

Social Media Marketing on Twitter: An Investigation of the Involvement-Messaging-Engagement Link

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Abstract. With the rise of social media marketing as an important domain of practice and research, a growing number of scholarly and practitioner articles have emerged highlighting best practices in social media marketing. Despite this proliferation of articles exploring the topic of social media marketing, no comprehensive frameworks exist that offer insight into the underlying components of effective social media marketing messages and the relations between them. Amalgamating constructs from a variety of disciplinary backgrounds—including marketing, advertising, communication, and information systems—this paper offers a theoretical framework and empirical investigation of the relations between four message components, namely purchase involvement, messaging strategy, message content, and media types. Using longitudinal data from ten Fortune 500 companies, we validate our comprehensive framework and find support for all hypotheses, thereby validating the importance of using an integrated approach to social media message design. Implications for research and practice are outlined.

Keywords: social media marketing, purchase involvement, media richness, content categories typology, Twitter.

1 Introduction

Recent studies have revealed that companies have grown their social media marketing spending and are expected to continue to increase social media budgets in the next five years (Moorman, 2013), making social media one of the fastest growing marketing platforms in the world. The popularity of social media for marketing purposes can be attributed to a number of advantages associated with social media when compared to traditional marketing channels. First, the scope of consumer markets that can be reached and served through social media platforms are nearly unlimited. Second, social media offer businesses significant cost advantages compared to traditional channels given its relatively free or low-cost nature. Third, social media enable personalized marketing strategies and allow the targeting of small niche markets (Carpenter and Shankar, 2012). Finally, due to the social nature of these platforms, companies can benefit from accruing earned media exposures and referral markets in unprecedented ways (Carpenter and Shankar, 2012).

Simply browsing the social media feeds of Fortune 500 companies reveals a plethora of marketing strategies and executions with some companies posting huge amounts of content with little to no impact, while others have immense followings or fan bases allowing for greater consumer engagement and enhanced branding. Although the lack of strategy may come as an initial surprise given the huge investments companies are making into the social space, the lack of research offering a comprehensive assessment, classification, and analysis of social media marketing techniques and strategies poses a major challenge to the design of effective social media marketing practices.

To fill this gap, this study draws upon and amalgamates three distinct and interdisciplinary theoretical perspectives for analyzing three dimensions of a business' social media marketing strategy, namely purchase involvement, message appeal, and message richness, in the context of Twitter. Additionally, we analyze and classify message content using the typology of social media messages as developed Coursaris, van Osch and Balogh (2013) in which the authors use a Multi-Grounded Theory approach to develop a coding scheme for message content within the context of Facebook. Given the extension of their approach to Twitter and the integration of an analysis of message content with purchase involvement, strategy, and media richness, we can offer a multi-dimensional framework for understanding and informing social media marketing as well as potential differences between the two social media platforms.

Consequently, the research questions underpinning this study are as follows:

1. What is the effect of purchase involvement of a brand's product or service on the adopted messaging strategy?
2. What is the interplay between message content and message richness? I.e., are certain content categories more likely to be combined with particular media types?
3. What is the effect of message richness on consumer engagement?

To answer these questions, this paper reports on the findings from a longitudinal multiple case study of the messaging practices from nine fortune 500 brands—Delta Airlines, JetBlue, KLM, Wal-Mart, Meijer, Target, McDonalds, Starbucks, and Pepsi—of six weeks of Twitter messaging data ($n=1169$ posts). The focus of this study is on Twitter and the unit of analysis is the tweet. The nine brands were selected because they represent a range of consumer purchase involvement across three industry categories, namely airlines, big box retailers, and fast-moving consumer goods (FMCGs).

The testing of our proposed multi-dimensional framework and the underlying hypotheses allows for the exploration of differences in the relative frequency and effectiveness of the messaging appeal and messaging content through ANOVA and regression analyses of the relationships between brand characteristics, messaging strategy (i.e., appeal, content, and richness), and consumer engagement.

The findings from our analyses reveal that purchase involvement of the brand significantly predicts the messaging strategy employed by a brand. Additionally, our findings show the importance of establishing a “fit” between the level of abstraction and complexity of the content category and the level of richness of the media type that is included in a tweet, and that this “fit” may be more important in increasing consumer engagement than increasing levels of media richness alone.

2 Theoretical Underpinnings

In order to provide a holistic assessment of brand marketing messages on social media, we integrate a set of interdisciplinary theoretical constructs with their origins in marketing, advertising, communication science, and information systems, on purchase involvement, messaging strategy, messaging type, and media type, as follows.

2.1 Purchase Involvement

Purchase involvement represents the extent of interest and concern that a consumer brings to bear upon a purchase-decision task (Mittal, 1989; Beatty et al., 1988). As such, it refers to the amount of time, effort, and costs invested when making a purchase. In general, higher levels of purchase involvement are present when purchases involve high uncertainty as well as high levels of economic and time concerns (Houston and Rothschild, 1978).

Thus, purchase involvement relates to risk reduction and price comparison. While involvement inherently refers to a consumer's behavior during the purchase process, certain product categories have been identified as being either high or low in purchase involvement. For instance, high involvement products are generally expensive and are associated with high potential risk, such as buying a home, financial investments, and/or airline tickets (primarily business travel). In making purchase decision regarding any of these high involvement goods, consumers seek extensive information in order to reduce risk and uncertainty. Consequently, messages from brands selling high purchase involvement goods tend to focus on informing the consumer—with the aim of assisting their problem-solving process and reducing associated risk—rather than entertaining (Lally, 2007).

On the other hand, low involvement products are perceived neither as risky nor fascinating (Lally, 2007), and include such products as food, beverages, and office supplies. In these instances, consumers are unlikely to make a significant time investment to explore and evaluate product information extensively. As a result, low involvement brands center their messaging content on providing rapid hedonic appeals (Hawkins et al., 1983). Thus, in the case of low involvement commodities, brands entertain rather than inform in order to get consumers to purchase their brand over any other.

2.2 Messaging Strategies: Informational versus Transformational

Within the traditional advertising literature, various schemes have been developed for the classification of messaging strategies. However, both practically and theoretically, the consistent application of these schemes—the majority of which are too complex or too simplistic—has proven challenging (see, e.g., Simon 1971, Frazer 1983, Aaker 1982). One exception has been the dichotomous messaging strategy framework developed by Laskey, Day and Crask (1989), which has proven to be valuable for both practitioners and researchers alike.

Laskey et al.'s (1989) classification scheme of brand messaging strategies is grounded in the typology proposed by Puto and Wells (1984), who distinguish between informational and transformational messages. While informational advertising focuses on the transmission of factual, verifiable data about the brand, transformational advertising emphasizes the consumer's affective experience with the brand. Described differently, informational advertising is often directed at problem-solving—providing the consumer with insights into how the particular brand or service can help solve a particular problem at hand—transformational messages rather aim to endow the use of the advertised brand with a particular experience that is different from that of using any similar brand.

Given that the informational/transformational dichotomy has broad applicability and generalizability, we adopt Laskey et al.'s (1989) classification scheme to analyze social media marketing messages.

When integrating the former theory on purchase decision involvement with the informational-transformational dichotomy, the following two hypotheses can be inferred:

H1a: *The higher the brand involvement, the more informational the messaging strategy on Twitter*

H1b: *The lower the brand involvement, the more transformational the messaging strategy on Twitter*

2.3 Messaging Typologies

Coursaris et al. (2013) present a review of existing typologies for analyzing the content of social media marketing messages. Based on their review the authors conclude only a limited number of existing typologies exist, none of which adopt a strategic lens as evident from their lack of analysis of engagement metrics and the isolated analysis of a single message dimension (e.g., media type, content, or brand).

Given the lack of existing typologies, Coursaris et al. (2013) use a grounded theory strategy to inductively develop a holistic typology of content categories based on the analysis of 256 Facebook posts. Their typology revealed seven overarching messaging categories of Brand Awareness, Corporate Social Responsibility, Customer Service, Engagement, Product Awareness, Promotional, and Seasonal, which in turn encompass a total of 23 subcategories.

Although a single message could be categorized under more than one umbrella category—e.g., a post that fosters both Brand Awareness and Product Awareness simultaneously—the underlying subcategories are designed to be mutually exclusive. Although it is beyond the scope of this paper to provide detailed definitions and examples for all categories and subcategories, Table 1 below offers definitions for the seven umbrella categories. For a more extensive overview of conceptualizations and illustrations we refer to Coursaris et al. (2013). Furthermore, Appendix 1 offers an overview of the frequency of occurrence of each of the messaging categories and subcategories for the three purchase decision involvement categories analyzed.

Table 1. Social Media Marketing Typology

Categories	Definitions
<i>Brand Awareness</i>	Posts that build company presence and attentiveness in digital consumer market
<i>Corporate Social Responsibility (CSR)</i>	Posts that build brand image of supporting, strengthening community
<i>Customer Service</i>	Posts that aim to build consumer knowledge about product, industry, and brand changes.
<i>Engagement</i>	Posts that build consumer connections/communities through brand interaction
<i>Product Awareness</i>	All posts which build product knowledge/understanding, and existence.
<i>Promotional</i>	Posts that are designed to stimulate immediate or near future purchases through monetary incentives.
<i>Seasonal</i>	Posts that remind, inform consumers of seasonal, annual events and related products by the brand

2.4 Media Richness Theory

One of the earlier and most widely used theories in communication and information science is Media Richness Theory (MRT) as proposed by Daft and Lengel in 1986. MRT asserts that each communication medium can be described by its ability to reproduce any associated contextual cues (e.g., visual ones such as gestures) during a message's transmission. This ability is referred to as the medium's "richness." Thus, the richness of a video message would be considered higher than that of a text-based message.

Twitter allows brands to employ different media types in a message (i.e., tweet). Hence, tweets can employ media types ranging from very lean media—i.e., text-only tweets—to media associated with an increasing level of richness, such as URL, photo, and video. Here, we treat URLs as rich media since their inclusion in a tweet is associated with a thumbnail image and these URLs frequently link to external, rather than embedded, videos.

One obvious observation about the content categories described in the previous paragraph is their varying levels of abstraction and complexity. Whereas some of the content categories are highly abstract—e.g., brand awareness, CSR, and customer service—other categories are concrete—e.g., promotional and seasonal messages. Using MRT, we anticipate that for tweets (i.e., messages) to be effective, abstract content categories need to be associated with richer media, in order to make the message more informative and appealing to consumers. Hence, the following hypothesis emerges:

H2a: More abstract content categories—i.e., brand awareness, CSR, and customer service—are associated with richer media (i.e., video, photo, or URL) on Twitter

Furthermore, for concrete content categories we anticipate no significant relationship to exist with media richness as they can be effectively associated with any media type. Finally, for product awareness, we anticipate increased use of photos—for enhanced product recognition—or direct links (i.e., URLs) to the product. Thus:

H2b: Product awareness messages on Twitter are associated with posts containing a photo or URL.

Ultimately, however, richer, more personal communication is more effective than leaner, less rich media (Newberry, 2001). Therefore, we propose that:

H3: *The inclusion of richer media types—photo, video, or URL—on Twitter is associated with higher consumer engagement*

3 Research Design

We use a multiple case-study approach rather than a single case-study design in order to avoid apparent challenges to generalizability. The multiple case-study design allows for the collection of data from two or more sources, which can then be compared (Yin, 1994). Cross-case comparisons augment within-case analysis (Eisenhardt, 1989) strengthening results through pattern-matching increasing confidence in the robustness of theoretical results (Yin, 1994).

3.1 Multiple-Case Study Design and Case Selection

All ten brands selected for this study are leaders in their respective domains for social media marketing. The brands rank among the top Fortune 500 companies by gross revenue, enjoy strong brand equity, and maintain a considerable social media presence. Three different levels of purchase-decision involvement can be represented from the brands: low-involvement among fast-moving consumer goods (FMCGs) including McDonalds, Coca Cola, Pepsi Cola, and Starbucks, mixed levels of involvement are found within Wal-Mart, Meijer, and Target representing Big Box Retailers (BBR), and high purchase-decision involvement for expensive and more risk-bearing goods and services represented by the airlines Delta, KLM, and JetBlue.

3.2 Data Collection

Data collection occurred over a six-week period during late Summer 2012. This provided a longitudinal aspect to our data giving us the ability to mitigate generalizability concerns. One brand, Walmart, was collected in late Winter 2013 due to complications with rate limiting on Twitter. Data were collected using a web crawler program that automatically went to each brand's Twitter account to collect the Tweets. Table 2 summarizes the number of brand posts analyzed for each purchase-decision involvement category—low, medium, and high. The unit of analysis is the brand tweet.

Table 2. Data Collection Details

	<i>High Involvement (Airlines)</i>	<i>Mixed Involvement (Big Box Retailers)</i>	<i>Low Involvement (FMCGs)</i>
Observations (<i>N</i>)	192 tweets	592 tweets	430 tweets

3.3 Coding Process

A pair of independent coders analyzed all tweets from a single brand, i.e., a total of ten pairs of independent coders analyzed the tweets from all ten brands. The final coding scheme encompassed the typology of brand messaging content categories as well as codes for messaging strategy (transformational versus informational), media types (text only, includes URL, photo, and/or video), timing (date/time of post; date/time of first and last comment), and consumer engagement (favorites, retweets, replies-to, and hashtags).

The overall interrater agreement across the 10 brands was .73 Cohen's kappa (computed as the average from the Cohen's kappa scores of each pair of independent coders), which is considered substantial agreement, noting that all 10 dyads' interrater agreement was well above the 0.60 threshold for substantial agreement. Following the completion of the data coding process, face-to-face meetings were organized to discuss and reconcile any disagreements. After the entire dataset had been coded and reconciled, summary tables and graphs were constructed for each category of the coding scheme.

3.4 Data Analysis

In order to test our hypotheses, we used SPSS ANOVA—for pairwise comparisons between purchase involvement categories—and SPSS Regression—for analyzing the effects of media richness on consumer engagement.

Due to the large differences in the number of tweets per category of purchase-decision involvement and the high sensitivity of ANOVA to unequal sample sizes (Howell, 2009), we used SPSS Select Cases to randomly select an equal amount of tweets across all three categories of purchase-decision involvement as determined by the group of brands with the least posts, namely the high involvement brands (i.e., airlines; including Delta, KLM, and JetBlue) (*N* = 192). For SPSS regression, we used the full data set, i.e., without randomly selecting an equal subset of tweets per purchase-decision involvement category. Since the aim of the regression analysis was not to compare across brands but rather to assess the effect of media richness on consumer engagement, unequal sample sizes do not pose a problem.

For the regression of the different messaging components—strategy, content category, and media type—we used the raw counts for likes, comments, and shares associated with each tweet, as well as computed an additional weighted dependent variable, social media engagement index on Twitter, which we define and calculate as follows:

Social Media Engagement Index on Twitter = $.5*\Sigma(F) + 1*\Sigma(R) + 1.5*\Sigma(Rt)$

Where F refers to Favorites, R refers to Replies, and Rt refers to Retweets.

The weighing of favorites, replies, and retweets, is based on the increasing level of cognitive involvement, exposure, and vulnerability (in terms of visibility in one's own personal network) associated with each of these activities for the consumer.

For the analysis of media richness, we additionally computed a compound media richness variable that encompasses the combined values for photos, videos, and/or URLs; i.e., a text-only post will have a media richness value of 0, a post that includes only one of these media types will have a value of 1, and a post that includes two or all three of these media types would have a value of 2 or 3 respectively.

4 Findings

In what follows, we will discuss the findings of our hypotheses testing as summarized in Table 3.

With respect to messaging strategy—i.e., informational versus transformational messages—we analyzed the link between brand purchase-decision involvement and strategy and between strategy and engagement.

First, a one-way ANOVA for brand purchase involvement on strategy reveals that there are significant differences between Airlines ($M = .30$, $SD = .46$), Big Box Retailers ($M = .27$, $SD = .45$), and Fast-Moving Consumer Goods ($M = .64$, $SD = .48$) with Airlines and Big Box Retailers using significantly more informational messages (Welch test; $p = .00$).

With respect to the content categories from our messaging typology, we analyzed the link between the level of abstraction of the messaging category and the richness vis-à-vis the set of media types used in a tweet. The results of the regression analysis showed that abstract messages are indeed significantly correlated with richer media ($p = .00$) supporting H3a. Interestingly, CSR ($p = .03$), Engagement ($p = .006$), and Product Awareness ($p = .00$) were significantly associated with richer media. On the other hand, Seasonal messages ($p = .008$), which tend to be quite specific in terms of the ideas being communicated to the consumers, were associated with less rich media.

In partial support of H2b, we found that product awareness tweets are indeed more likely to include photos ($p = .00$), but not URLs ($p = .54$), in order to support enhanced product recognition and recall.

With respect to the effect of media richness on engagement—Hypothesis 3—we found a marginally significant effect of the former on weighted engagement ($p = .089$).

Table 3. Hypotheses Testing

Hyp.	Specification	P-Value	Result
H1a:	Higher purchase involvement → Informational Strategy	.00	Supported
H1b:	Lower purchase involvement → Transformational Strategy	.00	Supported
H2a:	Abstract Content Categories → Richer Media	.00	Supported
H2b:	Product Awareness Messages → Photo/URL	.00/.54	Partial
H3:	Richer Media → Higher Engagement	.089	Marginal

5 Discussion

In this paper, we drew upon interdisciplinary theories from marketing, advertising, communication, and information systems to build a comprehensive framework. Amalgamating four constructs representing various components of a brand message, namely purchase involvement, messaging strategy, messaging content, and media richness, we aim to understand the effects of (i) purchase involvement on messaging strategy, (ii) messaging content on media richness, and (iii) media richness on consumer engagement. Combining the various theoretical domains, we proposed and tested three sets of hypotheses, pertaining to each of these relations, using Twitter data from ten Fortune 500 companies across three industries, airlines, big box retailers, and consumer packaged goods (CPGs).

First, hypotheses testing—using both SPSS ANOVA and SPSS Regression—revealed that brand purchase involvement significantly predicts the messaging strategy employed by brands in their tweets, with high involvement brands using mostly informational messaging strategies and low involvement brands using mostly transformational strategies. Second, our analysis of content categories showed that significant relationships exist between the content of a brand tweet and the richness of the media type—text only, photo, video, or URL—included in the post. Specifically, abstract content categories are best combined with rich media in order to more effectively communicate a brand's message to the consumer. Also, product awareness messages are best combined with photos in order to reinforce product recall. Finally, we found marginal support for the hypothesis that the use of richer media result in higher engagement, thereby potentially underlining that creating a “fit” between content category and media type is more important than the media type per se.

In sum, this study offers two main contributions. First by proposing and testing a multi-dimensional messaging framework, we aim to offer valuable and comprehensive insights to both researchers and practitioners interested in social media marketing. We hope this framework will be useful for researchers in exploring additional social media platforms, also in exploring other relationships between the four components—purchase involvement, strategy, content, and media type—of social media marketing, as well as in the importance of strategic fit among the components in order to establish high consumer engagement. Second, we hope that the proposed framework can help managers better understand the diversity of messaging components and the potential for a very large number of variations available between these components, as well as offer an analytical tool for assessing the nature of engagement associated with each strategy and category.

References

1. Aaker, D.A., Norris, D.: Characteristics of TV Commercials Perceived as Informative. *Journal of Advertising Research* (22), 22–34 (1982)
2. Carpenter, G.S., Shankar, V.: *Handbook of marketing strategy*. Edward Elgar Publishing (2012)

3. Coursaris, C.K., Van Osch, W., Balogh, B.A.: A social media marketing typology: classifying brand facebook page messages for strategic consumer engagement. In: European Conference on Information Systems (ECIS), Utrecht, Netherlands, June 6-8 (2013)
4. Daft, R.L., Lengel, R.H.: Organizational Information Requirements, Media Richness and Structural Design. *Management Science* 32(5), 554–571 (1986)
5. Day, G.S.: *Buyer Attitudes and Brand Choice*. Free Press, New York (1970)
6. Eisenhardt, K.: Building theories from case study research. *Academy of Management Review* 14(4), 532–550 (1989)
7. Frazer, C.F.: Creative Strategy: A Management Perspective. *Journal of Advertising* 12(4), 36–41 (1983)
8. Glaser, B.G., Strauss, A.L.: *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Aldine Publishing Company, Chicago (1967)
9. Goldkuhl, G., Cronholm, S.: Adding Theoretical Grounding to Grounded Theory - Towards Multi-Grounded Theory. *International Journal of Qualitative Methods* 9(2), 187–205 (2010)
10. Hawkins, D.I., Best, R.J., Coney, K.A.: *Consumer Behavior: Implications for Marketing Strategy*. Business Publications Inc., Plano (1983)
11. Hoffman, D.L., Fodor, M.: Can you measure the ROI of your social media marketing? *MIT Sloan Management Review* 52(1), 41–49 (2010)
12. Houston, M.J., Rothschild, M.L.: Conceptual and Methodological Perspectives on Involvement. In: Jain, S.C. (ed.) 1978 Educators' Proceedings, pp. 184–187. American Marketing Association, Chicago (1978)
13. Howell, D.C.: Unequal Cell Sizes Do Matter (2009),
http://www.uvm.edu/~dhowell/StatPages/More_Stuff/Unequal-ns/unequal-ns.html (retrieved on April 19, 2013)
14. Jenkins, B.: Consumer Sharing of Viral Video Advertisements: A Look into Message and Creative Strategy Typologies and Emotional Content, Capstone Project. (2011),
<http://www.american.edu/soc/communication/upload/blaise-jenkins.pdf> (retrieved on December 3, 2012)
15. Jensen, M.B., Jepsen, A.L.: Online Marketing Communications: Need for a New Typology for IMC? *Journal of Website Promotion* 2(1/2), 19–35 (2006)
16. Kwok, L., Yu, B.: Spreading Social Media Messages on Facebook: An Analysis of Restaurant Business-to-Consumer Communications. *Cornell Hospitality Quarterly* 20(10), 1–11 (2012)
17. Lally, L.: Degrees of Delight: A Model of Consumer Value Generated by E-Commerce. In: IRMA International Conference, pp. 1006–1007 (2007)
18. Landis, J.R., Koch, G.G.: The measurement of observer agreement for categorical data. *Biometrics* 33(1), 159–174 (1977)
19. Laskey, H., Day, E., Crask, M.R.: Typology of Main Message Strategies for Television Commercials. *Journal of Advertising* 18(1), 36–41 (1989)
20. Mittal, B.: Measuring Purchase-decision involvement. *Psychology & Marketing* (6), 147–162 (1989)
21. Newberry, B.: Media Richness, Social Presence and Technology Supported Communication Activities in Education (2001), http://learngen.org/resources/module/1gend101_norm1/200/210/211_3.html (retrieved on April 20, 2013)
22. Puto, C.P., Wells, W.D.: Informational and Transformational Advertising: The Differential Effects of Time. In: Kinnear, T.C. (ed.) *Advances in Consumer Research XI*, pp. 638–643. Association for Consumer Research, Provo (1984)

23. Rossiter, J.R., Bellman, S.: *Marketing Communications: Theory and Applications*. Pearson, Prentice Hall, New York (2005)
24. Simon, J.L.: *The Management of Advertising*. Prentice Hall, Englewood Cliffs, NJ (1971)
25. Sullivan, A., Sheffrin, S.M.: *Economics: Principles in action*. Pearson Prentice Hall, Upper Saddle River (2003)
26. Waters, R.D., Burnett, E., Lamm, A., Lucas, J.: Engaging stakeholders through social networking: How nonprofit organizations are using Facebook. *Public Relations Review* (35), 102–106 (2009)
27. Yin, R.K.: *Case study research: Design and methods*, 2nd edn. Applied Social Research Methods Series, vol. 5. Sage, Thousand Oaks (1994)