Social Media Response Based Upon Media Richness

Completed Research

Timothy Kaskela
Texas Tech University
timothy.kaskela@ttu.edu

Jaeki Song
Texas Tech University
jaeki.song@ttu.edu

Abstract

Research on social media engagement and measurements have been conducted, but there is an opportunity to research how the underlying psychological processes of an individual affects their response to corporate social media posts. This study examines how framing and media richness can affect how the information within corporate social media posts is processed and how individuals respond to the information. Different frames and media richness levels are defined and used to conduct a pilot study where sentiment analysis is conducted on comments under social media posts. The implications of the pilot study are discussed and the manner in which a full study will be conducted is described. Finally, the business applications of the paper are explored.

Keywords

Customer interaction, framing, media richness, sentiment analysis, social media

Introduction

Social media has permeated society to the extent that there are an estimated 2.46 billion social media users in 2017 (Statista, 2018). Due to the popularity of social media, it has become a vital communication medium for corporate brands to interact with their customers. Previous academic studies have worked to define and identify research areas of social media (Kaplan & Haenlein, 2010). They have also worked to construct frameworks through which social media can be more fully understood (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). Engagement with the individual customer through social media has also been studied (Dolan, Conduit, Fahy, & Goodman, 2016; Mangold & Faulds, 2009).

However, there is an opportunity investigating the underlying reason for customer engagement, the psychological connection an individual feels with a brand. Once the process is better known, it may be possible to encourage certain types of sentiment to be the primary responses on social media. This possibility of manipulating the manner in which information is presented in order to encourage certain behaviors well be the focus of this study. It will be examined by looking at three theories. Framing theory has shown that equivalent information can affect the decision making process of an individual (Kahneman & Tversky, 1979). Social media post framing will be considered for changing the shown behavior of an individual. The next theory, media richness theory, examined information processing within an organization (Daft & Lengel, 1986). Customer engagement theory examines how the relationship between a customer and a company can be affected by interactions between the two (van Doorn et al., 2010).

The paper will proceed in the following manner. The Theoretical Background section immediately follows and will provide an overview of framing and media richness theories. The Hypothesis Development section will build the argument and present our hypotheses. The Analysis section will describe the approach utilized for the pilot study, as well as include and discuss results. Future Research is an explanation of the methodology that will be used to conduct a full study. Finally, the Discussion section will bridge the gap between academic study and practical application.

Theoretical Background

There are two theories that will be built upon in order to develop our hypotheses and research question. A background on the psychological view on framing theory will be provided, the base for the development of the different frames to be considered. Media richness theory will also be discussed to introduce the constructs upon which the hypotheses are built.

Framing Theory

Framing an issue in a certain manner can affect the decision being made, even when equivalent information is provided. Framing has been developed from a number of research areas. From the psychological field, framing a situation in different manners has shown to affect the decision-making behavior of individuals (Tversky & Kahneman, 1981). When equivalent information is presented to the individual, but framed in a positive or negative manner, it was found that the decision made by the individual would be different. The reason for the difference in decision-making is due to losses being felt more heavily than gains. Kahneman and Tversky expanded upon this idea in the economic sense, developing prospect theory in the process (Kahneman & Tversky, 1979). In addition to psychology, additional fields have developed research streams around framing theory. For example, development of framing with a communication perspective focused on the manner in which stories could be framed to push a certain narrative (Entman, 1991).

Examining framing through the development of the theory from the psychological field has been instrumental in showing the irrational behavior of the consumer. Traditional utility maximization theory had operated under the assumption that the consumer would make the same rational choice, no matter how the information was presented. However, with Kahneman and Tversky's experiments that showed evidence to the contrary, framing effects became a topic of many studies. These studies included Kahneman and Tversky's famous Asian disease problem (Tversky & Kahneman, 1986) and preferences in cancer treatment being affected by the framing of the treatments (O'Connor, Boyd, Warde, Stolbach, & Till, 1987). The consistent findings in terms of loss aversion, as hypothesized by framing theory, has lent strong support to the continued use of framing theory as a base when considering the decision-making behavior of the individual.

Media Richness Theory

Media richness theory came from the study of how organizations process information. Information processing requirements at the organization level were found to be determined by a number of factors. Initially, technology, interdepartmental relationships, and environment, were found to influence how communication was facilitated within an organization (Daft & Lengel, 1986). The goal of the communication was to reduce uncertainty and equivocality. Uncertainty is defined as the absence of information in this theory and equivocality is defined as ambiguity (Daft, Lengel, & Treviño, 1987). Those requirements are then matched with the proper amount of information, as well as the proper amount of information richness to attempt to find the best manner in which to process information (Daft & Lengel, 1986).

From this information processing theory, media richness was defined in order to differentiate the different types of communication mediums that were possible. The richness of a certain type of media is determined by the effectiveness of said media type to convey a shared meaning. There are four criteria that determine the richness of a media type, feedback, multiple cues, language variety, and personal focus (Daft et al., 1987). The initial classification of media richness extended from face-to-face communication to formal unaddressed documents (Daft et al., 1987).. Face-to-face communication is the richest medium of media, since there is ample feedback when talking face to face, multiple cues that can be interpreted, a wide variety in language, and a highly personal focus. Formal unaddressed documents are the least rich medium. This makes intuitive sense as there will not be the opportunity for feedback, the only cues are those within the document, the variety of language is not as high, and the focus is not of a personal nature.

When media richness theory was first developed, online communication was not yet prevalent. As communication mediums have become more complex, media richness was studied under conditions such as text-based and video based (Lim & Benbasat, 2000), video, audio, and text-based (Otondo, Van Scotter, Allen, & Palvia, 2008),

Hypothesis Development

Framing and media richness are theories that can be tied together in order to further our understanding of the impact of a message on the consumer. However, each theory needs to be more clearly defined for our purposes and the relationship between them must be clearly drawn. For our purposes, we will define each item in our study as a media richness level embedded within a frame. Therefore, each combination is comprised of a media type and a frame. This section will discuss frames and media richness in more detail.

Defining Frames

For this paper, we will define framing from the psychological perspective of framing. The psychological perspective looks at how decisions are changed by how equivalent information is presented. It found that irrational decisions were made by individuals when information was presented in a different manner. In our setting, we would examine how information could be positively presented by a corporation and encourage positive processing. If the positive information is fully processed by an individual, it would be hoped to encourage a more positive response. Framing theory is the theoretical base for different types of frames that are defined within several research streams. While **frames** were developed from **framing**, the two words need to be understood separately. Framing comes from framing theory which we have previously discussed. Frames themselves are the methods through which framing theory can be applied; we will discuss the classification of **frames** in this section. These frames are how information can be presented by a corporation to a mass audience.

In general, frames tend to be defined in broad categories in which to present information. The psychological perspective on frames looked at negatively and positively framed messages (Kahneman & Tversky, 1979). The effect of positively and negatively framed advertisements has been studied extensively in the past, with mixed results (Levin & Gaeth, 1988; Maheswaran & Meyers-Levy, 1990; Zhang & Buda, 1999). Due to the large amount of research studying the positive and negative effects of framing, we will be examining framing from a different perspective. Specifically, in the manner framing is considered in media communication.

The communication perspective looks at how information is framed in terms of a particular narrative. This can be considered across a spectrum of specificity of an issue. The spectrum of issues can range from a generic frame to the issue-specific frame. The issue-specific frame focuses on singular topics. For example, the cost of attending a specific university would be considered to be within the issue-specific frame. The generic frame encompasses more general topics. Within the generic frame, the episodic frame focuses on a single event or instance while the thematic frame presents an overarching theme over a number of events (Iyengar, 1991). In relation to our example of the cost of attending a university, public funding of education would be considered to be framed at a thematic level. A tuition increase for a specific student would be considered to be within the episodic frame. The terminology of the issue-specific and episodic frame can make it appear as if the two frames have the same classification definition. However, issue-specific frames are related to a singular topic. Episodic frames are looking at single *instances*. Framing theory has clearly shown that the manner in which information is presented will affect the decision made by an individual. However, framing theory has primarily examined through the positive and negative viewpoint. The study will explore whether there is any difference in customer engagement when considering the three discussed frames. This theory will be combined with the different types of media richness levels that will be described next.

Framing and Media Richness

Both aspects of media richness theory need to be considered for developing our hypotheses. First, the different levels of media richness need to be defined within the context of the internet, specifically social media. Media richness theory differentiates media based upon the criteria of feedback, multiple cues, language variety, and personal focus (Daft et al., 1987). Based upon these criteria, the internet is considered a media rich platform. While the internet is media rich, it also allows for communication on various levels of media richness. For example, it is possible to have video calls, a media rich communication, as well as banner ads, communication at a lower level of media richness. For this reason, we will consider the various levels of media richness available through the internet to be different.

Additionally, online social media content has been found to include text, image, video, and networks (Berthon, Pitt, Plangger, & Shapiro, 2012). Since text, image, and video are all mediums that are found in social networks, we will consider text, image, and video to be different levels of media richness for examination. The criteria for determining media richness will need to be considered in determining the richness of the three mediums. Based upon the criteria defined in the literature review, we can see that there is not as wide a range when considering communication mediums through the internet and social media. For example, the criteria of feedback will be assumed to be similar for each type, since it is assumed that a corporation would respond to a comment without determining whether the comment was on a text, image, or video post. The point of emphasis for our purposes, media richness, will depend upon the multiple cues criterion. Text will be classified as the least media rich medium, since the cues within the text will be solely determined by the words written. Images will be classified as between text and video, as images will be able to portray text (if on the image) as well as imagery to communicate a message. Video will be classified as the most media rich medium, since there will be an opportunity for text, a large number of images, as well as audio cues.

After defining the levels of media richness within the context of the internet and social media, we need to consider the other part of media richness theory. It is critical to fit the information processing requirements of uncertainty and ambiguity with the correct level of media richness in order to match the expectations and requirements for the target audience. The levels of media richness can be combined with the defined frames to determine whether there are various levels of feedback for each respective combination. Since it has been found that corporate social media posts on Facebook primarily consist of image/text and video/text combinations, we will only be examining the difference between the image and video frame combinations.

Customer Engagement

The interaction between customers and businesses has been examined extensively in literature. Amongst the numerous theories, customer engagement has been identified as the following:

> "Customer engagement (CE) is a *psychological state* that occurs by virtue of *interactive, cocreative customer experiences* with a *focal agent/object* (e.g., a brand) in focal service relationships. It occurs under a specific set of context dependent conditions generating differing CE levels; and exists as a *dynamic, iterative process* within service relationships that *cocreate value*. CE plays a *central role* in a nomological network governing service relationships in which other relational concepts (e.g., involvement, loyalty) are antecedents and/or consequences in iterative CE processes. It is a *multidimensional concept* subject to a context- and/or stakeholder-specific expression of relevant cognitive, emotional and/or behavioral dimensions." (Brodie, Hollebeek, Jurić, & Ilić, 2011)

While customer engagement is a complex concept, the emphasis of the psychological state of the customer that occurs due to an experience with a company allows us to use the sentiment of a response as a proxy. The psychological state of an individual consumer at a given time will be examined through feedback from said consumer. The emphasis of the study will be on the sentiment, as it would be hoped that the information, when processed, would incur a positive interaction on behalf of the corporation. The frame and media type combinations will be considered to determine whether there are certain combinations that encourage more consumer responses. The different media types are matched with each frame, after which instances of that specific combination will be grouped and the consumer responses will be assessed.

We are considering the three types of frames from media communication in an exploratory manner, therefore we will not hypothesize where any frame would elicit more positive or negative sentiment. However, it is expected that there will be a difference in terms of customer engagement of some kind. This may be through varying levels of engagement or the positive or negative sentiment of that engagement. Since media richness is focused on reducing the uncertainty and equivocality of communication, it would be expected that the better fit for the corporate posts would be the more media rich medium. With the increased media richness, the amount of information being transmitted would be higher. The higher amount of information would decrease the uncertainty on the behalf of the individual processing the post. With lower uncertainty, we expect the individual would have a more positive sentiment towards the post since the information being provided is assumed to be positively slanted for the corporation. The

assumption for the information being provided as positive is due to our perspective from that of the corporation. The focus of the study is on posts focused on providing information regarding positive aspects of the corporation, we are not considering posts related to negative events. This leads us to our hypotheses:

> H1A: The more media rich medium, video, will have more positive sentiment than the lower media rich medium, image, within the issue-specific frame.
>
> H1B: The more media rich medium, video, will have more positive sentiment than the lower media rich medium, image, within episodic frame.

Research Method

Facebook will be considered for the examination of the customer engagement in social networking. Facebook is the largest social networking site with 2.13 billion users as of December 31, 2017 (Facebook, 2017), therefore it will be the website utilized for the purposes of this study. The Facebook posts will be taken from a single electronic corporation's Facebook page. Utilizing one corporation's Facebook posts will control for a number of different factors that would not be easily controlled for otherwise. For example, the level of brand reputation or external customer service would not need to be considered for analysis purposes for the pilot study.

Data Collection

Text only posts were not found for the selected electronics company and were excluded. For our purposes, we will examine media richness at the level of video and image. In addition, it was found that each post with video and image had text as well. Therefore, the examined posts will be either video with text or image with text. The posts will be sorted into each respective media type and frame combination.

Once the different items were classified into their respective groups, the response score of each respective group was compared to determine whether certain frame/media richness combinations encouraged more positive or negative responses than others. The response score for this study will be found by assessing the sentiment of the text for each comment within the initial time frame. When considering the impact of information over time, it has shown that the impact undergoes degradation. Therefore, the optimal timeframe for assessing the initial impact needs to be considered. Prior research conducted found that after 12 hours, the impact of the information is not as strong (Nguyen, Wu, Chan, Peng, & Zhang, 2012). Therefore, the text comments for the first 12 hours after a post were included in the sentiment analysis. Utilizing Linguistic Inquiry and Word Count (LIWC), a text sentiment analysis software, each comment was analyzed for positive and negative sentiment (Pennebaker, 2015). Since LIWC returns separate scores for positive and negative sentiment, the scores were examined separately.

Text Analysis and Pilot Study

A pilot study was conducted to determine the feasibility of a full study. Posts from Sony Corporation's corporate Facebook page were collected. Sony was selected for the study as the focus on the study was on an electronics company. Sony was found to have a large amount of responses to their posts, relative to other corporations considered (e.g. Samsung, IBM) and is more active in posting to the platform than other corporations (e.g. Apple). For the study, a thematic frame was considered to be a frame that tied information to an overarching companywide perspective. For example, an initiative for the company to be more environmentally friendly would be thematic. An issue-specific frame presented information in a manner related to more specific areas of the company. This could mean a specific product(s) or product line(s). The episodic frame presented information as related to a specific event. This could include a conference or a sale on a specific day.

There was only a single thematic/video post with six observations, therefore the thematic/image combination could not be compared. The results for the thematic/image combination are included in the analysis of sentiment, but not in the comparison between media richness types. The issue-specific combinations each had three posts collected for examination. The episodic combinations each had four posts collected for examination, this was due to the lower number of observations for each post in the episodic frame. A total of 257 comments across 17 posts were collected by hand by one of the researchers. LIWC was utilized to assess the positive and negative sentiment of each comment under each post. The

possible range of scores was from 0 to 100 and represent the percentage of positive or negative words within a text body.

		Media Type							
		Image				Video			
		Positive	Negative	Both	Neutral	Positive	Negative	Both	Neutral
Frame	Thematic	8	3	3	28	-	-	-	-
	Issue-Specific	23	5	5	37	16	4	4	48
	Episodic	12	4	4	15	7	6	1	24

Table 1. Number of Comments Classified Based Upon Sentiment

The number of positive sentiment comments, negative sentiment comments, comments with both positive and negative sentiment, and neutral comments are shown in Table 1. When looking at the results, two things become evident. First, even though each frame and media type combination assessed three posts, the number of comments across frame types has a wide range. It is interesting that the issue-specific frame would have almost twice as many comments as the episodic frame. Even when compared to the thematic frame, the issue-specific frame appears to elicit more comments.

In order to examine the difference in the within comment sentiment and the within frame sentiment scores, the average sentiment score of those comments with either a positive or negative sentiment was calculated. The average sentiment score was calculated both including and excluding the comments that were scored as neutral. The result of this sentiment score analysis is provided in Table 2. The numbers suggest that the thematic and issue-specific frames have about the same amount of negative sentiment in the comments posted. However, there is more separation between the thematic and issue-specific frames when looking at the positive sentiment. The episodic frame and image combination has almost double the amount of negative sentiment when compared to the thematic and issue-specific frames.

		Excluding Neutral Comments				Including Neutral Comments			
		Image		Video		Image		Video	
		Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Frame Type	Thematic	17.84	6.28	-	-	4.67	0.90	-	-
	Issue-Specific	23.97	7.07	18.81	11.23	9.32	0.98	5.37	1.28
	Episodic	28.23	13.42	28.60	45.03	12.91	2.28	6.02	4.74

Table 2. Average Sentiment Including and Excluding Neutral Comments

		Excluding Neutral Comments		Including Neutral Comments	
		Positive Sentiment	Negative Sentiment	Positive Sentiment	Negative Sentiment
Frame Type	Issue-Specific	0.7688	0.5628	0.1844	0.7004
	Episodic	0.7822	0.1311	0.0361*	0.8085

Table 3. Significance Testing Between Image and Video Mediums

*significant at $p < 0.05$

The distributions of the positive and negative sentiments were non-normal. For this reason, the Mann-Whitney-Wilcoxon test was utilized to calculate the statistical significance (Mann & Whitney, 1947). The statistical significance comparison between the media richness levels is contained in Table 3. The sentiment score distributions of the positive comments between the issue-specific/image and issue-specific/video

combination was found to have a p-value of 0.1844. These results do not support Hypothesis 1A. The statistical significance for the positive sentiment score of the episodic/image and episodic/video combinations was at a p-value of 0.036, suggesting that further investigation would be warranted. These results do not support Hypothesis 1B. The statistical significance for the difference in scores between the respective frames was also conducted. There was not a statistically significant different between the different frames. One issue, the lack of observations in these combination groups is assumed to have had an impact on these findings. A full study would include more observations across different firms to strengthen the statistical power of the analysis.

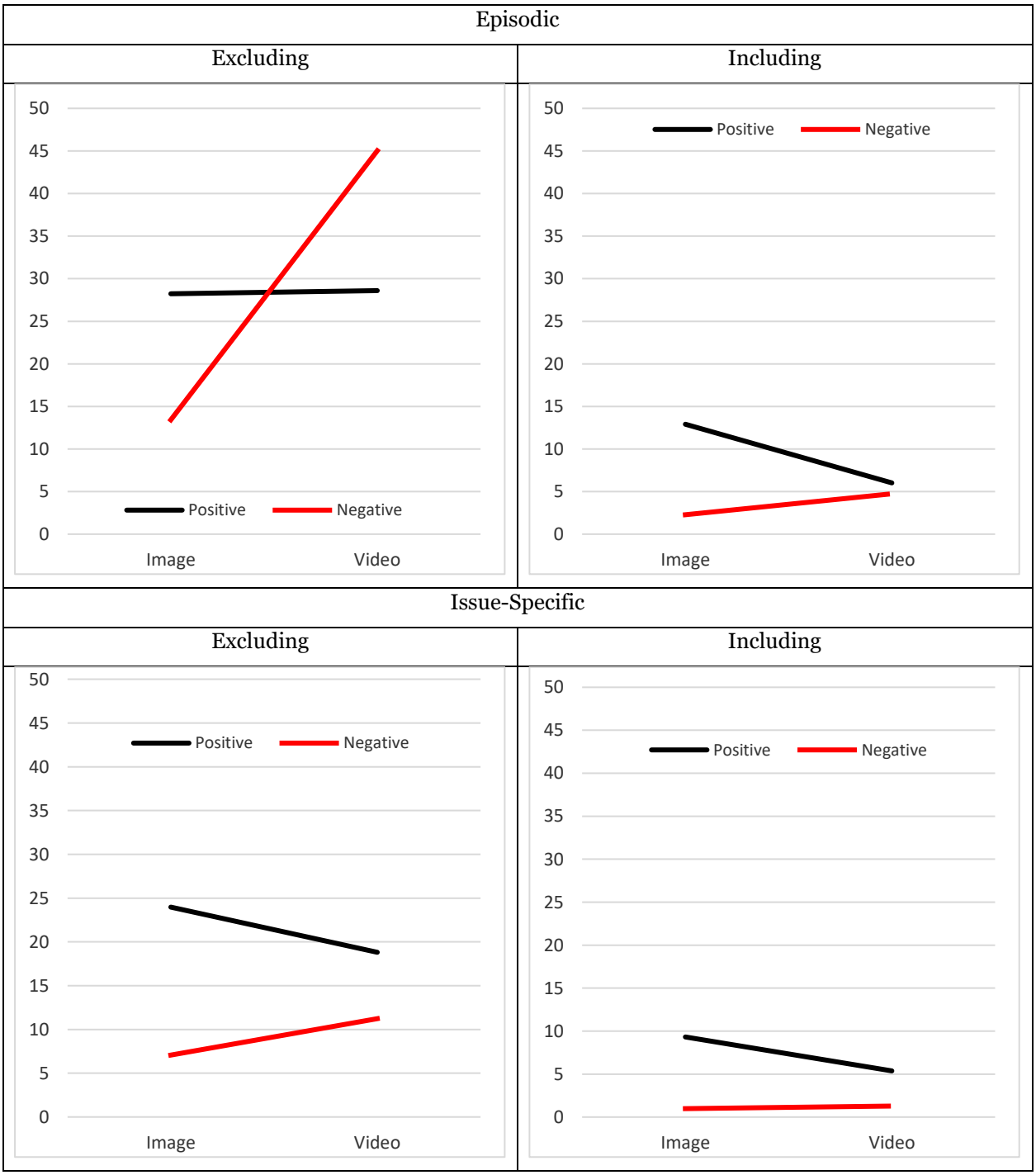

Figure 1 – Comparison of the Positive and Negative Scores Between Image and Video

The positive and negative sentiment scores plotted for the two episodic and issue-specific frames are shown in Figure 1. The top left graph shows the episodic frame with a comparison between image and video sentiments scores when the neutral comments are excluded. While the positive sentiment score does not change much between image and video posts, the negative sentiment score is significantly higher for posts with videos. The other top right graph shows the same scores when the neutral comments are included. While the change is not as drastic, the positive sentiment is lower for video posts and the negative sentiment is higher for video posts. Even more interestingly, the same holds true for the lower graphs which show the comparison for the issue-specific frame. Both of the issue-specific plots show that negative sentiment is higher on video posts than on image posts and that positive sentiment is lower on video posts than on image posts.

The results show some interesting possibilities, but there are also a number issues that will need to be considered for the full study. The average positive sentiment across all comments is higher for comments under posts composed of an image and text. This can be attributed to the larger number of comments that are considered to be neutral by LIWC. It can be seen that the number of neutral comments is higher for the video posts, this holds true even when the number of total comments is similar. More exploration into the role of framing and media richness will also be conducted through a full study. An explanation of how such a study would be conducted follows.

Future Research

At this point, it appears as if the media richness of the post is the key determinant in the average sentiment of all comments posted. It seems as if as media richness mainly plays a part in the number of positive comments posted. It appears as if image media, the less media rich medium, encourages more positive sentiment. This runs contrary to the hypothesis that video would elicit more positive responses due to increased media and information richness of the medium. There could be a few possible reasons for this outcome. It is possible that the less time needed to fully process an image elicits more positive responses. The cognitive load to fully process a video may lead to higher expectations of quality of information provided in the video. The effort invested into watching a video may cause an individual to have higher expectations. Therefore, it would be easier to have a mismatch of expected information and provided information. This lack of fit between the requirements of information and the amount and media richness of information constructs fits into the media richness theory. However, there would need to be more exploration to consider what the requirements of information may be for the target audience. This result may suggest that it is different than hypothesized.

Also, the difference in the number of comments between the frame types would need to be explored. It is a possibility that thematic frames are seen as too broad of a topic to attract engagement and that episodic frames are too specific to attract a large amount of engagement. Since issue-specific frames are between the two, it may be that the frame is at the right level of specificity to elicit a large number of comments. It is possible that it maybe be more effective to utilize a post with video if the goal is to disseminate information and utilize a post with an image if the goal is to positively influence the target consumer group. To explore these issues, as well as other considerations that will be included in the experimental design, another study will be conducted as described in the next section.

Multiple Methodologies

Multiple methodologies will be utilized to strengthen the experimental design. Initially, we will determine the validity of the frames as previously defined. This will be done through two separate methods. First, there will be an exploratory approach to determine the different frames that will be included in the study. Second, a confirmatory approach, using the definitions provided by the authors, will be utilized to assess the validity of the define frames. After the frames have been defined through the empirical analysis, machine learning will be used to assess the sentiment of the text comments. The mixed method design of the study will strengthen the results.

Classifying Frames

Classifying different posts into their respective frames will be done by asking independent researchers to classify different posts into groups in two ways. First, a group of classifiers will be given examples of

Facebook posts and asked to classify them without being given predefined groups. Next, a different group of classifiers will be given definitions for each frame, as defined by the authors, and asked to put the given examples into their respective groups. The number of matches and mismatches can be used to assess the validity of the definitions.

Text Analysis

Sentiment analysis will again be conducted on the Facebook posts that are collected. LIWC will be utilized to conduct the sentiment analysis again. However, the data will be analyzed in a number of different manners. First, the positive and negative sentiment scores will be analyzed as in the pilot study. However, additional analysis will be conducted to determine the most accurate manner in which to assess the sentiment in each comment. For example, the positive and negative sentiment scores may be combined in order to examine the different responses separately and altogether. In addition, the comments that are merely tagging others in order to share the post will be separated. This would allow for an analysis on the sentiment with and without the neutral comments. The pilot study has a small sample size from one corporation, the full study will include multiple companies and a larger data set.

If data collected show linearity and normality, hierarchical linear modeling will be utilized in order to allow the inclusion of variables that will need to be controlled when posts are collected from multiple companies. In addition to the variables regarding the firm, variables related to the information that is being presented will need to be classified and controlled. This will be done by breaking down the information into the type of product, event, or information being discussed. Finally, the medium being utilized will need to be taken into consideration. For example, the length of a video will be considered, as well as considering how to compare the information content of an image versus video.

Discussion

From a business perspective, this research would explore if corporations can present frame/media richness combinations which will affect the positive or negative sentiment of the consumer. If there are certain combinations that can encourage certain types of consumer sentiment, it would be in the best interest of corporations to match their information message with the appropriate frame and media type. If the full study was to find that more positive or negative comments were elicited from certain combinations, it would be prudent to only use the combinations that encouraged positive responses. These combinations could show to improve the interaction that a corporation has with its customers and potential customers. Going beyond social media, it would be hoped that these combinations could be applied to different settings, outside of the online environment. The ease with which companies can now reach potential consumers has led to numerous possibilities for creating positive interactions with them. This study strives to find the proper method in which to present the best possible frame/media richness combination to use for a given situation.

References

Berthon, P. R., Pitt, L. F., Plangger, K., & Shapiro, D. (2012). Marketing meets Web 2.0, social media, and creative consumers: Implications for international marketing strategy. *Business Horizons*, *55*(3), 261–271.

Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research*, *14*(3), 252–271.

Company Info | Facebook Newsroom. (n.d.). Retrieved February 4, 2018, from https://newsroom.fb.com/company-info/

Daft, R. L., & Lengel, R. H. (1986). Organizational Information Requirements, Media Richness and Structural Design. *Management Science*, *32*(5), 554–571.

Daft, R. L., Lengel, R. H., & Treviño, L. K. (1987). Message equivocality, media selection, and manager rerformance: Implications for information systems. *MIS Quarterly*, *11*, 355–366.

Dolan, R., Conduit, J., Fahy, J., & Goodman, S. (2016). Social media engagement behaviour: a uses and

gratifications perspective. *Journal of Strategic Marketing*, *24*(3–4), 261–277.

Entman, R. M. (1991). Symposium Framing U.S. Coverage of International News: Contrasts in Narratives of the KAL and Iran Air Incidents. *Journal of Communication*, *41*(4), 6–27.

Goffman, E. (1975). *Frame Analysis- An Essay on the Organization of Experience*. *American Sociological Association* (Vol. 4).

Iyengar, S. (1991). *Is Anyone Responsible? How Television Frames Political Issues*.

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, *47*(2), 263–292.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, *53*(1), 59–68.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, *54*(3), 241–251.

Levin, I. P., & Gaeth, G. J. (1988). How Consumers are Affected by the Framing of Attribute Information Before and After Consuming the Product. *Journal of Consumer Research*, *15*(3), 374.

Lim, K. H., & Benbasat, I. (2000). The effect of multimedia on perceived equivocality and perceived usefulness of information systems. *Mis Quarterly*, *24*(3), 449–471.

Maheswaran, D., & Meyers-Levy, J. (1990). The Influence of Message Framing and Issue Involvement. *Journal of Marketing Research*, *27*(3), 361.

Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, *52*(4), 357–365.

Mann, H. B., & Whitney, D. R. (1947). On a Test of Whether one of Two Random Variables is Stochastically Larger than the Other. *The Annals of Mathematical Statistics*, *18*(1), 50–60.

Mollen, A., & Wilson, H. (2010). Engagement, telepresence and interactivity in online consumer experience: Reconciling scholastic and managerial perspectives. *Journal of Business Research*, *63*(9–10), 919–925.

Nguyen, L. T., Wu, P., Chan, W., Peng, W., & Zhang, Y. (2012). Predicting collective sentiment dynamics from time-series social media. In *Proceedings of the First International Workshop on Issues of Sentiment Discovery and Opinion Mining - WISDOM '12* (pp. 1–8).

Number of social media users worldwide 2010-2021 | Statista. (n.d.). Retrieved October 1, 2017, from https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/

Otondo, R. F., Van Scotter, J. R., Allen, D. G., & Palvia, P. (2008). The complexity of richness: Media, message, and communication outcomes. *Information and Management*, *45*(1), 21–30.

Pennebaker, J.W., Booth, R.J., Boyd, R.L., & Francis, M.E. (2015). Linguistic Inquiry and Word Count: LIWC2015. Austin, TX: Pennebaker Conglomerates (www.LIWC.net).

Tversky, A., & Kahneman, D. (1981). The Framing of Decisions and the Psychology of Choice. *Science*, *211*(4481), 453–458.

van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer Engagement Behavior: Theoretical Foundations and Research Directions. *Journal of Service Research*, *13*(3), 253–266.

Zhang, Y., & Buda, R. (1999). Moderating effects of need for cognition on responses to positively versus negatively framed advertising messages. *Journal of Advertising*, *28*(2), 1–15.