A Study on Differences in Attitudes and Memory Effects according to the Regulatory Focus Tendencies of Facebook Users and the Types of Message Appeals

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Abstract

Background/Objectives: This study aims to empirically determine differences in memory effects according to the individual tendencies of Facebook business page users with regard to regulatory focus (promotion/prevention) and types of Facebook message (rational/emotional appeal). Methods/Statistical Analysis: To test the aforementioned hypotheses, this study used a 2 X 2 between-subjects factorial design. The two factors are the self-regulatory focus (promotion/prevention focus) of subjects, and (2) the types of message appeals (rational/emotional). Thus, this experiment used a 2 X 2 between-subjects factorial design according to the self-regulatory focus (promotion vs. prevention focus) of subjects and the types of message appeals (rational/emotional), and conducted the analysis using Two-Way MANOVA. It is considered more valid to conduct MANOVA than repeating ANOVA for each dependent variable since it is grounded on relationships among dependent variables. Findings: First, emotional messages generated greater brand attitudes and memory effects among promotion-focused Facebook users. Second, prevention-focused Facebook users showed relatively high brand attitudes, with no difference between rational and emotional appeals. However, the memory effect was greater for emotional messages. Third, promotion-focused Facebook users tended to remember evaluation-focused information more than attribute-focused information. Fourth, unlike promotion-focused users, prevention-focused Facebook users tended to remember attribute-focused information more than evaluation-focused information. These users engage in systematic or cognitive information processing. Since prevention-focused users protect themselves from negative consequences such as risk or loss and try to increase their safety, they are extremely careful in their decision-making process. This motivates them to closely examine the attributes of the experimental product and remember the functions and features to be used in decision making. Application/Improvements: Since such users perceive their surroundings positively and place a greater emphasis on the benefits or achievements that can be obtained from products, they prefer emotional aspects in processing information on advertising models or other elements related to products.

Keywords: Facebook, Memory Effects, Message Appeals, Regulatory Focus

1. Introduction

Social Network Services (SNS) such as Facebook and Twitter have become among the most popular means of communicating with other people in modern society. Consumers compliment or complain about products or services on SNS and talk about their experiences while looking for the product information that they need, thereby sharing and spreading information. With the explosive growth of SNS, firms are also showing an interest in ways to use SNS as channels through which to communicate with customers. This transition has brought many changes to the communication strategies of firms. In 2010, Pepsi, which had placed commercials in every single Super Bowl for the previous 23 years, chose to use online media as its key advertising channel instead of the Super Bowl. The “Pepsi Refresh project”, which used SNS that are highly accessible to young people, was an online...
model as well as a form of online campaign planned by many firms to increase consumer participation. This online campaign chose Facebook from among many kinds of SNS, and invited consumers to submit ideas about art, culture, education, and/or health that could ‘refresh’ the world every month, sharing these ideas with many people on Facebook and attracting participation through voting. With this campaign, Pepsi intended to link the provision of ideas by participants to creatively solve social problems to Pepsi’s brand image. This campaign rapidly increased web traffic by over 800% and was spread to the whole world in 2011. Such online campaigns are carried out not only by Pepsi but also by other major advertisers such as Budweiser and Coca Cola, which make great investments in advertising costs and use Facebook as the key marketing communication channel. Of the top 100 global companies, 84% are using at least one type of SNS and this trend continues to grow. Among consumers engaged in a direct relationship with brands through SNS, the relationship has a greater value with regard to qualitative aspects as well.

As for Facebook business pages, their messages are posted on the Facebook News Feeds of individual users if they simply ‘like’ these pages. Thus, in order for firms to maximize the effects of marketing communications, an important strategy is to determine what types of messages are effective to expose on the News Feeds of consumers. Many criteria can be applied to identify message types, but the most generally used ones relate to rational appeal and emotional appeal. The communication effects of these types of message appeals are likely to vary according to the self-regulatory focus tendencies of individual consumers. According to the regulatory focus theory, people show different behavioral patterns depending on their tendencies to engage in promotion or prevention through certain behaviors. Specifically, promotion-focused people have a strong tendency to obtain positive results through certain behaviors because they view their surroundings positively, while prevention-focused people tend to prevent negative results through certain behaviors because they view their surroundings negatively.

This study aims to empirically determine differences in memory effects according to the individual tendencies of Facebook business page users with regard to regulatory focus (promotion/prevention) and types of Facebook message (rational/emotional appeal).

### 2. Theoretical Background and Hypotheses

#### 2.1 Facebook and Types of Messages

PitchEngine (2009) investigated the ‘reasons for using SNS’ among 438 firms in the U.S. and found them to be brand building (82%), networking (60%), and customer services (32%). As can be seen here, many firms can now communicate with consumers more closely through their official websites as well as corporate blogs, Facebook business pages, and Twitter. This global trend in SNS use is considered to represent a new paradigm. Facebook (www.facebook.com), the service that has the most overwhelmingly dominant position among the various forms of SNS, is used as a communication channel for many firms. Facebook fan pages (business pages) serve as the most important feature differentiating marketing on Facebook from that on other SNS. Fan pages are also known as business pages. Customers who have become fans by ‘liking’ a firm’s brand fan page spread the firm’s brand messages to the ‘friends of fans.’ For example, a brand message recently posted on a brand fan page will automatically be posted on the News Feed of fan A, and if A ‘likes’ that message, the same message will be posted on the News Feed of A’s friends. This is how brand messages are spread through fans. The appeal of Facebook as an advertising channel is that information dispersed among known people is diffused spontaneously through links with countless people. When logging into Facebook on a computer or mobile, users first access their News Feeds rather than their walls. The wall is where their own stories are posted, whereas the News Feed is useful for catching up with friends since it posts their own and their friends’ stories, depending on whether they are the top or most recent news. The Facebook News Feed applies a unique algorithm that delivers only contents that are considered to be highly relevant to certain users at certain times. In terms of marketing communication, this function of the News Feed can maximize effectiveness when combined with free advertising, which is a type of advertising on Facebook. The user’s awareness of the SNS characteristics - exchange of opinions, public opinion formation and interactivity in SNS had significant effect on the flow experience. Second, awareness of SNS exchange of opinion and interactivity factors had a significant impact on
SNS acceptance\textsuperscript{5}. The Facebook likes are given by each user only on their personal interest. Thus, these data play a vital role in providing accurate search results to each user and provide exact search results as per the user interest\textsuperscript{6}.

Message appeal is a method in which appeals are made to consumers so that they better accept the arguments provided by the source via messages. Shimp (2003) argued that the motivations to pay attention to commercial messages originate from rational and emotional information, and it is more effective to determine the communication effects of rational and emotional appeals than the directivity of positive or negative messages\textsuperscript{7}. A rational appeal is used to convey objective and realistic information, focusing on logical and functional needs. An emotional appeal is used to convey information through various emotions or images, focusing on emotional responses such as psychological rewards or satisfaction rather than actual utility\textsuperscript{8}. It is difficult to determine which of these is superior, with appeal effects varying according to a product’s attributes, the circumstances, and the employed media. This implies that there is a need for studies that identify appeal methods that are suitable for different products and new media such as Facebook. Studies on different reactions to message strategies from Korean and U.S. Facebook users showed that Korean users ‘liked’ more rational appeals than emotional ones, and also shared the former more than the latter. In contrast, U.S. users ‘liked’ more emotional appeals than rational ones, although they also shared more rational appeals\textsuperscript{9}.

2.2 Self-regulatory Focus

The concept that forms the basis of regulatory focus is the principle of hedonism, which claims that people generally tend to focus on motives to avoid pain and risk while pursuing pleasure. The regulatory focus theory proposed by Higgins (1998) has been studied in various ways to explain the motives and emotions that regulate an individual’s behavioral patterns according to goal directedness\textsuperscript{10}. This motivation system can have a promotion focus or a prevention focus, depending on the tendency to focus on certain motives by regulating one’s own behaviors in order to achieve the desired goal.

First, promotion-focused people seek to improve their present state and tend to have the motive to match their goals related to development and achievement with the status of their desired goals. Accordingly, they have a strong tendency to obtain positive results through their behaviors, and therefore tend to view their surroundings positively. Thus, promotion-focused people are willing to take risks and pursue their desired results. In contrast, prevention-focused people tend to manage their current status safely, and aim to fulfill their own or others’ duties, such as those related to safety and other types of responsibilities. Thus, they are cautious and tend to avoid the things that do not match their desired goals. Accordingly, they have a strong tendency to view their surroundings negatively but are also willing to resolve any issues by carefully analyzing various alternatives before taking specific actions\textsuperscript{11}. Previous studies stated that regulatory focus may be triggered not only by an individual’s immanent tendency but could also temporarily apply to specific situations\textsuperscript{12}. However, regulatory focus through both an individual’s immanent tendency and the situation shows consistent results. When an individual’s regulatory focus is consistent with the regulatory focus type of the provided stimulus, the review of the relevant target is more positive; this is referred to as regulatory fit. When related to positive gains, it is more effective in a promotion-focused situation, while it is more persuasive in a prevention-focused situation when related to negative loss.

Previous studies on regulatory focus and acceptance of new products consistently prove that they affect product evaluations and judgments\textsuperscript{13}. A study by stated that promotion-focused consumers tend to explore new products as a means to pursue their desires and achievements, while prevention-focused consumers tend to stick to the products that are currently using\textsuperscript{14}. It was discovered that promotion-focused consumers have a stronger tendency and desire to purchase high-tech products than prevention-focused consumers. Moreover, promotion-focused consumers perceived lower uncertainty in the performance of products applying new technology compared to prevention-focused consumers, but the latter only showed high purchase intentions when they were certain of the performance of the new technology. Ultimately, in accepting high-tech products or evaluating and owning new products, promotion-focused consumers had more positive perceptions.

With regard to information processing, Zhu and Levy (2007) argued that promotion-focused consumers generally process information by cognitively evaluating detailed attributes rather than processing information specifically and systematically, while prevention-focused people process information through individual methods of determining the meaning of detailed information con-
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More specifically, for the rational appeal, we presented contents on the five functional attributes of tablet PCs discovered in the pretest along with images. Meanwhile, the emotional appeal aimed to communicate happiness and joy in using this model rather than providing attribute information. The results indicate that the manipulation of the Facebook message appeals was successful \( (t=28.64, df=154, p<.01) \).

The regulatory focus of the subjects was rated using a modified version of the 18 items rated on a 9-point scale used by Lockwood et al. (2002). The subjects were divided into two groups --- promotion-focused and prevention-focused --- using the median split applied by Zhao and Pechmann (2007) \( (promotion-focused=72/ prevention-focused=87) \).

3. Research Method

3.1 Experimental Design and Method

To test the aforementioned hypotheses, this study used a 2 X 2 between-subjects factorial design. The two factors are (1) the self-regulatory focus (promotion/prevention focus) of subjects, and (2) the types of message appeals (rational/emotional). Thus, this experiment used a 2 X 2 between-subjects factorial design according to the self-regulatory focus (promotion vs. prevention focus) of subjects and the types of message appeals (rational/emotional), and conducted the analysis using Two-Way MANOVA. It is considered more valid to conduct MANOVA than repeating ANOVA for each dependent variable since it is grounded on relationships among dependent variables.

The product used in the experiment is a tablet PC based on a pretest through a Focus Group Interview (FGI) with eight university students, the subjects of this study. Moreover, a secondary pretest to identify the functional and practical attributes of tablet PCs found that the key attributes were the Central Processing Unit (CPU), display resolution, camera performance, battery performance, portability, embedded memory, 3D image processing function, Adobe Flash support, and price. Based on these attributes, the different types of Facebook message appeals were manipulated separately.

3.2 Manipulation and Treatment

The experiment was conducted by actually creating different types of message appeals for a virtual brand called ‘Smart P’ on Facebook, which is frequently used by the research subjects, university students.
brand attitude (F=21.70, p<.01), attribute-focused recollection (F=6.86, p<.01), and evaluation-focused recollection (F=16.14, p<.01) all showed significant differences (p<.01).

Next, in the posteriori ANOVA of regulatory focus (promotion vs. prevention), the dependent variables recollection (F=0.06, p>.05) and brand attitude (F=2.97, p>.05) showed no statistically significant differences. However, attribute-focused recollection (F=77.64, p<.01) and evaluation-focused recollection (F=145.65, p<.01) both showed significant differences (p<.01).

Finally, in the posteriori ANOVA of the interaction effect between the types of appeals and the regulatory focus, the dependent variables recollection (F=190.02, p<.01), brand attitude (F=17.91, p<.01), attribute-focused recollection (F=35.60, p<.01), and evaluation-focused recollection (F=3.94, p<.05) all showed significant differences.

Based on these results, the hypotheses were analyzed as follows (Figure 1).

First, <Hypothesis 1> predicted that emotional appeals would generate greater brand attitude and memory effects among promotion-focused Facebook users than rational appeals. The results of the hypothesis testing proved that the brand attitudes of promotion-focused users were greater for emotional appeals (M=5.17, SD=1.29) than for rational appeals (M=3.28, SD=1.68) (p<.01). Moreover, the recollections of emotional appeals (M=4.41, SD=0.11) by promotion-focused users were greater than those of rational appeals (M=0.21, SD=1.03) (p<.01). Therefore, Hypothesis 1 was supported.

<Hypothesis 2> predicted that rational appeals would generate greater brand attitudes and memory effects among prevention-focused Facebook users than emotional appeals. The results of hypothesis testing proved that the brand attitudes of prevention-focused users were low for both rational appeals (M=2.21, SD=1.04) and emotional appeals (M=2.42, SD=1.29), with no differences (p>.05). However, the recollections of rational appeals (M=4.63, SD=1.37) by prevention-focused users were greater than those of emotional appeals (M=1.88, SD=0.87) (p<.01). Therefore, Hypothesis 2 was partially supported.

<Hypothesis 3> predicted that promotion-focused Facebook users would remember more evaluation-focused information than attribute-focused information. The results showed that promotion-focused users do indeed remember more evaluation-focused recollections (M=4.94, SD=1.45) than attribute-focused recollections (M=3.11, SD=1.20) (p<.01). Therefore, Hypothesis 3 was supported.

<Hypothesis 4> predicted that prevention-focused Facebook users would remember more attribute-focused information than evaluation-focused information. The results showed that prevention-focused users do indeed remember more attribute-focused recollection (M=4.49, SD=0.95) than evaluation-focused recollection (M=2.56, SD=1.14) (p<.01). Therefore, Hypothesis 4 was supported.

5. Conclusions and Discussion

This research empirically studied differences in brand attitudes and memory effects according to regulatory focus (promotion vs. prevention) and type of message appeal

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Note 1: *p<.05, **p<.01
Note 2: A: Message Appeal/ B: Regulatory Focus
Note 3: ARM: Attribute Related Memory/ GRM: Global Related Memory

Figure 1. Mean in ARM and GRM.
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(rational appeal vs. emotional appeal) among Facebook users. The results and practical implications can be discussed as follows.

First, emotional messages generated greater brand attitudes and memory effects among promotion-focused Facebook users. Since such users perceive their surroundings positively and place a greater emphasis on the benefits or achievements that can be obtained from products, they prefer emotional aspects in processing information on advertising models or other elements related to products.

Second, prevention-focused Facebook users showed relatively high brand attitudes, with no difference between rational and emotional appeals. However, the memory effect was greater for emotional messages. Prevention-focused people tend to perceive certain advertising messages as being manipulated by the intentions of advertisers or information providers for marketing, therefore having doubts about the messages and devaluing their brand attitudes. However, the memory effect was greater for emotional messages. In the end, since prevention-focused users protect themselves from negative consequences such as risk or loss and try to increase their safety, they are extremely careful in their decision-making process. This motivates them to closely examine the attributes of the experimental product and remember the functions and features to be used in decision making.

Third, promotion-focused Facebook users tended to remember evaluation-focused information more than attribute-focused information. These consumers have a greater preference for highly innovative products than prevention-focused consumers. Thus, when establishing marketing strategies for highly innovative IT products, strategic plans are required to promote and activate the motives of these consumers. In other words, there is a need for communication strategies that, rather than providing detailed product attributes, can transmit happiness or satisfaction in using the product by creating a general attitude.

Fourth, unlike promotion-focused users, prevention-focused Facebook users tended to remember attribute-focused information more than evaluation-focused information. These users engage in systematic or cognitive information processing and thus attributes have a greater memory effect due to their desire to prevent loss.

6. Acknowledgement

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7. References

