USING YALE MODEL IN EXAMINING THE ADOPTION OG ONLINE PRODUCT REVIEW

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ABSTRACT

This study adopts Yale model to discuss the interaction of message, source, and receiver characteristics and their effects on perceived credibility and review adoption in the online product review. There is a positive relationship between message balance/vividness and perceived credibility/review adoption. Brand commitment and need-for-cognition moderates on message and perceived credibility as well as review adoption, where brand commitment strengthens and need-for-cognition weakens the effects, respectively. Additionally, perceived similarity is positively related to perceived credibility, which then affected receivers' willingness to adopt the review.

Keywords: Yale model, need-for-cognition, brand commitment, perceived similarity, review adoption

INTRODUCTION

It is common that consumers to search for information about products or services online recently. Some studies point out that consumers trust online review posts more than traditional media when making their purchase decisions (e.g. [9]). However, Internet provides a huge amount of information for users but at the same time creates issues related to information quality and credibility. An online product review from Internet users provides information about a specific product that either encourages or discourages its audience to use it. In this study, reviews that contained information about Windows 10 use experiences were created for Internet users to test the model. Since Windows 10 is a new system, consumers might tend to look for feedback or reviews from other people to help them reduce perceived uncertainty before doing the upgrade.

Yale model mentioned that, in the process of communication, message, source, channel, and receiver are the major components that influence people's attitudes toward information intended for delivery ([10]). However, Yale model might not able to explain source characteristics due to Internet's nature. This study proposed that the perceived similarity of receiver perceptions from the message originator should be able to explain how receivers perceive the credibility of the information source. When reading the message, receivers will look for cues (e.g. background) that tell them the characteristics of the message originator. After they have an idea about the information source, their attitude toward the originator will affect the effectiveness of the message.

Previous studies have put focus on how individual attributes affect information delivery (e.g. [3] [15] [1]). This study aims to create a combination of message attributes that can best describe reality in the online environment. Message balance, vividness, and the number of shares are the three attributes proposed to describe how the message is written and presented, including some of additional information.

Receiver can be represented by individual traits that vary from person to person. A previous study by [2] used brand commitment as a receiver attribute for the reason that e-WOM usually targets a specific product. The same concept was adopted in this study. However, since this study discusses a product that

can contain information with levels of detail, the second attribute of receiver characteristics, need-for-cognition (NFC), was included. NFC is a trait that people have that suggests their motivation to process information that is presented to them. It is posited in this study that this attribute also plays a role in the adoption of a product review.

This study intends to examine: 1) the influence of message characteristics (balance, vividness, and number of shares) on receivers' perceived credibility of a message as well as review adoption; 2) the influence of perceived similarity of writer on how receivers perceive message credibility; and 3) the moderating effects of brand commitment and NFC on the effectiveness of an online product review.

RESEARCH FRAMEWORK

This study adopts Yale Model ([10]) to examine the effect of a product review on review adoption in new media such as online channels and social networks. Yale model is suitable for this research context since this study involves the fundamental elements described by the model: Internet users (receivers), who are looking for information about Windows 10, a reviewer (source), who creates the information regarding their experience of this new product, and the review (message), which delivers the information about the use experience towards the product. The medium is already clear defined as an internet platform; thus, it is not included as a variable in the model for investigation.

Message, receiver and source characteristics are considered in the development of the framework. These message attributes were used to resemble a review for Windows 10 user experience found on a Facebook page. These attributes basically covered how the message was written (message sidedness/balance), how the message was presented (message vividness) and some additional external information attached to the message (number of shares) ([2] [17]). Message balance is defined as an indication suggesting the review of the product is presented as either one-sided (low balanced) or two-sided (high balanced). Message vividness is that a message is considered vivid if it is to some degree interesting, concrete and imagery-provoking. [6] mentioned that vividness could be achieved by the inclusion of dynamic animations, (contrasting) colors, or pictures. The highly vivid message contains vivid text along with pictures relevant to the topic, whereas the less vivid message only contains plain-written text in this study. Number of shares refer to the degree to which the product review regarding Windows 10 is accepted by the general public. [16] found that receivers tend to forward or share messages when they perceive the message as consistent with their self-concept. One would share the message if he/she agrees with the content of that message. Those who read a message which has been accepted by a great number of individuals might have their attitude toward the message persuasiveness.

According to the literature, each message characteristics has distinct effect on perceived credibility and review adoption ([11] [4] [7]). Perceived credibility of a review is defined as the extent to which an individual perceives the product-related reviews and review writer are believable. Review adoption is defined as review receiver's perceived persuasiveness of the message and willingness to rely on the perceived credible online product review.

In the case of a message presented online, the source of information becomes important for receivers, who may perceive the credibility of message differently from each other. The receiver in this study is the individual who responds in the communication process. Brand commitment is an explicit factor that explains this phenomenon and describes the relationship between a message and its receiver. Basically, those who report themselves as having commitment at different levels to the target brand will have formed different attitudes toward the presented message. Similarly, another receiver attribute in this study, NFC, is also considered as a trait that varies among individuals. Different levels of NFC lead to different perceptions of messages. Brand commitment is referred to as the attachment or bond the consumers have and their desire to maintain a valued relationship with a brand ([13]). It can be explained by multiple facets, such as loyalty, performance, and involvement. Similarly, in this study, brand commitment is defined as a consumer's bond and desire to maintain a valued relationship with the brand of the product

being reviewed. [5] conducted an experiment on students who were at different levels of NFC, and their study determined how the presented message regarding euthanasia altered students' beliefs while NFC was considered as an important factor. Product reviews regarding Windows 10 in this study contained different levels of information that allowed the audience to consider. NFC is as an individual's need to process information in meaningful and integrated ways with deliberate thought.

Perceived similarity is believed to be involved in the process of communication in this study. For receivers to accept a message, the source of that message is important. In an online environment, source are being formed by Internet users and the source credibility shall be re-considered. Perceived similarity as a source attribute that is less likely to be affected by the content of a message because it places more emphasis on the person who generates the message (characteristics of originator). This attribute was used in this study's model to discuss its impact on the receiver's perception of source and message credibility. Perceived similarity here is defined as the review receiver's perception of the similarity between him/herself and the review writer based on the writer's observed characteristics ([14] [17]) Finally, the credibility of the message is suggested to subsequently affect review adoption. As far as receiver characteristics are concerned, the attributes, brand commitment and NFC are believed to be able to moderate the effect of message characteristics on both perceived credibility and review adoption. The research framework is as figure 1 shows.
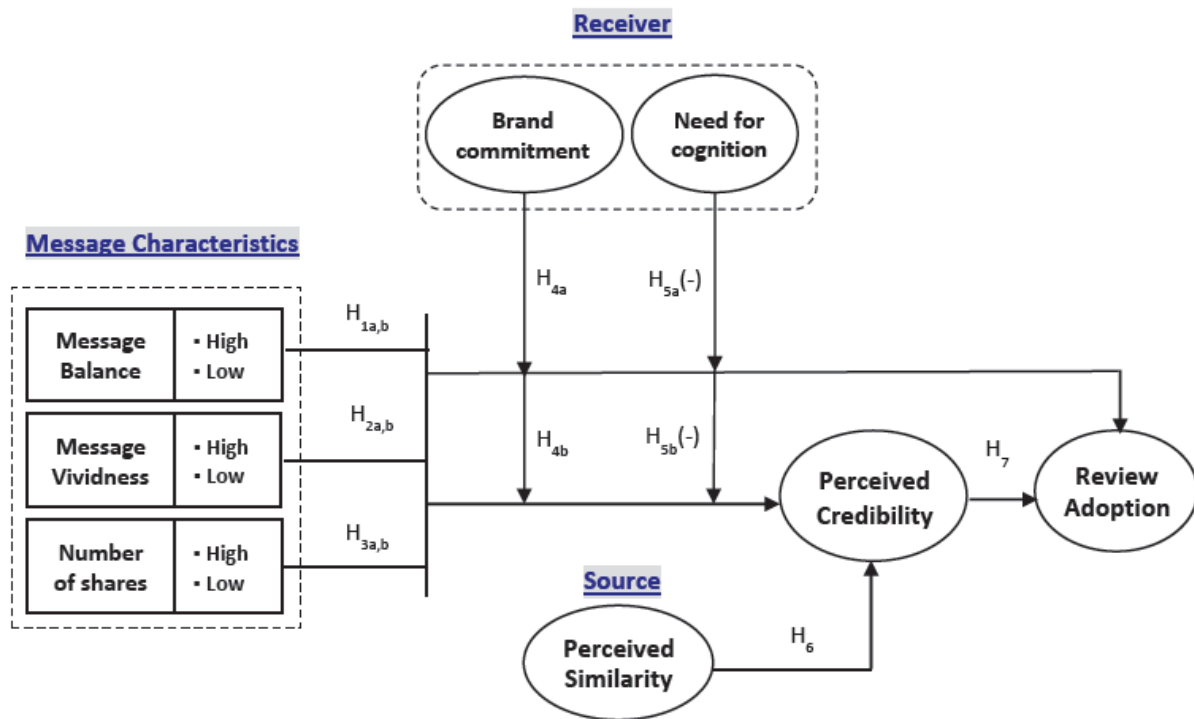

Figure 1

METHOD AND RESULT

The study used a 2 x 2 x 2 factorial design to determine the effect of the message under different scenario (high and low message balance, vividness and number of shares). There is in total 8 scenarios. The study also examined the moderating effect of brand commitment and NFC on the relationship between the message and perceived credibility, and the message and review adoption. The medium chosen as a platform for review presentation was Facebook, which is considered one of the most popular social network sites in Taiwan. This study targeted individuals who currently use the Windows system.

There are in total 496 valid responses and we use SPSS 20 and AMOS 18 to do the data analysis. A CFA

was conducted and the result of item-to-total, factor loading, AVE values and CR values all meet the request value. The Cronbach's alpha also met the suggested value (>.70). Thus, the results showed high convergent validity, high internal consistency, and high reliability. Besides, for discriminant validity, all the values (correlation of constructs) are below the diagonal line in the matrix were less than the square root of AVE, thus showing discriminant validity. For the high and low scenarios, we use t-value to do the analysis, there is a significant difference between high and low levels for each message attribute. The results again show the manipulations of message attributes in the questionnaire design were successful.

The result of one-way MANOVA found that the direct effect of message characteristics on perceived credibility was significant. The post hoc tests showed that when the respondents were exposed to scenario 1 (high message balance, vividness and number of shares), they were more likely to perceive the review to be highly credible as compared other scenarios, such as Scenario 3, 4, 7, and 8. However, some of the groups showed no distinction (e.g. Scenario 1 vs 2). When analyzing the effect of individual message attributes on perceived credibility, the study found that both message vividness and message balance had significant effects; this means that H1a and H2a were supported. However, in the case of the number of shares, the effect was not significant, therefore H3a was not supported. Message vividness and message balance both affected review adoption significantly, whereas number of shares did not. This suggests that H1b and H2b were supported, but not H3b.

The moderating effects of brand commitment and NFC on message characteristics and perceived credibility as well as review adoption was analyzed K-means cluster method with separation of two groups (high and low). Also, to simplify the analysis of the results, only the two extreme scenarios of this study were compared to see the moderating effect of brand commitment and NFC. For moderating effects of brand commitment, the results showed that when the high brand commitment group was exposed to Scenario 1 (high balance, vividness, and number of shares), the respondents formed higher perceptions of credibility and also tend to adopt the review than those exposed to other scenarios. However, for Scenario 8, the difference was not significant. Thus, H4a and H4b were only partially supported. On the other hand, for moderating effect of NFC on perceived credibility and review adoption, the outputs of the analyses showed the opposite of the effect of brand commitment. Those with low NFC had a higher tendency to be affected by changes in the message characteristics than those with high NFC. The differences for those with low NFC were more significant than those with high NFC. The result shows that as NFC increased, both of the dependent variables decreased, especially under Scenario 1. However, in Scenario 8, the effect of NFC on perceived credibility was not significant. Therefore, H5b was supported, but H5a was only partially supported.

H6 and H7 were analyzed by structural equation modeling (SEM). All the values for model fit met the requirements and thus suggest the model is appropriate. The results of SEM paths analysis, there was a positive relationship between perceived similarity and perceived credibility. This supported H6. Similarly, the relationship between perceived credibility and review adoption was shown to be positively related and thus showed support for H7.

CONCLUSIONS AND RECOMMENDATIONS

This study proposed that message characteristics have an effect on perceived credibility and review adoption; that is, when exposed to different messages, message receivers tend to react differently. The three message attributes that were adopted were message balance, message vividness, and number of shares of the message. It was assumed that higher levels of these three attributes would result in higher the perceived credibility as well as higher levels of review adoption. The results showed that both message balance and vividness had a direct effect. The number of shares, however, appeared to have an insignificant impact on receivers' reactions toward the messages.

Speaking of message balance, the finding is in accordance with the results from previous research (e.g. [4] [7]). The respondents tend to accept two-sides information than one-side information as they might

consider the reviewer who provided two-sides information are more honest and willing to provide fair comments(H1b). This explains the high review adoption of receivers when the two-sided message was presented (H1a). The results for hypotheses related to message vividness were also consistent with those of prior studies (e.g. [12] [2]). When receiving a highly vivid message, regardless of the opinions addressed in the review, the receivers felt more emotionally connected with the message due to the way it was presented. This connection helped break down the potential barriers or gaps between the subject of the message and receivers; which in turn enhanced the believability of message (H2b). From the designed scenarios, those with high vividness provided not only relevant pictures but also concrete examples elaborating on the arguments or the opinions discussed in the text. When receivers read the highly vivid review, it was thus more likely that they would agree with its content (H2a). It was expected that the last message attribute, number of shares, would affect the receivers' perceived credibility and review adoption. Nevertheless, the results suggested that the relationship was not found to be significant. The reason might be that when the receivers were responding to these two dependent variables in the questionnaire, they put more focus on the content of the review, mainly concentrating on the other two message attributes (message balance and vividness) instead of paying attention to number of shares (H3a, H3b).

For moderating role of brand commitment and NFC on message characteristics and perceived credibility as well as review adoption, perceived credibility was found to be different between the high brand commitment group and the low brand commitment group in the scenario when the review was highly balanced, had high vividness, and a high number of shares. This result indicated that brand commitment could strengthen the effect of the message in this scenario on perceived credibility. The results were congruent with those mentioned in [8] in terms of message sidedness. On the other hand, for messages with low balance, low vividness, and a low number of shares, where the perceived credibility was already low, the difference between the two groups was not significant. The receivers with high in brand commitment were much more familiar with the information regarding Windows. Thus, if the information was not well presented, they were more likely to question the content of the review, leading to low perceived credibility (H4b). On review adoption, the result is similar as perceived credibility. However, the low balance, low vividness, and low number of shares message seemed to be less persuasive for both the high and low brand commitment groups (H4a).

It was expected that in the case of receivers who had different levels of NFC, the impact of reviews would not be the same. The results indicated that when reading a message with high message balance, high vividness, and a high number of shares, the perceived credibility for the high NFC receivers was significantly lower than those with low NFC. Similar to [7], audiences did not expect the reviewer to be honest when giving only one-sided comments on the product. The results also indicated that the low NFC group relied more on the characteristics of the message (H5b). On the other hand, the effect of both high balance, high vividness, and high number of shares messages and the low balance, low vividness, and low number of shares messages on review adoption were weakened by NFC. In these two extreme scenarios, receivers with low NFC were more easily persuaded than those with high NFC (H5a).

In an online environment where the majority of information is created anonymously, information quality is usually a concern for information seekers. Receivers tend to look for cues that help them decide if the message is credible. This study proposed that the perceived similarity with the message originator would help the receiver decide whether or not the information was coming from a good source. The results of this study indicated that those who perceived the reviewer as similar to themselves tend to view both the review and reviewer to have higher credibility (H6). This result is consistent with that of prior studies (e.g. [14] [17]).

The credibility of the message has usually been treated as an antecedent of message adoption in many research contexts. In [2], information credibility was shown to have a positive effect on negative e-WOM adoption. This study again proved this that high perceived credibility leads to high review adoption. In other words, the receivers chose to adopt the opinions about Windows 10 where they perceived the review

and reviewer to be credible. This is due to once the receivers believed the content of the review, they tended to be more likely to be persuaded. Eventually, the review helped them decide whether or not they should upgrade their current Windows operating systems to Windows 10 (H7).

This study extends the Yale model to explore the communication process in the online environment and also provides a new combination of message attributes (i.e. number of shares, message balance and vividness) that could be used to describe the presentation of product review articles in the online environment. Although the hypothesis related to one of the attributes (number of shares) was not supported, the other two attributes were found to be important factors. This study again suggested that a highly vivid message could be useful for information delivery. As for message balance, this study supported the stance of the two-sided message which had been found to be inconsistent in many studies. In the context of online product reviews, a two-sided message could be beneficial to receivers' acceptance of information.

This study provides a model that explains the information communication process. The results can be applied in some online communication situations and useful for companies who are interested in how their users or potential users process information regarding the products. The way in which message is written and presented is important for information delivery. According to the results, the audiences were in favor of highly balanced message. Therefore, if a company would like to hire online bloggers to convince their audiences to use a product, it might be better to include both the positive side and some relatively unimportant negative opinions. In addition, the presentation of the message also plays a critical role in the process of information delivery. Consumers tend to believe messages with high levels of vividness where information is presented that contains visual support (e.g. pictures) and concrete arguments (e.g. examples) to help them process information. Companies should be aware of this attribute to help them obtain audience attention toward their messages and allow users to comprehend information more easily. There are some limitations in this study. Firstly, one of the attributes, number of shares, was found to be insignificant. Even though the respondents were able to identify the difference in this attribute in the different scenarios, their responses for perceived credibility and review adoption toward the review with a low number of shares were very similar to the one with a high number of shares. Compared to the other two attributes, message balance and vividness, the number of shares for the respondent might have seemed to be unimportant information in the reviews, and the design of the scenario could not resemble the real situation perfectly. Therefore, future research should design the scenarios more carefully when this attribute is taken into the account in the message characteristics. Secondly, the designed scenarios contained either one-sided (positive) or two-sided reviews of Windows 10. However, in reality, there should be online reviews that only contain negative information about Windows 10. Future studies could investigate and design scenarios that reflect the normal condition that occurs in an online environment.

References available upon request from the author at r48041011@mail.ncku.edu.tw.