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News outlets in social media: aggression in comments

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NEWS OUTLETS IN SOCIAL MEDIA: AGGRESSION IN COMMENTS

by

Leslie G. Holt

A Thesis

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Dedications

I dedicate this manuscript to my mother and father, Tom and Bonnie Holt, for their endless love and encouragement.

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Abstract

Leslie Holt

NEWS OUTLETS IN SOCIAL MEDIA: AGGRESSION IN COMMENTS

2015-2016

Terri Allen, Ph.D.

Master of Arts in School Psychology

Facebook has played a significant role in society since 2004. Not only do individuals use the social media platform, but most prominent news sources have their own Facebook pages which serve as a primary news source for many people. Individuals can comment publicly under any article, thus creating a type of community in which Facebook users can share their opinions and debate with one another. The purpose of this study was to examine specific news source postings on Facebook on October 1, 2015 through October 2, 2015. The study analyzed the first 500 comments under each article posted about the school shooting at Umpqua Community College in Roseburg, Oregon. The study aimed to investigate whether or not there was a correlation between aggressive and non-aggressive comments and the credibility of the news source. A Between-Groups One-Way ANOVA was used to analyze data. Significant differences were found between type of aggression and news source credibility, and also, total aggression and news source credibility. Implications and limitations of this study are further discussed.

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Chapter 1

Introduction

Need for Study

Facebook has played a significant role in society since 2004. Today, most prominent news sources have their own Facebook pages where many individuals receive their news. Individuals can comment publicly under any article, thus creating a type of community in which Facebook users can share their opinions and debate with one another. Further research needs to be done on how the trustworthiness of the news sources relate to the comments they receive and how the comments foster culture norms and group processes.

Purpose

The purpose of this study was to examine specific news source postings on Facebook on October 1, 2015 through October 2, 2015. The study analyzed the first 500 comments under each article posted about the school shooting at Umpqua Community College in Roseburg, Oregon. The study aimed to investigate whether or not there is a difference between aggressive and non-aggressive comments and the trustworthiness of the news source. Aggressiveness was divided into three subcategories: harassment, provocative aggression, and passive-aggression.

Hypothesis 1

There will be a difference in total aggressive comments between the three types of news sources. It was predicted that news sources with the most trustworthiness will have the fewest total aggressive comments and news sources with the least trustworthiness will have the most total aggressive comments.

Hypothesis 2

There will be a difference in harassment comments between the three types of news sources. It was predicted that the least trustworthy news sources would have the most harassment comments and the most trustworthy news sources would have the least harassment comments.

Hypothesis 3

There will be a difference in provocative comments between the three types of news sources. It was predicted that the least trustworthy news sources would have the most provocative comments and the most trustworthy news sources would have the least provocative comments.

Hypothesis 4

There will be a difference in passive-aggressive comments between the three types of news sources. It was predicted that the least trustworthy news sources would have the most passive-aggressive comments and the most trustworthy news sources would have the least passive-aggressive comments.

Operational Definitions

Facebook is an online social networking service where users can communicate publicly, privately, or with a select group of friends (Bond, Fariss, Jones, Kramer, & Settle, 2012).

Trustworthiness is the ability “to be relied on or provide what is needed or right” (Merriam-Webster, 2016).

Group norms are shared values or goals among group members for interacting together (Bagozzi, Dholakia, & Mookerjee, 2006)

Computer-mediated communication allows for online social interactions for the purpose of achieving personal and shared goals of their members (Bagozzi, Dholakia, & Mookerjee, 2006).

Harassment is “a broad term that includes bullying but also includes other types of interpersonal aggression that do not meet the standard definition of bullying because they do not involve repetition and power imbalances between perpetrators and victims” (Mitchell, Jones, Turner, Shattuck, & Wolak, 2016).

Provocative aggression is the arousal of negative responses such as anger, irritation, and exasperation (Kansas Safe Schools Resource Center, 2012). Does not address a specific person or group of people.

Passive-aggression is “characterized by the expression of negative feelings, resentment, and aggression in an unassertive passive way” (Merriam-Webster, 2016).

Assumptions

The study assumed that each comment under each article had been posted by a human being and not by a computer or advertising agency.

Limitations

This study examined comments under a select group of articles posted by a select group of news sources. Thus, the sample size did not include all news sources or all articles.

Summary

A brief summary of group processes, group norms, and social influence were addressed within the study. In addition, a description of how different news sites are ranked was used to provide a framework for the basis of the study. An outlook on social identity on the Internet and online social interactions was also addressed. Group norms are shared values or goals among group members for interacting together (Bagozzi et al., 2006). In this case, interactions through comments on news articles are the backbone of this study. Group cultures can have a significant impact on an individual's beliefs. For example, Sechrist & Young (2011) found that individuals who identified more with the group in question were more influenced than individuals who did not identify with the group. Group identities can wield a significant amount of power, as "individuals are expected to change their beliefs to the extent that they identify with members of the group providing the social consensus information (Sechrist & Young, 2011). In order to have a powerful social identity in the online community, online groups must attract individuals who are motivated to participate. Online communities tend to have a "shared cognitive framework that allows the sharing behavior to be mutually beneficial and productive (Shen et al., 2010). This study will analyze different news sources and their different group identities, and how these identities are reflected in online comments.

Chapter 2

Literature Review

Group Norms

Group norms are shared values or goals among group members for interacting together (Bagozzi, Dholakia, & Mookerjee, 2006). Group cultures can have a significant impact on an individual's beliefs and behaviors. For example, Sechrist & Young (2011) found that individuals who identified more with the group in question were more influenced than individuals who did not identify with the group. Social influence, the scientific study of attitude and behavior change due to real or imagined pressure (Cialdini, 2009; Guadagno, Muscanell, Rice, & Roberts, 2013), is a prominent aspect of in-group tendencies. Group identities can wield a significant amount of power, as "individuals are expected to change their beliefs to the extent that they identify with members of the group providing the social consensus information" (Sechrist & Young, 2011, p. 676). Thus, individuals who want to be a part of the group are more likely to mold their opinions to the group norm.

The Rise of the Internet

The Internet has a significant impact on individuals and their beliefs. In 1978, Internet users first started to have the ability to communicate and share information by emailing comments and attachments to other users, making use of bulletin boards and posting content, and reading or posting information or comments to various list servers (Acar & Polonsky, 2007; Heinrichs, Lim, & Lim, 2011). While some may argue that the Internet is overloaded with information, there is research that demonstrates how people who use the Internet frequently are less likely to encounter information overload

(Beaudoin, 2008). For example, Hargittai & Curry (2011) conducted focus group interviews with Americans across the country. They asked the focus groups how they keep up with what is going on in the world and how they feel about the information out there. The study found that “instead of feeling burdened by choice, many participants enjoyed the freedom it brought, especially the range of information online” (Hargittai & Curry 2001, p. 9). Beaudoin (2008) surveyed 4,001 U.S. adults via telephone in 2006 about their Internet use and interpersonal trust. The study found that higher Internet use predicts trust among others and “underscores the capacity of the Internet to foster the development of community, social interaction, and open debate” (Beaudoin, 2008, p. 562; Wellman, 2001; Wellman et al., 2001). The Internet has evolved from solely an information source to a tool used to foster community development and interpersonal relationships.

Computer-Mediated Communication

Computer-mediated communication allows for online social interactions for the purpose of achieving personal and shared goals of their members (Bagozzi et al., 2006), or for spreading information to the public. Furthermore, social networking sites have become “important communication channels used by individual consumers to create content, distribute materials, share ideas, express opinions, and use information and knowledge” (Heinrichs et al., 2011, p. 347). Online social platforms provide millions of individuals with near-unlimited access to information and connectivity (Kwak, Lee, Park, & Moon (2010). With social media, Internet users are able to participate in a community in which endless information sharing and interpersonal relationships can occur seamlessly.

Facebook and Twitter are social networking sites that have a particularly large influence on Internet users. For example, a randomized controlled trial of political mobilization messages was delivered to 61 million Facebook users during the 2010 United States congressional elections. As a result, “the messages directly influenced political self-expression, information seeking, and real-world voting behavior of millions of people” and “not only influenced the users who received them but also the users’ friends, and friends of friends” (Bond, Fariss, Jones, Kramer, & Settle, 2012, p. 295). Computer-mediated communication had a significant impact on voters in the U.S. Twitter is another prominent social media source. On Twitter, users can “read and write millions of short messages on any topic within a 140-character limit” (Bae & Lee, 2012, p. 2521). Twitter is used for one-way communication as well as conversational interaction and collaboration between users (Bae & Lee, 2012). Facebook and Twitter are largely prominent in today’s culture. The Internet has great capacity to influence millions of people.

Social Media as News Source

Traditional news sources such as newspapers and television networks are not nearly as popular now as they were a decade ago. In fact, “polls show a strong decline in public trust of traditional news outlets; however, social media offers new avenues for receiving news contact” (Turcotte, York, Irving, Scholl & Pingree, 2015, p. 520). Even non-commercial news outlets such as NPR are declining in public credibility ratings (Pew Research, 2012; Turcotte et al., 2015). However, when news is accessed from social media, the Internet user is more likely to trust that news source (Turcotte et al., 2015). Turcotte et al. (2015) found that social media recommendations improve levels of media

trust, and that people are more likely to follow news from that particular media outlet in the future.

These effects are even stronger when the Internet user views the real-life friend sharing the information as an opinion leader (Turcotte et al., 2015). Users are more likely to believe information coming from someone in their social network (Johnson & Kaye, 2014; Kaye, 2010; Metzger et al., 2010) than from a stranger; thus, a person's social media circle holds significant influence over the news and opinions that the person views on a daily basis. Social networks are interesting and entertaining as well as serving "as a forum for political discussion and expression as well as an outlet for political information" (Johnson & Kaye, 2014, p. 959). Overall, more people are consuming news from social media instead of directly from the news source. As cited in Turcotte et al. (2015), Pew Research (2014) finds that 47% of Facebook users—or 30% of U.S. adults—are consuming news on Facebook. Furthermore, users who rely heavily on social media report it to be more credible than others less reliant on those sites (Johnson & Kaye, 2014). There are also different audiences for different social media platforms. LinkedIn tends to attract high earners and college educated people, Twitter's users are significantly younger than news consumers on Facebook, Google Plus, and LinkedIn, and Facebook users are more likely to be female than news consumers on YouTube, Twitter, and LinkedIn.

Additionally, social media can predict political elections (Bae & Lee, 2012; Diakopoulos & Shamma, 2010; O'Connor et al., 2010; Tumasjan et al., 2010; Yu et al., 2008) and stock market indicators (Bollen et al., 2011; Bollen et al., 2009; Gilbert & Karahalios, 2010; Zhang et al., 2010). Because of the high influence of social media, the

2008 presidential race was dubbed “The Facebook Election” (Johnson & Kaye, 2014). Facebook was an important campaigning resource for the 2008 election (Fraser & Dutta, 2008; Johnson & Perlmutter, 2010; Selter, 2008), the 2010 midterm election (Smith 2011), and the 2012 presidential campaign (Rucker, 2012). Bae and Lee (2012) conducted a study in which they created a measure of influence to use on popular Twitter users as an indicator to “identify real-world audience sentiments, providing new insights into influence and a better understanding of popular users” (Bae & Lee, 2012, p. 2522). The study found that the positive and negative influences of popular Twitter users relate to real-world situations, including Obama’s job approval ratings and artists’ movements on the Billboard Weekly chart (Bae & Lee, 2012). Twitter reveals trends that impact prominent issues in daily life.

Emotional Contagion

Computational Social Science is an emerging field that studies many aspects of social media, in particular the capacity to spread emotions quickly throughout the online world, or emotional contagion (Ferrara & Yang, 2015; Hatfield 1994). While Internet users can gather endless news information online, they can also spread emotion that affects the offline community. The spread of information on the Internet significantly impacts society offline, from social and political discussions to disaster and response (Lazer, Kennedy, King, & Vespignani, 2014; Ratkiewicz et al., 2011; Varol et al., 2014; Sakaki & Okazaki, 2010). As cited in Ferrara and Yang (2015), Hatfield (1994) found that “emotions can be passed via online interactions even in absence of non-verbal cues typical of in-person interactions, which are deemed by traditional psychology to be an essential ingredient for emotional contagion” (p. 2).

Ferrara and Yang (2015) conducted a study in which random Twitter users were observed for one week in September 2014. They defined the users as highly susceptible or scarcely susceptible to outside influence. They found that highly susceptible users are significantly less inclined to adopt negative emotions than the scarcely susceptible ones, but equally likely to adopt positive emotions (Ferrara & Yang, 2015). This is significant because the Internet is a new norm for spreading emotion throughout society without verbal or facial cues. Emotional contagion is a major impact of the Internet on society along with information sharing.

Group Polarization

Group polarization, a side effect of emotional contagion, is a common occurrence on the Internet. “Group polarization refers to the well-established finding that following group discussion, individuals tend to endorse a more extreme position in the direction already favored by the group” (Hogg et al., 1990; Isenberg, 1986; Lee, 2007; Moscovici & Zavalloni, p. 1969). Persuasive arguments theory is when group polarization occurs as group members are exposed to persuasive and original arguments during group discussion and change their stances accordingly (Burnstein & Vinokur, 1977; Hinsz & Davis, 1984; Lee, 2007; Vinokur & Burnstein, 1978). Opinions are likely to shift in the direction of the majority opinion because the majority position has a greater number of arguments and more persuasive arguments (Lee, 2007; Zuber et al., 1992). This study examined referent informational influence theory, or the idea that polarization occurs because of people converging on group norms, and focused on the role of group identification in contributing to the opinion polarization (Abrams et al., 1990; Lee, 2007; Turner et al., 1989). Thus, in order to feel a sense of belonging, group polarization is a

likely side effect of discussions and debates on the Internet. Group norms are a major phenomenon on the Internet that fosters group polarization.

Anonymity

On the Internet, individuals are not always genuine in computer-mediated communication. Varying degrees of anonymity play an important role in how people portray themselves “that may encourage a sense of impunity and freedom from being held accountable for inappropriate online behavior” (Hardaker, 2010, p. 215). For example, individuals can usually edit their responses at any time (Guadagno et al., 2013). An Internet user who immediately regrets a post can edit it right away. Internet users may also create a buffer against their actual identities by concealing certain aspects of their identity (Guadagno et al., 2013).

Anonymity can have the negative effect of deindividuation, or a loss of self-awareness and a likelihood of acting upon normally self-controlled impulses (Hardaker, 2010; Kiesler & McGuire, 1984; Siegel et al., 1986). Although the Internet is a prime location for community building and interpersonal relationships, anonymity can have serious consequences. Deindividuation can lead to neglect of one’s usual personal standards for behavior and ultimately increase anti-normative behavior (Guadagno et al., 2013; Mendels, 1999).

Anonymity can also increase group conformity by focusing on group identity and relevant group norms (Guadagno et al., 2013; Postmes et al., 2001). When anonymous, it is easier to hold more radical beliefs and encourage others to conform to those beliefs. Social norms indicate that individuals consider an action more appropriate when they see others reacting similarly in a situation (Guadagno et al., 2013). Additionally, “under

conditions of anonymity, individuals look more toward a group for normative direction rather than following their internal standards of behavior” (Guadagno et al., 2013, p. 51). Deindividuation on the Internet is a regular phenomenon that results in Internet users losing their real, or offline, persona.

Trolling

Different degrees of anonymity or deindividuation can also lead to more aggression on the Internet. “Trolling” is “the luring of others into useless, circular discussion, without necessarily involving argument (Hardaker, 2010 p. 224; Herring et al., 2002; Turner, 2005). Trolling also involves provoking others into conflict (Baker, 2001; Brandel, 2007; Cox, 2006; Hardaker, 2010). It has become an umbrella term for any number of negative behaviors, and it includes people who seek to negatively influence the forum by starting arguments, criticizing, or complaining (Binns, 2012). It is a popular phenomenon because “users can exercise aggression against other real humans, with little risk of being identified or held accountable for their actions” (Hardaker, 2010, p. 238). With the Internet having a plethora of options to communicate socially, trolling occurs frequently. Trolling is an inevitable aspect of news sharing online, as people with vastly different beliefs can comment on a controversial issue.

Trolling can occur in the form of different kinds of aggression. This study aims to analyze three different types of aggression: harassment, provocation, and passive aggression. Harassment is “a broad term that includes bullying but also includes other types of interpersonal aggression that do not meet the standard definition of bullying because they do not involve repetition and power imbalances between perpetrators and victims” (Mitchell, Jones, Turner, Shattuck, & Wolak, 2016). An example of harassment

would be attacking a certain ethnic or religious group. Provocative aggression or provocation is the arousal of negative responses such as anger, irritation, and exasperation (Kansas Safe Schools Resource Center, 2012). While this type of aggression does not address a specific person or group of people, it clearly invokes a negative response. Finally, passive aggression is “characterized by the expression of negative feelings, resentment, and aggression in an unassertive passive way” (Merriam-Webster, 2016). Passive aggression is particularly complicated because it can be subtle; it does not blatantly attack nor single out a specific group, but it’s impact can be just as destructive. This study will further analyze how aggression is incorporated into Facebook comments.

Group norms are highly influential, including on the Internet. They have the ability to change individuals’ opinions, influence group polarization, and provoke deindividuation. Millions of Internet users are affected by group norms every day, whether they are aware of it or not. In particular, Facebook offers the opportunity for users to comment on any shared article, picture, or any other item. News sources on Facebook publicly post articles that can receive hundreds of comments. As a result, group polarization and aggression occur within these comments. In particular, harassment, provocative aggression, and passive aggression are often seen in the comments. This study aims to analyze the comments under articles posted by different news sources of varying trustworthiness and the potential differences among the types of aggression and news source ratings.

Chapter 3

Methodology

Materials

Archived public data were obtained from nine different news sites on Facebook.com. Each article posted by the news site from October 1, 2015 to October 2, 2015 about the Oregon school shooting was analyzed. According to a study by Pew Research Center, the sites were divided by trustworthiness; most trustworthy, neutral, and least trustworthy (Engel, 2014; Mitchell, Gottfried, Kiley, & Matsa, 2014). Three news sources from each category were selected by the researcher for the study. The most trustworthy group included Wall Street Journal, CNN, and Washington Post. The neutral group included Slate, Huffington Post, and ThinkProgress. The least trustworthy group included Ed Schultz Show, Daily Kos, and BuzzFeed.

Variables

The Facebook comments included comments that were categorized aggressive or non-aggressive. Aggression was subdivided into three categories: harassment, provocative aggression, and passive-aggression. Harassment referred to comments that targeted a specific group of people. Provocative aggression referred to comments that were defiant in nature but did not address a specific group. Passive-aggression referred to comments that indirectly instigated negative feelings. The independent variables were the news sources and the articles. The dependent variables were the Facebook users' public comments on the articles.

Design

The independent variables were the three news source categories: most trustworthy, neutral, and least trustworthy. The dependent variables were the Facebook user comments and how they were labeled. A one-way between groups ANOVA was conducted to determine whether or not the total aggression in the comments varied based on the trustworthiness of the news source.

Procedure:

This study investigated a group of three most trustworthy news sources, three neutral trustworthiness news sources, and three least trustworthy news sources. The study selected each article posted on Facebook by the news sources between October 1, 2015 and October 2, 2015 regarding the school shooting at Umpqua Community College in Roseburg, Oregon. First, qualitative variables, the Facebook user comments, were labeled and coded in order to enable quantitative analysis. Each comment was examined, labeled, and assigned a code based on the operational definitions of different types of aggression: “harassment”, “provocative aggression”, and “passive-aggression”. The study then compared the means of the total levels of aggression across all three news source categories (most trustworthy, neutral, and least trustworthy) as well as the means of each type of aggression for all three news source categories.

Chapter 4

Results

This study conducted a one-way between groups ANOVA of trustworthiness of news source and total aggression among news sources as well as different types of aggression. The three types of aggression analyzed were harassment, provocation, and passive-aggression. The three news source ratings were most trustworthy, neutral, and least trustworthy.

Hypothesis 1

There will be a difference in aggressive comments between the three types of news sources. It was predicted that news sources with the most trustworthiness will have the fewest total aggressive comments and news sources with the least trustworthiness will have the most total aggressive comments. A one-way between groups analysis of variance was conducted to explore the impact of news source “trustworthiness” on levels of social media aggressiveness, as measured by the number of aggressive comments posted on Facebook news source pages. News sources were divided into three groups according to “trustworthiness” as defined as the ability “to be relied on or provide what is needed or right” (Merriam-Webster, 2016).

There was a statistically significant difference at the $p < 0.5$ level in total aggression scores for the three news source groups: $F(2,4181) = 9.872, p = 0.00$. As predicted, the mean total aggression score varied significantly between the three groups. Post hoc comparison using the Tukey HSD test indicated that there were significant differences in total aggression between the most trustworthy news sources and the neutral trustworthiness news sources (mean difference = 0.0607, $p = 0.001$), and between the

neutral trustworthiness news sources and least trustworthy news sources (mean difference = 0.0739, $p < 0.001$). Although there was a difference between the three groups, results did not support the predicted difference between the least trustworthy and most trustworthy news sources (mean difference = 0.0132, $p = 0.751$). The one way between-groups analysis of variance is shown in Table 1.

Table 1

One-Way Between Groups ANOVA of Total Aggression

	Sum of Squares	df	Mean Square	F	Sig.
Between	4.378	2	2.189	9.872	.000
Within Groups	927.009	4181	.222		
Total	931.387	4183			

Hypothesis 2

There will be a difference in harassment comments between the three types of news sources. It was predicted that the least trustworthy news sources would have the most harassment comments and the most trustworthy news sources would have the least harassment comments. As predicted, the mean total harassment score varied significantly between the three groups. A one-way between groups analysis of variance was also conducted to examine the impact of harassment on each type of news source. There was a statistically significant difference at the $p < 0.05$ level in harassment scores for the three news source groups: $F(2, 4181) = 10.285$, $p < 0.001$. Although there was a difference between the three groups, results did not support the predicted difference between the

least and most trustworthy news sources; the most trustworthy news sources had the greatest mean of harassment comments. Post hoc comparisons using the Tukey HSD test showed that there were significant differences between the total harassment in the most trustworthy news sources and the neutral trustworthiness sources (mean difference = 0.0340, $p < 0.001$) and between the most trustworthy news sources and the least trustworthy news sources (mean difference = 0.0212, $p = 0.023$). However, there was no significant difference between the neutral trustworthiness news sources and the most trustworthy news sources (mean difference = 0.0129, $p = 0.247$). The one way between-groups analysis of variance for harassment is shown in Table 2.

Table 2

One-Way Between Groups ANOVA of Harassment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.884	2	.442	10.285	.000
Within Groups	179.579	4181	.043		
Total	180.462	4183			

Hypothesis 3

There will be a difference in provocative comments between the three types of news sources. It was predicted that the least trustworthy news sources would have the most provocative comments and the most trustworthy news sources would have the least provocative comments. As predicted, the mean total provocative comments varied significantly between the three groups A one-way between groups analysis of variance

was also conducted to examine the impact of provocative aggression on each news source category. There was a statistically significant difference at the $p < 0.001$ level in provocative aggression scores for the three news source groups: $F(2, 4182) = 45.124, p < 0.001$. Although there were significant differences between the three groups, results did not support the predicted difference between the least and most trustworthy news sources. Post hoc comparisons using the Tukey HSD test showed that there were significant differences between the total provocative aggression in the most trustworthy news sources and neutral trustworthiness news sources (mean difference = 0.1147, $p < 0.001$) and between the most trustworthy news sources and least trustworthy news sources (mean difference = 0.0923, $p < 0.001$). However, there was no significant difference between the neutral trustworthiness news sources and the least trustworthy news sources (mean difference = 0.0223, $p = 0.224$). The one way between-groups analysis of variance for provocative aggression is shown in Table 3.

Table 3

One-Way Between Groups ANOVA of Provocative Aggression

	Sum of Squares	df	Mean Square	F	Sig.
Between	10.903	2	5.451	45.124	.000
Within Groups	505.213	4182	.121		
Total	516.116	4184			

Hypothesis 4

There will be a difference in passive-aggressive comments between the three types of news sources. It was predicted that the least trustworthy news sources would have the most passive-aggressive comments and the most trustworthy news sources would have the least passive-aggressive comments. As predicted, the mean passive-aggressive scores varied significantly between the groups, but there was no difference between the most and least trustworthy news sources. A one-way between groups analysis of variance was also conducted to examine the impact of passive-aggression on each type of news source. There was a statistically significant difference at the $p < 0.001$ level in passive-aggression scores for the three news source groups: $F(2, 4182) = 16.441$, $p < 0.001$). Although there was a difference between some of the groups, results did not support the predicted difference between the most and least trustworthy news sources. Post hoc comparisons using the Tukey HSD test showed that there were significant differences between the total passive-aggression in the most trustworthy news sources and neutral trustworthiness news sources (mean difference = 0.2093, $p < 0.001$), the neutral trustworthiness news sources and the least trustworthy news sources (mean difference = 0.1091, $p < 0.001$), and the most trustworthy news sources and least trustworthy news sources (mean difference = 0.1002, $p < 0.001$). The one way between-groups analysis of variance for passive-aggression is shown in Table 4.

Table 4

One-Way Between Groups ANOVA of Passive-Aggression

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	32.882	2	16.441	86.413	.000
Within Groups	795.669	4182	.190		
Total	828.551	4184			

Chapter 5

Discussion

Summary

Results suggest that there are significant differences between certain news sources and level of aggressive comments. There were significant differences in total aggression between the most trustworthy news sources and the neutral trustworthiness news source and between the neutral trustworthiness news sources and the least trustworthiness news sources. There was no significant difference of aggressive comments between the most trustworthy news sources and least trustworthy news sources. The hypothesis that the most trustworthy news sources would have the least amount of aggressive comments and the least trustworthy news sources would have the most aggressive comments was rejected. Instead, results showed that the neutral trustworthiness news sources had the most total aggressive comments. This could have occurred because Facebook users who follow neutral trustworthiness news sources on social media are more likely to comment. Further research could be done on what types of news sources have the most followers versus which type of news sources have the most comments.

Results also suggested that there are significant differences between certain news sources and the different types of aggression. There were significant differences in harassment between the most trustworthy news sources and the neutral trustworthiness news sources and between the most trustworthy news sources and the least trustworthy news sources. However, there was no significant difference between the neutral trustworthiness news sources and the least trustworthy news sources. The most trustworthy news sources had the greatest harassment comments.

Additionally, there were significant differences in provocative aggression between the most trustworthy news sources and the neutral trustworthiness news sources and between the most trustworthy news sources and the least trustworthy news sources. However, there was no significant difference between the neutral trustworthiness news sources and the least trustworthy news sources. The most trustworthy news sources had the most provocative aggression in their Facebook comments.

Furthermore, there were significant differences between the total passive-aggression in the most trustworthy news sources and neutral trustworthiness news sources, the neutral trustworthiness news sources and the least trustworthy news sources, and the most trustworthy news sources and least trustworthy news sources. The neutral trustworthiness news sources had significantly more passive-aggressive comments than the most trustworthy news sources and the least trustworthy news sources. The least trustworthy news sources had more passive-aggressive comments than the most trustworthy news sources.

It is indisputable that the Internet has a large impact on users' consumption of media and more specifically, news outlets on Facebook. Online social platforms such as Facebook provide millions of individuals with near-unlimited access to information and connectivity (Kwak, Lee, Park, & Moon, 2010). With social media, Internet users are able to participate in a community in which endless information sharing and interpersonal relationships can occur seamlessly. For example, when news is accessed from social media, the Internet user is more likely to trust that news source (Turcotte et al., 2015). Turcotte et al. (2015) found that social media recommendations improve levels of media

trust, and that people are more likely to follow news from that particular media outlet in the future.

Limitations

Examinations of potential bias and study limitations helps to inform future research on the topic of social media aggression. One limitation to is that the researcher was the sole evaluator of aggressiveness in the Facebook comments. Although the types of aggression were quantitatively labeled, it is possible that there was subjectivity in determining the scores. For example, a comment that the researcher thought was passive-aggressive could potentially be interpreted as a different form of aggression by another researcher. Additionally, only three types of aggression were used to analyze the comments. Another researcher could study more types of aggression, and thus be able to have a more specific guide to analyzing the comments. It would be helpful in the future to have a team of researchers evaluating the comments instead of only one researcher.

Furthermore, the Facebook comments used were not randomized. The first 500 comments posted were used. Another limitation is that the number of comments used in the study were not the same for each rating. Each rating should have had a total of 1500 comments, with 500 comments per news source. The first 500 comments of each news source were analyzed, except for two of the news sources in Rating 3 which had less than 500 comments listed. Thus, only 4185 comments of Rating 3 were analyzed instead of an ideal 4500 comments. Two of three news sources in Rating 3 did not have a total of 500 comments under articles related to the Oregon shooting between October 1, 2015 and October 2, 2015. This leads to the next limitation, which were the articles used to analyze the comments.

The articles used in this study were between about the Oregon school shooting. It can be inferred that Facebook users would discuss the gun control debate, thus provoking aggressive comments. Perhaps the comments were more aggressive under these specific articles, since the topic of the articles was strongly emotional. Additionally, the articles within the specific time frame about the shooting were different. There were some articles about the victims, and others about President Obama's response to the shooting. The comments under articles about the victims were less aggressive in comparison to the comments under the articles about President Obama. The articles used in this study were not homogeneous, which could have impacted the data analysis.

Additionally, the same Facebook user could have commented on multiple news sources' Facebook pages. The researcher did not record the names of the Facebook users who left the comments. Further, the researcher did not analyze the replies to comments left on the Facebook pages. The types of aggression in the replies to the comments could have changed the results in the data analysis. In the future, researchers can study the replies to each comment.

Future Direction

The research of this study creates a platform from which more studies can be conducted. News sources on social media and the type of comments they receive are a current issue in today's society. It would be important as well as fascinating to continue studying this topic and the impact it can have on social media users. Furthermore, Internet trolling remains a pressing issue, as bullying can occur more frequently and subtly on social media sites. It would be interesting to research if there is a correlation between social media users who comment on news source articles and social media users

who claim to be bullied online. It would also be intriguing to study the different types of Facebook comments under different types of news articles within the same news source.

Additionally, social media can predict political elections (Bae & Lee, 2012; Diakopoulos & Shamma, 2010; O’Conner et al., 2010; Tumasjan et al., 2010; Yu et al., 2008). Because of the high influence of social media, the 2008 presidential election was dubbed “The Facebook Election” (Johnson & Kaye, 2014). Facebook was an important campaigning resource for the 2008 election (Fraser & Dutta, 2008; Johnson & Perlmutter, 2010; Selter, 2008), the midterm election (Smith 2011), and the 2012 presidential campaign (Rucker, 2012). It would be fascinating for further research to study the impact of aggressive comments on Facebook and Twitter on the 2016 presidential election.

It is unsurprising that the news source with the most passive-aggressive comments had the most total aggression because there were significantly more passive-aggressive comments in general. Further research could study why Facebook users are more likely to leave a passive-aggressive comment than a different type of aggressive comment. Future research could also study whether or not Facebook promotes passive-aggression, and if there is a difference between the type of comments left on Facebook news source pages and news source pages on different social media outlets.

It is critical that more researchers are involved in a study such as this in order to reduce bias and subjectivity. More research can be done on how the content of articles posted by news sources impact the type of comments underneath them. Future studies can analyze how additional types of aggression relate to the trustworthiness of news sources. Finally, more research needs to be done on why the different types of aggression differ

among news sources based on their trustworthiness. The results gained from this study should invoke more research in order to produce more data.

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