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An Analysis of Linguistics Patterns in Online Product or Service Reviews and their Influence on Customer Behavior

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Abstract: *In this digital era, people share views, experiences, and issues about online products with others. It is the same case with the online customer; customers read and discuss everything about the target product through different websites created by the companies or site pages. Customer reviews are critical in this age. Numerous studies have been attempted regarding customer reviews of online product services. Still, significantly fewer steps are taken to improve the deficiency related to customer reviews. This study analyzes online product and service reviews by applying linguistic pattern analysis to identify customer needs. Combining context information extracted from the reviews with details about the products and services, a semantic embedding method is used to capture these needs effectively. This research represents an early effort to integrate insights from customer reviews with their underlying expectations. The proposed approach offers valuable potential for understanding online customer feedback on specific products and services.*

Key Words: Linguistics Pattern, Online Product, Service Reviews, Customer Behavior

Introduction

Linguistic patterns are the patterns of language that show the formation of words in a language. Some elements of language are used to form language patterns, such as phonology, morphology, semantics, and syntax. Language patterns can help to improve communication as language is resized when a person is communicating with others. Nowadays, in language patterns, not only do words have importance rather, but emojis, clapping modes, and musical patterns are also used.

Linguistic patterns are essential in society as the words spoken influence them. So, these words give potential and are attractive to others. The writing pattern of a language has different impacts, such as the cloud-style of words attracting online customers. Online customer reviews can affect the bottom line of the products. Positive perception can generate more sales for your brand. Even raising your stars' emojis or good patterns increases your revenue. Reviews of online customers can increase or decrease your product demands. According to the 35th Statistical Report on China Internet Network Development (CNNIC, 2015), the transaction volume in China's online shopping market reached 691.41 billion RMB. Within this, the B2C sector comprised 44.2% of the market, with shopping malls contributing nearly 60% of B2C transactions. Meanwhile, the C2C sector continues to cater to diverse and personalized customer demands and is expected to maintain steady growth in the coming years. In this digital era, service reviews have become much more significant because today, customers use online purchasing to sell products. It is necessary to be positive service and their influence on customer behavior. Customer reviews or behavior are critical because today, customers are much more conscious about purchasing anything and rely on product reviews. Online customer behavior about products has a significant influence. In addition, the customer's behavior and influence depend on the seller's linguistics pattern. Linguistic patterns are substantial in online marking. In comparison, they emphasize linguistics patterns and customer reviews in which linguistics elements, such as tone, sentiment, and language style, contribute to shopping centers'

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perceptions and choices. Online product reviews play an essential role as they provide customers with product choices and are one of the most common ways consumers share their experiences and expectations about products (Ali 2020). These customer reviews help minimize the risk of buying unsuitable or unsatisfactory products (Zhang et al., 2016).

Linguistic patterns refer to how language is formed and used, involving aspects such as sounds, word structure, meaning, and sentence construction. These patterns are essential for effective communication and help individuals express themselves more clearly. In today's digital communication, the language we use extends beyond words—it includes symbols like emojis, clapping icons, and musical elements, all of which contribute to the tone and clarity of messages. Language has a powerful influence on people, and the way something is written or spoken can significantly impact how it's received. For example, visually appealing arrangements of words, such as word clouds, can capture attention in online content. In the context of product reviews, how language is used can directly affect how a product is perceived. Positive expressions or even favorable emojis can increase interest in a product and boost sales. Customer reviews play a vital role in shaping public opinion about a product or service. According to a 2015 report by CNNIC, online shopping in China reached a massive scale, and reviews became a key factor in consumer decisions. As online marketplaces continue to grow, understanding how language influences customer behavior becomes increasingly important. The words people choose in their reviews—especially their tone and clarity—can shape buying decisions, making linguistic patterns a powerful tool in online marketing.

Additionally, online reviews often contain contextual details and product-specific information. In this context, customer needs identified from online reviews are essential for driving innovation in marketing strategies and maintaining a competitive advantage. Zhang et al. 2016 illustrated this with the example of Huawei phones, demonstrating how product features were defined and how sentiment analysis offered suggestions for product improvements. In today's digital marketplace, customer reviews have emerged as one of the most powerful tools influencing consumer behavior. With the proliferation of e-commerce platforms and online retail spaces, the accessibility and visibility of customer feedback have reshaped the dynamics of purchase decisions (Chevalier & Mayzlin, 2006). Unlike traditional word-of-mouth, online reviews offer a broader reach and an enduring presence, allowing potential buyers to gauge product performance and reliability before making a commitment (Dellarocas, 2003). The Echo Show, a flagship smart device from Amazon, exemplifies how online reviews can impact product reputation and sales. As a multifunctional smart speaker with a display, it appeals to a diverse audience, and its success has been partly attributed to the volume and tone of customer reviews available online. Customer reviews serve a dual purpose: they detail the technical features of products and offer valuable insight into user satisfaction. These investigations often uncover linguistic patterns that exhibit intense client emotions and preferences, indicating a profound level of awareness (Mudambi & Schuff, 2010). The language used in customer reviews, which merges factual details with intense emotions, significantly impacts potential buyers' purchasing decisions. The use of terms such as "love," "excellent," and "disappointing" can influence the perceived value and quality of an object or experience (Pang & Lee, 2008). Specific forms of language, including imperatives (e.g., "purchase this immediately!") and declarative assertions (e.g., "The display is exceptionally clear"), communicate confidence and reliability essential for fostering consumer trust (Archak, Ghose, & Ipeirotis, 2011). A prevalent method for gauging individuals' perspectives on their statements is sentiment analysis. Researchers can analyze emotional responses using three categories: positive, negative, and neutral (Liu, 2012). This research demonstrates correlations between emotional content in reviews, customer retention (Chen & Xie, 2008), and product sales. Theme analysis can discover not just core emotions but also the most significant recurring issues for consumers. Typically, people assess the Echo Show based on its usefulness, customization options, audio and visual quality, and its compatibility with other smart devices. By detecting these persistent trends, firms can improve customer happiness and optimize feature performance (Zhan et al., 2009). A primary concern is the reliability of evaluations. Inaccurate or biased reviews can skew public perception and undermine trust in both the website and the product. Researchers, including Luca and Zervas (2016), have examined the financial repercussions of fraudulent reviews, hence underscoring the necessity for stringent control measures to preserve review integrity. Customer feedback serves as a form of validation from peers for individuals. Narratives of favorable experiences from others may alleviate the apprehensions of individuals who are not prepared to purchase or influence others to do so (Cialdini, 2001). This trend becomes increasingly

apparent in digital contexts, where peer endorsements may surpass traditional advertising methods in effectiveness (Smith, Menon, & Sivakumar, 2005). Reviews can impact decision-making through emotional cues, repetition, framing, and balanced arguments that engage both logic and emotion (Petty & Cacioppo, 1986). The expression and understanding of online evaluations are influenced by cultural and demographic factors. Cultural differences in language, emotional expressiveness, and faith in digital content can influence review impressions (Tsao, et al., 2015). Multinational corporations must comprehend these distinctions to create effective client engagement strategies. Visual elements, such as images and videos, in assessments, enhance trust by offering direct evidence of product performance. Consumer expectations have been significantly influenced by visuals emphasizing the Echo Show's intelligent functionalities and display quality (Flanagin et al., 2014). On digital platforms, interactive components such as comment sections, helpfulness ratings, and reviewer rankings significantly affect the perception and visibility of reviews. Positive assessments typically exhibit greater visibility and can substantially influence purchasing decisions (Forman, et al., 2008).

In conclusion, research at the intersection of linguistics, consumer psychology, and digital marketing underscores the influential role of customer reviews in shaping market behavior. The Echo Show exemplifies how user-generated content reflects real experiences while actively influencing purchasing patterns. As e-commerce continues to expand, understanding the underlying mechanisms of customer reviews remains essential for businesses aiming to stay competitive. Furthermore, a table presented in the study Context-Aware Customer Needs Identification by Linguistics Pattern Mining on Online Product Reviews summarizes analytical techniques and findings related to online consumer feedback. Typically, online reviews encompass both praise and criticism of products available on e-commerce platforms (Park & Lee, 2009). These reviews provide evaluation information about products and services, usually posted on third-party sites or retailer platforms and generated by customers (Mudambi & Schuff 2010)

Customer Needs

Additionally, to obtain factual information on specific topics such as online product service reviews or comments posted on social media platforms—which often include both contextual details and customer feedback—researchers have explored methods like contextual text mining (Mei and Zhai 2006, "A mixture model for contextual text mining"). Contextual information refers to the surrounding details in customer reviews, such as location, time, mood, or other environmental factors (Kapitsaki et al., 2015).

Linguistic Patterns

Linguistic patterns refer to the structure and formation of human language used to extract meaningful insights by analyzing grammatical and syntactic features found in customer reviews (Athira & Thampi, 2018). The use of linguistic patterns in customer reviews helps reveal meaningful differences in how language is used throughout the text (Schwartz et al., 2015). These patterns allow for the identification of specific product features and service-related aspects. For instance, combinations like "adjective + noun" often highlight physical or technical attributes of a product, while "verb + noun" pairings tend to describe actions or services associated with it. Such patterns are commonly applied in analyzing online reviews, especially when evaluating a brand's reputation or assessing regional sales performance. Understanding these language structures is crucial, as they help customers interpret reviews accurately and gain clear, relevant information to make informed purchasing decisions.

Methodology

The research started by gathering online reviews for a specific product, paying attention to both favorable and critical comments. These reviews were then analyzed to pull out details about the product and how it was described. Similar phrases and meanings were grouped to better understand the common themes in the feedback. By connecting these insights with the product features mentioned, the study identified key customer expectations and concerns. Finally, customer needs related to the product's service were determined by integrating the contextual insights with the product/service information from the reviews. A quantitative research approach was employed, and the analysis was carried out accordingly.
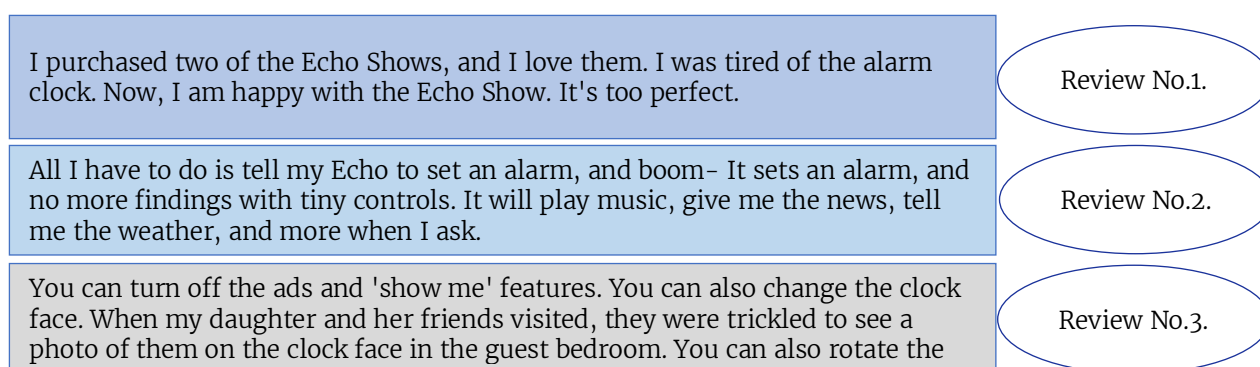
Data Collection

For this step, Data collection focused on analyzing online reviews of a specific product to identify and assess customer needs based on contextual information. For data collection, the questionnaires were taken from Chatgpt, and data was obtained from Google, where a company launched its products, and customers took their reviews about the service of the products. In questionnaires, there was a scale where four scales range between 1-(often), 2-(rarely), 3(occasionally), and 4-(always). Moreover, Negative reviews are mostly taken as credible and more considerable—data collection for getting online research reviews regarding target products. Emojis also show customers' reviews of online product services. Language expression also indicates customer reviews about online product services.
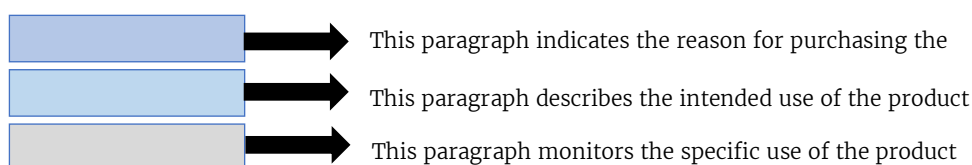
Figure 1

Fabulous function Echo Show!
Reviews were taken from in the United States on August 6, 2020.
Color: charcoal! Configuration: Echo Show 5: verified purchase

Figure 2

I purchased two of the Echo Shows, and I love them. I was tired of the alarm clock. Now, I am happy with the Echo Show. It's too perfect.	Review No.1.
All I have to do is tell my Echo to set an alarm, and boom- It sets an alarm, and no more findings with tiny controls. It will play music, give me the news, tell me the weather, and more when I ask.	Review No.2.
You can turn off the ads and 'show me' features. You can also change the clock face. When my daughter and her friends visited, they were trickled to see a photo of them on the clock face in the guest bedroom. You can also rotate the	Review No.3.

Description

This paragraph indicates the reason for purchasing the

This paragraph describes the intended use of the product

This paragraph monitors the specific use of the product

Discussion and Analysis

This section analyzes customer reviews collected for the Echo Show product. The aim was to uncover linguistic patterns and assess their influence on consumer behavior and decision-making.

A sentiment analysis approach was employed to classify reviews as positive or negative. Sample reviews, such as "I love them" and "It's too perfect," indicate a strongly positive sentiment, reflecting customer satisfaction. These sentiments were detected using rule-based language analysis and pattern recognition (e.g., adjective-noun pairs like perfect product happy customer). In addition to sentiment, linguistic structures were examined. Reviews frequently used imperative and declarative forms (e.g., "Set an alarm" or "You can change the clock face"), demonstrating product functionality as a key topic. These functional descriptions suggest that clarity and usefulness in language increase customer trust and engagement. Frequency distribution of phrases revealed that product usability, ease of interaction, and personalization were the most discussed features. For example, customers valued personalization elements such as "photo display" and "rotating photos," contributing to emotional satisfaction and brand loyalty. Survey data showed the following:

- 59% of respondents often read reviews before purchasing
- 10% occasionally, 9% always, and 23% rarely

This distribution supports the notion that customer reviews significantly influence consumer behavior. These insights align with your second objective—identifying how linguistic features (like tone and syntax) shape decision-making. Emotional tone and structured clarity in language emerged as key factors in persuading buyers.

Overall, the data supports the hypothesis that linguistic patterns—especially sentiment-bearing expressions and functional clarity—play a pivotal role in shaping customer behavior in online settings. Here is an example discussed in the reviews';

Sample Question

Q. No. 1: How often do you read online product or service reviews before purchasing? a) Often   b) rarely c) Occasionally d) always
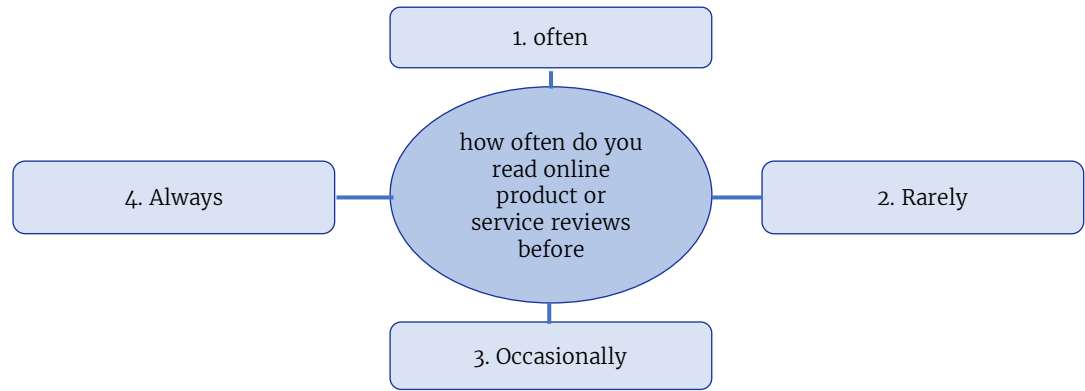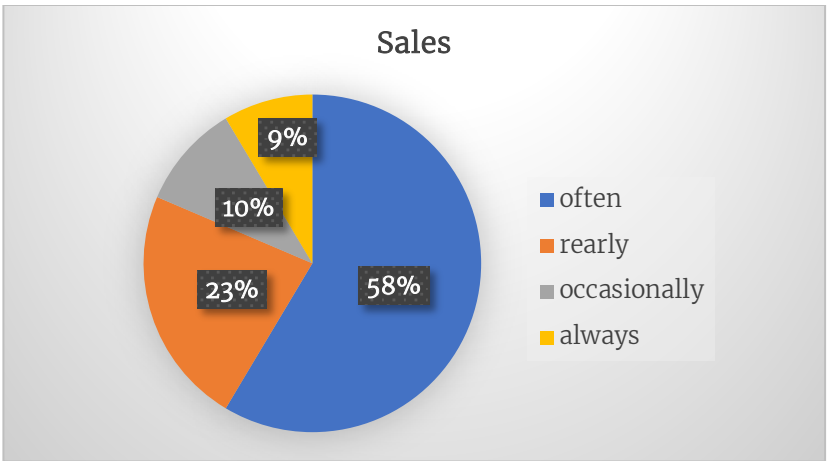
Figure 3

Figure 4
Sales

58% often, 9% always, 10% occasionally, 23% rarely

Conclusion

This research investigated the influence of customer reviews on consumer decision-making, focusing on linguistic patterns, sentiment, and the overall effect of online feedback on purchasing behavior. Using the Echo Show product as a case study, the research combined sentiment analysis, linguistic examination, and survey methods to explore how customers express satisfaction or dissatisfaction and how this shapes the perceptions of potential buyers. The research indicated that favorable customer reviews—often marked by emotionally charged words like "love," "perfect," and "amazing"—play a vital role in establishing product credibility and trustworthiness. In addition to emotional language, reviewers frequently highlighted practical features such as ease of installation, customization capabilities, and overall user-friendliness. This underscores the importance of clear and informative language in guiding consumer choices. Many buyers rely on online reviews prior to making a purchase, hence the results of a survey corroborated these

conclusions. This illustrates the increasing significance of user-generated content in e-commerce. The study demonstrated that the structure of language—especially with the use of imperatives and declaratives—facilitates the transmission of clear and practical messages, hence enhancing customer confidence and satisfaction. The examination of materials containing both emotional and factual components significantly impacts potential buyers' perceptions of the products. Comments that integrate genuine emotions with comprehensive product knowledge are generally more engaging and foster brand loyalty. Requesting consumers to provide candid, detailed, and heartfelt reviews can benefit companies, according to the study. These reviews bolster the brand's reputation and aid other buyers in acquiring knowledge. The research introduces novel concepts to the fields of digital marketing and consumer behavior. It offers enterprises pragmatic guidance on the judicious utilization of consumer feedback to enhance engagement, satisfaction, and sales.

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