



A Study on the Impact of “Management Myopia” on Consumer Empathy—Based on Gym-Based E-Commerce Promotion Text Analysis

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Abstract. Short-sightedism shows that managers are more inclined to the interests that can be satisfied at the moment. Under the influence of innate and acquired, managers will transmit this characteristic to consumers through promotion methods. Short-sighted features will be fully reflected in e-commerce texts. Based on text analysis, we collect and process gym e-commerce texts in Dongguan. We find that direct and indirect words with short-sighted features frequently appear. After consumers communicate interactively based on e-commerce texts, the direct words of short-sighted features have little effect on consumers’ attitudes, cognition and behavior, while the indirect words of short-sighted features have little effect on consumers’ attitudes, cognition and behavior. Has a significant impact and gained the establishment of consumer empathy.

Keywords: Management Myopia · Consumer Empathy · E-Commerce Promotion · Text Analysis

1 Introduction

People are increasingly paying attention to their health by taking advantage of leisure time for physical exercise. The equipment in the gym is complete and there are professional guidance, so people start to choose a large number of gyms for exercise, which provides a lot of market opportunities for gym operations. Gym managers also promote to consumers through various channels, among which e-commerce platforms and mobile terminals have become one of the main ways, and a large number of promotional texts have emerged on e-commerce platforms and mobile terminals. The content of e-commerce promotion texts is drawn up by gym managers, projecting managers’ comprehensive cognition of health, exercise and consumer needs. So, whether the gym’s pursuit of short-term business effects can gain empathy from consumers is worth exploring.

2 Concept and Theory Overview

2.1 Management of Myopicism

Time orientation is not only considered to be an innate, stable personal trait and sub-conscious process, but it is also influenced by the acquired environment. Different time orientations of people determine how to choose and pursue goals, which in turn affects people’s cognition, emotion and behavior. Managerial myopia originated from the time-oriented theory of social psychology, which means that managers have a short decision-making horizon, and managers are more inclined to pay attention to the interests that can be satisfied immediately than to focus on the future development of the enterprise. Managerial myopia reflects the personal characteristics of managers’ perception of time, and managers’ perceptions and characteristics affect managers’ behavior and strategic choices, which in turn affect organizational behavior and results. Therefore, when market opportunities arise and the organization’s short-term performance requires, managers’ external promotion behavior is bound to be affected by short-termism. Under the short-term frame decision-making, the promotion content must also have short-term preferences.

2.2 Consumer Empathy

If the purpose of the promotion text as a means is to align the needs and emotions of different subjects of manufacturers and consumers, then empathy is one of the results achieved by the means. Clair. Brooks (2019) systematically expounded the method of gaining insight into consumers and quickly establishing empathy with consumers, proposing that insight representatives describe their unmet needs in the language consumers are used to, and the essence of insight is to establish a shared relationship with consumers. Affection. Empathy is the emotional response of a subject based on an understanding of another subject’s emotional state that is equal to or similar to what others are experiencing or may experience. At present, most researchers divide empathy into emotional empathy and cognitive empathy. Empathy is regarded as a kind of emotional experience, emotional processing and decision-making that occurs in social situations. Hein & Singar (2008) pointed out that with the help of the Internet, big data, scene experience technology and new marketing methods, the emotional memory of both parties, including explicit memory and implicit memory, mobilized customers’ physical feelings and emotions, and formed body marks. Therefore, under the background that e-commerce and mobile terminals are widely used by manufacturers, consumer empathy has become the main purpose of text promotion on electronic platforms, which ultimately leads to long-term purchase and loyalty of customers [2].

2.3 E-Commerce Text Analysis

Ahmed M, Chen Q, & Li ZH (2020) pointed out that e-commerce text analysis can obtain people’s opinions, opinions, attitudes and emotions by analyzing text, audio and images, which are usually divided into three levels: document, sentence and keyword The sentiment analysis of documents and sentences can determine the sentiment tendency of

documents and sentences, and the analysis of keywords is a more fine-grained sentiment classification for objects or entities in the corpus. With the help of the e-commerce promotion process, manufacturers obtain data in the process of text-based interactive communication, and then understand the quality, word-of-mouth and user satisfaction of consumer review objects, conduct user portraits through user behavior, and calculate user needs and preferences. Users provide personalized recommendations [1].

The e-commerce promotion content formed under the management of shortsightedness will precipitate a large amount of text material through interactive and dynamic communication. The content of the text reflects consumers' opinions and evaluations on products and services, and represents the real emotions of consumers. With the help of text analysis method, it is a scientific test and research path to test whether the promotion text formed by management myopia can achieve consumer empathy.

3 Study Design

3.1 Sample Selection and Data Sources

Through the collection of major online platforms and APPs in Dongguan, this article collects the online promotion texts of various gyms in Dongguan in the two years of 2020–2021. The text content includes: promotion text, business platform messages and evaluations, platform business consultation, after-sales service dialogue texts, and comments in relevant communities. Based on special dictionaries such as the Chinese general dictionary Jieba and the HowNet dictionary HowNet, and stop words are removed, so as to convert the unstructured text data into word vectors for storage. Calculate the word frequency of the word set corresponding to the manager's shortsightedness indicator. From the website of Dongguan Statistics Bureau and gym operation data. Exclude the observation values of related indicators of gym operation with a business cycle of less than 3 months. Eliminate some missing values.

3.2 Variable Measurement

Managerial myopia. Pennebaker et al. (2003) pointed out that human traits are captured by analyzing the word types and word frequencies used in the subject's language. For

Table 1. Shortsighted words for gym managers.

Category	Word Name	Category	Word Name
Direct class	day	indirect class	break
	High-efficiency		fat burning for weeks
	short		release
	pressure now		results
	quick		Say goodbye
	perfect		shape

example, the more emphasis on words such as “past” and “past” in a person’s language, it reflects that he pays more attention to the past; the more emphasis on words such as “future” and “will” in a person’s language, it reflects that he pays more attention to the future.

Develop a set of seed words related to shortsightedness of gym managers, including two categories: direct and indirect. This paper uses the CBOW model in Word2Vec to train the collected gym promotion text corpus. Based on the dictionary method, this paper calculates the proportion of the total word frequency of the “short-term horizon” vocabulary to the total word frequency, and multiplies it by 100 to obtain the manager’s short-sightedness indicator. The larger the value of this indicator, the more short-sighted the manager is. CBow model:

$$\max \sum_{w \in C} \log(f(w \text{ context}(w))) \tag{1}$$

Through the data in Table 1, gym managers highlight words such as “weeks”, “quick”, and “immediately” in the promotion text content to establish consumers’ short-term benefit expectations; among indirect words, through “Breakthrough”, “efficient fat burning”, “shaping” and other words related to fitness effect shape consumers’ expectations of fitness effect. Consumer empathy. This paper constructs a measure of consumer empathy by collecting textual data reflecting consumer attitudes and opinions. Collect the consumer evaluation indicators below the e-commerce promotion text of the gym. The text evaluation on the e-commerce platform and APP adopts a 1–5 incremental evaluation. [3], The higher the score, the higher the consumer’s recognition of the text. By collecting the likes value below the text, the calculation formula is: (number of likes/total number of comments) * 100. The number of clicks on the promotion text of the gym. The number of promotional texts forwarded. The above five indicators serve as the main dimensions of consumer empathy measurement.

3.3 Model Design

By setting the manager’s short-sightedness indicator as the dependent variable and consumer empathy as the independent variable, a measurement model was constructed. The

Table 2. Indicators for each variable.

<i>Matter</i>	Days	Weeks	Short	Fast	Immediately	Perfection
<i>Days</i>	1	.571**	.598**	.684**	.730**	.461**
<i>Weeks</i>		1	.445**	.301**	.439**	.285**
<i>Short</i>			1	.626*	.630*	.690**
<i>Fast</i>				1	.278**	.502**
<i>Immediately</i>					1	.339**
<i>Perfection</i>						1

** indicates a significance level of 0.01

* indicates a significance level of 0.05

variables are described in Table 2. The collected data were tested against the following regression models, and relevant conclusions were drawn by analyzing the relationship of each variable.

$$Y1 = a1 * x1 + a2 * x2 + a3 * x3 + a4 * x4 + a5 * x5 + b \quad (2)$$

$$Y2 = a1 * x1 + a2 * x2 + a3 * x3 + a4 * x4 + a5 * x5 + b \quad (3)$$

4 Model Results and Analysis

4.1 Descriptive Statistics

As shown in the descriptive statistics table in Table 3, the average value of direct indicators of managerial myopia is 172, and the average value of indirect indicators is 17.7. Therefore, we can draw a preliminary conclusion: among the two types of words that gym promotion texts shape consumers' expectations, and effect words are weaker than time words. From the perspective of consumers' acceptance of e-commerce texts, more consumers click and forward texts, but directly reveal the content of evaluation emotions, such as likes, evaluation indicators and so on [4].

4.2 Correlation Analysis

As shown in Table 4 and Table 5, the direct and indirect indicators of managerial shortsightedness are analyzed by the correlation coefficient, and there is a correlation between the variables, which are significant at the 0.01 and 0.05 levels, respectively. As shown in Table 6, the variables of consumer empathy are analyzed by the correlation coefficient, and there is a correlation between the variables, which are significant at the 0.01 and 0.05 levels, respectively.

Table 3. Descriptive statistics table

Managerial shortsightedness (dependent variable Y)	Direct class indicator measure (Y1)
	Indirect class indicator measure (Y2)
Consumer empathy (independent variable X)	Consumer evaluation (x1)
	Like value (x2)
	Link Click (x3)
	Number of text clicks (x4)
	Number of text forwards (x5)

Table 4. Correlation coefficients of various indicators of consumer empathy.

<i>Variable name</i>	Number of observation	Average value	Standard deviation
<i>Direct Class Indicators (Y1)</i>	413	172	21.2
<i>Indirect index (Y2)</i>	413	17.7	4.9
<i>Consumer evaluation (X1)</i>	413	3.23	0.74
<i>‘Likes’ value (X2)</i>	413	14.32	3.024
<i>Link click (X3)</i>	413	7.2	0.22
<i>Number of text ‘likes’ (X4)</i>	413	51.66	6.59
<i>Number of text forwarded (X5)</i>	413	22.25	1.227

Table 5. Correlation coefficients of indirect indicators.

<i>Matter</i>	Consumer evaluation (X1)	Likes’ value (X2)	Link click (X3)	Text clicks (X4)	Text forwarded (X5)
<i>Consumer evaluation (X1)</i>	1	288.**	.421*	.511**	.448*
<i>Likes value (X2)</i>		1	.533*	.309*	.332**
<i>Link click (X3)</i>			1	.381**	.539**
<i>Text clicks (X4)</i>				1	.478*
<i>Text forwarded (X5)</i>					1

**.*indicates a significance level of 0.01*

*.*indicates a significance level of 0.05*

4.3 Model Results Analys

Statistical analysis was performed on the two regression models through SPSS 20.0, and the analysis data were obtained, as shown in Table 7. In the model with direct index as the dependent variable, text clicks have the greatest impact on managers’ short-sighted direct index, with a coefficient of 1.344, while link clicks have the least impact, with a coefficient of 0.115. This shows that a large number of consumers read the promotion text of gym e-commerce, the time element in the promotion text has not been well

Table 6. Correlation coefficients of various indicators of consumer empathy.

<i>Matter</i>	Breakthrough	Efficient fat burning	Pressure relief	Effective	Farewell	Plasticity
<i>Breakthrough</i>	1	.433**	.406**	.244**	.507**	.331**
<i>Efficient fat burning</i>		1	.351**	.287**	.349**	.430*
<i>Pressure relief</i>			1	.371**	.416**	.405**
<i>Effective</i>				1	.311**	.356**
<i>Farewell</i>					1	.227**
<i>Plasticity</i>						1

** indicates a significance level of 0.01

* indicates a significance level of 0.05

Table 7. The analysis data were obtained.

Model1 (Direct Class Indicators)	Standardization Coefficient	T	Significant
Constant	-0.256	10.559	0.018
Consumer evaluation (X1)	0.192	0.804	0.023
'Likes' value (X2)	0.204	0.034	0.043
Link click (X3)	0.115	0.197	0.041
Number of text clicks (X4)	1.344	0.369	0.014
Number of text forwarded (X5)	0.717	0.239	0.012
Model2 (Indirect index)	Standardization Coefficient	T	Significant
constant	4.105	-1.452	0.015
Consumer evaluation (X1)	0.289	1.295	0.019
Likes' value (X2)	1.197	1.67	0.008
Link click (X3)	0.659	0.921	0.031
Number of text clicks (X4)	0.462	0.894	0.037
Number of text forwarded (X5)	0.117	1.239	0.028

recognized. It shows that the short-term word descriptions used by gym managers in e-commerce texts have not been well recognized by consumers with empathy.

In the model with indirect indicators as the dependent variable, the text like value has the greatest impact on the manager's short-sighted direct indicator, with a coefficient of 1.197, while the least impact is the number of text retweets, with a coefficient of 0.117.

This shows that: consumers pay more attention to the effect in the promotion text of the gym, they adopt the attitude of approval more. Gym managers have won the approval of consumers with empathy in the promotion of the effect.

5 Conclusion and Future Outlook

5.1 Managing the Relationship Between Short-Sighted Direct Words and Consumer Empathy

Direct words that manage short-sightedness have low salience for consumer empathy relationships through text analysis methods. Through the analysis of the model, although consumers have expected judgments about the fitness effect, the gym managers' judgment of the fitness effect time given does not conform to the consumers' own cognition. Therefore, although words such as “short”, “weeks” and “immediately” are used in e-commerce promotion texts, consumers' recognition is not high [5].

5.2 Manage the Relationship Between Short-Sighted Indirect Words and Consumer Empathy

In the model analysis, we found that gym managers use words related to fitness effects in e-commerce promotion texts, which can significantly change consumer attitudes, cognitions and behaviors, and in interactive communication, gain consumers recognition. Therefore, we believe that consumers are more focused on the fitness effect words in e-commerce texts than the words on the time when the fitness effect is achieved. Under the promotion of fitness effect words, it can also gain consumers' empathy.

5.3 Manage the Connection Between Direct and Indirect Words of Short-Sightedness

This article adopts the method of word segmentation, the e-commerce text promoted by gym e-commerce is to use the two closely. Therefore, in the process of word segmentation, this paper divides the two into two categories: direct words and indirect words.

5.4 Manage the Degree of Distinction Between Direct and Indirect Words of Short-Sightedness

After distinguishing between direct words and indirect words, this paper finds that indirect words in gym e-commerce promotion texts are the core content, that is, the absence of direct words in indirect words will not lose language meaning. Therefore, the direct words and indirect words that manage short-sightedness in this paper can be well distinguished in the word segmentation process, and consumers can also identify them in the e-commerce promotion text.

5.5 Managing the Relationship Between Myopicism and Consumer Empathy

As shown above, managing myopia affects consumer empathy in this article through both direct and indirect terms. However, the degree of influence of direct words is not obvious, because the fitness effect is an indirect word and can be independent of direct words. On the one hand, it shows that management myopia does affect consumers' empathy relationship through indirect words. Finally, the thesaurus of text analysis first originated from Western English, and the language expression of Chinese is more complex. In the future, the construction of the Chinese language thesaurus, especially the professional Chinese thesaurus in the consumer field is one of the key directions of the research [6].

Acknowledgements. This paper is sponsored by the project: the first batch of the 2021 school-level teaching quality and teaching reform project “Guangdong University of Science and Technology - Jinmei Science and Technology Integration Practice Teaching Base”, GKZLGC2021003; Guangdong Province Philosophy and Social Science Planning 2021 General Project “Research on the Impact of Metaphors in E-commerce Text Language on Consumer Empathy--Analysis Based on Pearl River Delta Enterprises”, GD21CGL07.

References

1. Ahmed.M.,Chen.Q. and Li.Z.H.(2020), Constructing Domain-Dependent Sentiment Dictionary for Sentiment Analysis[J].*NeuralComputing and Applications*, 32(18): 14719–14732.
2. Damon.W, Lerner.R. M. & Eisenberg.N.(2006), *Handbook of Child Psychology: Social, Emotional, and Personality Developmen*, New Jersey: John Wiley & Sons.,Vol. 3, 6th ed .
3. Hambrick.D. C. andA.Mason. P.(1984), Upper Echelons: The Organization as a Reflection of Its Top Manager, *Academy of Management Review*, Vol.9, pp193–206.
4. Hein .G.&Singer .T(2020), I feel how you feel but not always: The empathic brain and its modulation, *Current Opinion in Neurobiology*, 18, pp153–158.
5. Laverty.K.J.(1996), Economic ‘Short-Termism’: The Debate, the Unresolved Issues and theImplications for Management Practice and Researc, *Academy of Management Review*, Vol.21,pp825–860.
6. Pennebaker.J.W,Mehl.M.R.and.Niederhoffer.K.G.(2020),Psychological Aspects of Natural Language Use: Our Words, Our Selve, *Annual Review of Psychology*, Vol.54, pp547–577.

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