.03	31	1.84

Note. Neutral (N = 88), gun control (N = 88), gun rights (N = 88).

Table 7Means and SDs for perceived media bias for each story by condition.

	No comment		Comment	
	M	SD	M	SD
Neutral	.05	1.23	.02	1.27
Gun control	2.26	1.90	1.92	2.08
Gun rights	-2.14	2.01	-1.53	2.03

Note. Neutral (N = 92), gun control (N = 92), gun rights (N = 92).

Table 8Means and SDs for perceived media bias for each story by gun position.

	Gun control group		Gun rights group	
	M	SD	M	SD
Neutral	26	1.19	.47	1.16
Gun control	1.83	1.96	2.39	2.02
Gun rights	-1.85	2.02	-1.67	2.03

Note. Neutral (N = 89), gun control (N = 89), gun rights (N = 89).

Table 9Means and SDs for willingness to press "like" for each story by gun position.

Story	Gun contro	rol group Gun rights		group	
	M	SD	M	SD	
Neutral	-2.61	2.83	-2.14	2.79	
Gun control	-1.91	3.06	-3.89	1.88	
Gun rights	-3.71	1.94	97	3.21	

Note. Neutral (N = 91), gun control (N = 92), gun rights (N = 93).

Table 10Means and SDs for willingness to press "dislike" for each story by gun position.

Story	Gun control group		Gun rights group	
	M	SD	M	SD
Neutral	-3.03	2.46	-3.27	2.56
Gun control	-3.13	2.63	25	3.65
Gun rights	-1.76	3.27	-3.68	2.14

Note. Neutral (N = 91), gun control (N = 92), gun rights (N = 92).

Table 11 Means, standard deviations, and intercorrelations for media bias and predictor variables (N = 95).

^{*} p < .05.

^b Values recorded represent agreement on a -5 (strongly disagree) to +5 (strongly agree). Values included in the scale, however, were reserve coded.

 $^{^{\}rm c}$ Values recorded represent placement on a scale from -5 (most pro-gun rights person I know) to +5 (most pro-gun control person I know). Values included in the scale, however, were reserve coded.

^{**} p < .01.

Table 12 Hierarchical multiple regression analysis predicting perceived media bias (N = 95).

Variable	В	SEB	β	R^2	ΔR^2
Step 1				.415	.415
Gun position	469	.06			
Constant	2.01	.19	64**		
Step 2				.417	.002
Gun position	46	.07	64 ^{**}		
Media credibility	01	.11	01		
TPE general citizen	.02	.07	.02		
Political orientation	06	.13	04		
Constant	2.13	.32			

^{**} p < .01.

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^a The absolute value of the average bias subjects reported across all stories and conditions.