How Do Types of Explanation in Online Review Affect Consumers’ Attitude? ——an Experiment Study Based on the Theory of Regulatory Orientation

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How Do Types of Explanation in Online Review Affect Consumers’ Attitude? —— an Experiment Study Based on the Theory of Regulatory Orientation

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Abstract: Online reviews have taken a significant role in consumers’ decision of purchasing. Different from the existing researches which focus more on the usefulness of online reviews, this paper divides consumers into promotion-focused individuals and prevention-focused individuals according to their personality traits based on the regulation orientation theory. And it explores the influence of attitude changing of online explanation types to consumers by experimental research methods. The results show that, the positive and negative explanation type have no significant effect on promotion-focused individuals’ attitude change, that is, negative explanation action have a greater impact on their attitude change when selecting utilitarian product; the positive and negative explanation reaction have no significant effect on their attitude change when selecting hedonic product. The negative explanation type has a greater impact on prevention-focused individuals’ attitude change, that is, the negative explanation action has a greater effect on their attitude change when selecting utilitarian product; the negative explanation reaction has a greater effect on their attitude change when selecting hedonic product. The conclusions can benefit precision marketing and customer relationship management of e-commerce enterprises.

Key words: Online commentary; Interpretation type; Attitude change; Regulation orientation; Experimental research

1. INTRODUCTION

In the context of online shopping, online comments, as an explanation of previous consumers’ behavior and feelings towards the purchase of products or services, can effectively reduce the uncertainty perception of subsequent consumers and serve as an important basis for subsequent consumers to make purchase decisions [1]. Online comments consist of two parts: explanation type and explanation content. The former emphasizes consumers’ behavioral choice or experience, while the latter clarifies the reasons for choosing this behavior or having this feeling [2]. Some scholars have found that, as an important background for understanding the interpretation content, the type of explanation has a greater impact on consumers’ decision-making, and provides a basis for predicting consumers' attitudes towards specific products [3]. Interpretation can improve people's social cognition, increase the degree of understanding of the event, although some scholars are discussed from the point of view of explaining online reviews influence on perceived usefulness [4]. but for online reviews most of the research is still ignored the following points: (1) the existing research focused on users of online comments to explain more content, in fact compared to explain the content, explain the type to predict consumer attitude plays a key role more [5].(2) consumer attitudes is considered effective predictors of behavioral intention [6], perceived usefulness is simply the attitude and behavioral intention of leading factors [7], consumers consider useful comments will not necessarily make the attitude change and influence consumers purchase intention (3) simply regarded as homogeneous is unreasonable. Different consumers have different perceived values for the

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same product, which directly leads to the heterogeneity of demand. The heterogeneity of consumers makes different individuals use different information processing methods to process the same information, resulting in different cognition and attitudes. Therefore, the division of consumer types is very necessary.

As an important factor in predicting consumers' attitudes towards products, the different types of explanation in online reviews are of great significance to the marketing of merchants. Based on this, this study method, through the experiment under the condition of different online comments explain type influence on consumer product attitude, namely: (1) adjusting orientation theory, according to people with the same information when their cognitive ability and the differences in risk appetite, to promote consumers into the crowd and defensive, explore different personality traits of consumers in the face of the interpretation of the same type of comment attitude change effects are the same;(2) according to different product types (search products/experience products), the difference of attitude change between the promoting people and the defensive people when they are faced with positive and negative comments of interpretation types was investigated.

2. THEORETICAL BASIS AND RESEARCH HYPOTHESIS

2.1 Consumer attitude

Attitude was first defined as an individual's response to his own emotions, which is a conscious activity before people take action, and is manifested as an action intention. Rosenberg and Hoveland put forward the three-component theory of attitude, pointing out that attitude is composed of three dimensions of cognition, emotion and intention, each of which can jointly or separately explain consumer attitude and further affect consumer behavior. Ajzen believes that attitude, subjective norms and perceived behavior control are the main indicators to predict consumers' behavioral intentions. The theory of planned behavior also points out that consumers' attitude not only affects their purchase intention, but also their final purchase behavior, which can effectively predict consumer behavior decisions. Hovland constructed an attitude change model with information learning as an intermediary mechanism, which includes four basic elements: persuader, persuasive information, persuasive situation and persuasive object. As an effective predictor of behavioral intention, it is necessary to explore the influencing factors of attitude change. This paper intends to analyze the influence of online comments on the attitude change of consumer products from the perspective of interpretation types.

2.2 Online commentary explaining the impact of type on consumer attitudes

2.2.1 Interpretation types and content

The explanation of behavior is a basic means of social cognition, which has a unique influence on individuals' understanding of the world and prediction of events. Studies have shown that interpretation can influence the persuasive effect, and a large number of explanatory languages can be used as arguments to support evaluation. Online comments, as a kind of explanation, increase the certainty of users' attitude towards the product. With the increase of the certainty of attitude, the attitude is more and more likely to guide the behavior. Previous studies generally regarded online comment expression as a whole without subdivision. In fact, comment expression consists of two parts, namely explanation type and explanation content. Explanation types include explanation behavior and explanation response. If a comment is explaining why the consumer has done something (such as buying, choosing, or using, or processing), then the comment is an explanation behavior. Similarly, if a comment is explaining a consumer's experience (like, love, or anger, hate), it is an explanatory response. The explanation content is the reason for choosing this behavior or having this feeling. See table 1-1.
Table 1.  Comment representation breakdown icon

<table>
<thead>
<tr>
<th>Comment expression</th>
<th>Explanation type</th>
<th>Explanation action</th>
<th>Positive explanation action</th>
<th>Example: &quot;I bought this bag&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Negative explanation action</td>
<td>Example: &quot;I threw this bag&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation reaction</td>
<td>Positive explanation reaction</td>
<td>Example: &quot;I like this bag&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explanation content</td>
<td>Negative explanation reaction</td>
<td>Example: &quot;I hate this bag&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Example: "(because) it has a large capacity and good quality / (because) it has a small capacity and bad quality"

2.2.2 Interpretation types and consumer attitudes

Most previous studies on online comments have not subdivided the comments into subsections, focusing on the explanatory content. However, in fact, interpretation type can more directly predict consumers' attitudes towards products and is more critical in shopping decisions, while interpretation content plays a relatively small role\[5]\,\[16]. Currently account for online reviews type research are rare, not much to explain the types of existing research its focus on the dependent variable is comments usefulness, namely customer perceived usefulness, such as Moore found that explain types (behavior versus response) and product type compatibility between vs. enjoyment (utility), choose when reading comments containing explain behavior and utilitarian products choose pleasure product reading contains explain response comments will add to consumer attitudes, predictability, and increase the likelihood of product selection\[2].

Attitude is an effective predictor of behavioral intention, which is also supported by the technical acceptance model (TAM). Its basic point is that perceived usefulness and perceived ease of use will have an impact on individuals' attitudes towards using target technology, and attitudes will further influence behaviors\[7],\[17]. According to the theory of communication persuasion, persuasion can influence the attitude of the target object in a certain way\[18]. Explanation, however, can affect the persuasive effect, for the reason that interpreting events in explanatory language helps individuals to understand and predict events and behaviors\[2],\[15]. In other words, explanation is more likely to cause a change in consumer attitudes than no explanation. Therefore, in the research on explanatory types, the dependent variable focusing on attitude change can better predict the actual behavior of consumers. However, there is still a lack of research on the relationship between interpretation type and consumer attitude change in the existing literature.

2.3 The effect of regulatory orientation on the role of interpretation types

2.3.1 Effect of regulation orientation

According to the regulation orientation theory first proposed by Higgins, individuals can be divided into two types of regulation orientation according to the difference of motivation orientation when achieving goals, namely, promoting orientation and defending orientation\[19]. Individuals who promote orientation have higher cognitive ability, obvious risk taking tendency, are sensitive to positive information and actively search for information related to benefits. Defense-oriented individuals have low cognitive ability, take a cautious attitude and prefer conservative strategies, are sensitive to negative information and actively search for loss-related information\[20]. The regulation orientation theory has been widely used, but no scholars have considered the heterogeneity of consumers in the study of online comment interpretation types. This study explores the differences in attitudes of consumers with different regulatory orientations in the face of different types of explanatory comments through the classification of consumers' personality traits.

Regulatory orientation has a significant effect on persuasion and consumer buying behavior. In the process of information processing, individuals' cognitive ability and personality traits will affect their final attitude
When faced with different types of comments, consumers with different personality traits pay different attention to information and have different motivations for information processing. In accordance with their behavioral strategy of their own preference, the adjustment matching will be achieved and the corresponding attitude will be generated. Promote the targeted individuals are more sensitive to positive information, adopts exploratory information processing method, preference information search and himself, so to promote consumers, comments on the type contains positive interpretation is more persuasive, explain the type information for a positive match, a larger impact on consumer attitudes. For defensive consumers, comments with negative explanations are more persuasive and attract their attention in line with their conservative and cautious personality traits. They adopt alert strategies and prefer to search for information related to losses. In addition, information of negative explanations can be adjusted and matched to have a greater impact on consumers’ attitudes. Accordingly, we propose the following hypothesis:

Hypothesis 1 (H1): For promoting consumers, compared with comments containing negative interpretation types, comments containing positive interpretation types have a greater impact on changes in consumer attitudes;

Hypothesis 2 (H2): For defensive consumers, comments that include negative interpretation types have a greater impact on changes in consumer attitudes than comments that include positive interpretation types.

2.3.2 Consider different product types

Nelson divided the products into two categories, search-type commodities and experience-type commodities, according to whether consumers can make a judgment on the value of products based on their existing knowledge before purchase. Search-type commodities refer to that consumers can obtain information related to product attributes before purchase by virtue of their own knowledge or third-party channels, such as laptop computers. Experiential goods must be experienced in order to evaluate their attributes, such as clothing. As the nature of the product itself is different, consumers’ search time and effort before purchase are also different. Huang et al. point out that consumers’ purchase of search-type goods involves more extensive search, while consumers’ purchase of experience-type goods involves more in-depth search. The search product attributes (such as price, color, etc.) are objective and easy to diagnose, while the experience product attributes (such as camera usage difficulty) are subjective and difficult to evaluate. Differences in product attributes result in different information processing methods.

When consumers choose and buy search products, they pay more attention to whether the characteristics of the product itself can provide practical value for themselves, and the practical value is expected to be measured by the objective attributes described after others purchase and use. When consumers purchase experience products, they pay more attention to whether the products can satisfy their own enjoyment experience, and the enjoyment value they expect to obtain is measured by subjective evaluation, such as the reaction described by others after using. Studies on the usefulness of comments have also confirmed that comments that explain behavior are more useful for search items, and comments that explain reactions are more useful for experience items. Therefore, we speculate that comments that explain behavior have a greater impact on consumers’ attitudes for search products; For experiences, comments that explain reactions have a greater impact on consumer attitudes. Face information for promotion people when the choice has higher cognitive ability, good at active search for relevant information and explore the relationship between things, so when the face expression of emotion to explain reaction comment, no matter in the face of positive or negative view, tend to attribute the advantages or disadvantages to reviewers subjective factors rather than the product itself. In combination with the influence of H1 and H2 on consumers’ regulation of orientation, when consumers are promotive personality traits, we propose the following hypothesis:

Hypothesis 1a (H1a): For search items, comments that include positive explanatory behaviors have a
greater impact on changes in consumer attitudes than comments that include negative explanatory behaviors;

Hypothesis 1b (H1b): For experiential products, there is no difference in the impact of changes in consumer attitudes on comments containing positive explanatory responses and comments containing negative explanatory responses.

When consumers are defensive personality traits, we make assumptions:

Hypothesis 2a (H2a): For search items, comments containing negative explanatory behaviors have a greater impact on changes in consumer attitudes than comments containing positive explanatory behaviors;

Hypothesis 2b (H2b): For experiential products, comments containing negative explanatory responses have a greater impact on changes in consumer attitudes than comments containing positive explanatory responses.

The research model is shown in Figure 1.

![Research Model Diagram](image)

Figure 1. Research Model

3. EXPERIMENTAL STUDY

3.1 Experimental Materials

As the main force of online shopping, college students can reduce the influence of age, educational background and other demographic variables on the experiment, and they are familiar with search engines and online shopping. This study selects college students as the experimental subjects. In the selection of experimental objects, because college students know more about computers and have certain needs, they choose computers as search objects. In order to avoid the influence of gender factors on the selection of goods, the experience products choose neutral running shoes. At the same time, in order to prevent the subjects' preference or bias towards a certain product, the real name of the experimental object was concealed in the experiment, and only the picture, price, parameters and other information of the commodity were given.

In the measurement of variables, both the initial attitude and the final attitude refer to Stayman and Bartra's likert7-point scale [24], including 9 items. Trait Yao Qi and adjust directional questionnaire reference guo-an yue modified questionnaire [25], according to the consumer itself characteristics were divided into promote directional and defensive orientation, each topic adopt 5 points, including six topics used to measure the promotion orientation, the questionnaire also included age, sex, whether to have online shopping experience, and whether the reference review information such as online shopping.
In order to investigate the change of consumers’ attitude, the experiment was divided into two parts: pre-test and post-test. Pretest according to different types of products, measured search product (computer) group and experience (running shoes) of the initial attitude, after the test, according to the different types of groups for further comment, which is divided into four groups, followed by interpretation of positive behavior group (computer) and positive reaction group (running shoes), negative explain behavior (computer), negative interpretation reaction group (running shoes), one and two groups, three groups and four groups explain content part are exactly the same, reviews the difference of expression is limited to explain different types. Participants were randomly assigned to one of the four groups, read the different comments, and then filled out the attitude scale. In addition to measuring the initial attitude, the pretest also distinguished the trait adjustment tendency of each group.

This study with the method of laboratory experiment, a total of 352 college students as subjects, invited by the time interval of two weeks of two orientation attitude scale before and after the complete measurement, to measure the attitude of the subjects to change. The experimental design of before and after test can effectively control the interference of product and other relevant information on the experimental results, and ensure that the difference in consumers’ attitude towards products is entirely caused by the difference in comments. Finally, 319 valid questionnaires were used for user measurement. Among them, 153 were male, accounting for 48%. The average age of the subjects was 20.41 years old. In addition, the pretest attitudes of each group were worth 4.14, indicating that the subjects had a neutral attitude towards the commodities at the beginning.

3.2 Data processing and analysis

3.2.1 Reliability and validity test

The alpha value and KMO value of the front and back attitudes are above 0.9, the alpha value and KMO value of the adjusted vector table are also greater than 0.7, and the sig value of the Bartlett sphere test is 0.000, indicating that the data is suitable for factor analysis. The degree of interpretation is high, and the data has a good level of validity.

3.2.2 Hypothesis test results

<table>
<thead>
<tr>
<th>Table 2. Test results of experimental data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanation type</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td><strong>Promote orientation</strong></td>
</tr>
<tr>
<td>Positive review</td>
</tr>
<tr>
<td>Negative review</td>
</tr>
<tr>
<td>ANOVA analysis</td>
</tr>
<tr>
<td><strong>Defensive orientation</strong></td>
</tr>
<tr>
<td>Positive review</td>
</tr>
<tr>
<td>Negative review</td>
</tr>
<tr>
<td>ANOVA analysis</td>
</tr>
</tbody>
</table>
Univariate analysis of variance was used to test whether the difference in attitudes between groups was significant. The specific test results are shown in Table 2.

As shown in Figure 2, for promoting consumers, there is no significant difference in the amount of attitude change between positive interpretation type groups and negative interpretation type groups (F = 3.347, p = 0.069). For promoted consumers, when the product is a search product (computer), there is a significant difference in the amount of consumer attitude change between the positive and negative interpretation behavior groups (F = 4.236, p = 0.043). The amount of change in attitude is greater than the positive interpretation behavior group, which is contrary to our hypothesis that H1a holds; when the product is an experience product (running shoes), there is no difference in the amount of change in consumer attitude between the positive interpretation reaction group and the negative interpretation reaction group. Significantly (F = 0.097, p = 0.756), H1b holds.

As shown in Figure 3, for defensive consumers, there is a significant difference in the amount of consumer attitude change between the positive interpretation type group and the negative interpretation type group (F = 15.859, p = 0.000), that is, H2 holds. For defensive consumers, when the product is a search product (computer), there is a significant difference in the amount of consumer attitude change between the positive and negative interpretative behavior groups (F = 4.483, p = 0.038), and the attitude of the negative interpretive behavior group is different. The amount of change is greater than the positive interpretation behavior group, H2a is established; when the product is an experience product (running shoes), there is a significant difference in consumer attitude change between the positive interpretation reaction group and the negative interpretation reaction group (F = 11.666, p = 0.001), and The amount of attitude change in the negative interpretation response group was greater than that in the positive interpretation response group, and H2b was established.
3.2.3 Interactive analysis based on product type

![Interactive Diagram of Search Group Regulation Orientation and Interpretation Behavior](image)

Figure 4. Interaction Diagram of Search Group Regulation Orientation and Interpretation Behavior

An ANOVA analysis of 2 (regulated orientation: promotion / defense) × 2 (explanatory behavior: positive behavior / negative behavior) was performed on the data of the search item (computer) group, as shown in Figure 4. The results show that: (1) the main effect of regulating orientation is not significant, that is, when consumers choose search products, the difference in the attitude of consumers who promote orientation and defense orientation is not significant (F (1,81) = 0.008, η² = 0.000, p = 0.929) (2) The main effect of interpretive behavior is significant, that is, when consumers choose search items, there is a significant difference in the amount of attitude change between reading reviews that contain positive interpretive behavior and reading reviews that contain negative interpretive behavior, and reading contains negative The amount of attitude change was higher when interpreting behavioral comments (F (1,81) = 8.727, η² = 0.053, p = 0.004) (3) The interaction between regulation orientation and explanatory behavior was not significant (F (1,81) = 0.135, η² = 0.001, p = 0.713), that is, for search products, the interaction between the adjustment of orientation and explanatory behavior has no significant effect on the amount of change in consumer attitudes.

![Interaction diagram of experiential group regulation orientation and interpretation response](image)

Figure 5. Interaction diagram of experiential group regulation orientation and interpretation response

The ANOVA analysis of the data of the experience product (running shoes) group is 2 (regulation orientation: promotion / defense) × 2 (explanation response: positive response / negative response), as shown in Figure 5. The results show that: (1) the main effect of regulating orientation is not significant, that is, when consumers choose experiential products, there is no significant difference in the amount of changes in consumer attitudes that promote orientation and defense orientation (F (1,83) = 0.266, η² = 0.002, p = 0.607) (2) The main effect of interpretation response is significant, that is, when consumers choose experience products, there is a significant difference in attitude change between reading reviews with positive explanation reactions and reading reviews with negative explanation reactions, and reading contains negative The amount of change in...
attitude was higher when interpreting response comments ($F (1,83) = 9.459, \eta^2 = 0.057, p = 0.002$) (3).

Significant interaction between modulating orientation and interpretive response ($F (1,83) = 6.721, \eta^2 = 0.041, p = 0.010$), that is, when consumers choose experiential products, the attitude change of defensively oriented individuals when reading negative review comments is significantly higher than when they read positive explanation response comments. The amount of change in attitudes between individuals who read comments with positive and negative comments was not significantly different for individuals who promoted orientation.

4. RESEARCH CONCLUSIONS AND DISCUSSIONS

4.1 Research conclusions

The experimental results show that, for potential consumers, there is no significant difference in the impact of positive explanatory comments and negative explanatory comments on the amount of change in consumers' attitudes. To be specific, when promoting consumers choose search items, the impact of negative explanatory behavior in comments on the amount of change in consumers' attitude is significantly higher than that of positive explanatory behavior, which is contrary to our hypothesis. Although promote the personality of the individual information more open and inclusive, and preference income characteristics make them more sensitive to positive information, but when selecting the search product, negative comments objectively explain behavior, strong show the disadvantages of the product, product search properties make it easier for individuals to these shortcomings, lack of due to the product itself, even if the individual shortcomings more tolerance, also cannot ignore after choose products is expected to bring their losses. There was no significant difference in the impact of positive and negative explanatory comments on the amount of change in consumers' attitudes when they chose the experience. Consumer experience product itself ambiguous characteristics make it difficult to make objective evaluation, promoting consumption individuals with higher cognitive ability, is good at through own efforts to take the initiative to find the deep relationship between things, in the face of negative interpretation reaction comment because of the experience of product attributes are more inclined to the subjective attributes these deficiencies to reviewers itself. For defensive consumers, whether they choose the search product or the experience product, the cautious and conservative thinking characteristics and the low cognitive processing mode of information will make the negative interpretation comments have a greater impact on their attitude.

4.2 Research contribution and prospect

The theoretical contribution of this paper is mainly reflected in the following aspects: first, existing studies generally regard online comment expression as a whole, mainly focusing on the textual and quantitative characteristics of comments. Firstly, this paper divides the comment expression into two parts: explanation type and explanation content, explores the influence of explanation type on consumers’ attitude under different conditions, and enriches the research on online comment. Secondly, consumers have heterogeneity, that is, individuals with different personality traits will adopt different ways of information processing when faced with the same information, thus resulting in different attitudes. Based on this, the adjustment orientation theory is introduced in the experiment, and the attitude change differences between the corresponding comment interpretation types to the promoting and defensive individuals are explored respectively for different commodity types. Research on interpretation types has found that defensive individuals still maintain their negative preferences, while the cognitive focus of promotive individuals varies with the processing of different information. This paper not only expands the research of regulation orientation theory in the field of consumer behavior, but also deepens the exploration of consumer attitude from the perspective of comment interpretation type.

In practice, different measures should be taken according to the type of products sold. For search product
sellers, needed to pay attention to the potential consumer groups is to promote personality or defensive personality, just need to know the negative comments to explain behavior of consumer attitudes influence is very big, this may be because contain explain behavior made the credibility of the review itself more and more convincing, more evident objective attributes, just can make huge consumer attitudes change. Therefore, search product e-commerce enterprises should always pay attention to the appearance of negative explanation behavior comments, and communicate with the reviewers in time to understand the reasons and properly deal with them. Otherwise, potential consumers will have a strong negative attitude and affect their purchase behavior. For sellers of experience products, the personality traits of potential consumers need to be distinguished. There was no difference in the impact of positive and negative explanatory comments on the attitude of individuals promoting orientation. For defense-oriented individuals, comments with negative explanatory reactions had a greater impact on consumer attitudes than comments with positive explanatory reactions. Therefore, the experience product sellers should pay more attention to the defensive potential consumer groups and take active measures to curb the impact of previous negative comments on subsequent consumer attitudes.

According to the theory of three ingredients attitude, attitude can be further divided into cognition, emotion and behavior intention, this paper studies the results showed that under different conditions explain types will have different effects on consumer attitudes, but did not explore the specific happens is a change in the attitude of what kind of ingredients, can be in the future from this perspective, explore the role of different explanation attitude to each component. Second in this study, overall positive attitude change quantity less than the change of the negative attitude, suggesting that some of the consumer is in after reading the positive explanation type of comment form compared to the attitude of the initial attitude instead of reduced, we explore the reasons for this phenomenon is nothing, future research can be perfect, and to explain the causes of the formation of different attitude.

ACKNOWLEDGEMENT
This research was supported by the National Natural Science Foundation of China under Grant 71774101.

REFERENCES


