# A Review and Perspective of Research on the Inconsistency of Online Reviews on New Products Adoption Intentions

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**Abstract.** The launch and market acceptance of new products is important for companies to innovate and gain competitive advantage, but the reality is that the launch and marketing of new products is always accompanied by a high rate of failure and risk. Now that consumers rely heavily on the internet and social media for information, reviews are critical, but inconsistencies in reviews are becoming more prominent, especially for new products that consumers are unfamiliar with. So how should companies and marketers respond? In response, this review article explores the impact of online review inconsistency on new product adoption intentions and suggests directions for future research. The article begins with an overview of the phenomenon of online review inconsistency and its impact on consumers and firms. Through the literature review, we find that different scholars hold different views on the impact of online review inconsistency, which highlights the need for in-depth research on the phenomenon. In this paper, we further sort out the definition and manipulation methods of online review inconsistency and analyze its limitations. Based on the theoretical perspectives of optimal arousal theory, perceived usefulness, and risk-related theory, the article explores the mechanisms by which prior review inconsistency affects consumers' willingness to adopt new products. In addition, the article discusses the role of moderators such as product type, review itself factors and socio-cultural. Finally, in theoretical significance, this review combs through existing theories and proposes possible future research directions, such as consumer attitude ambivalence and social value perspectives. In the practical sense, the article provides insights into how firms can manage and leverage online review inconsistency to make valuable and consumer-preferred innovations that engage consumers and contribute to the market success of new products. Through these studies, we can better understand the impact of online review inconsistency on consumer behavior, bringing value to both businesses and consumers.

**Keywords:** online review inconsistency; new product adoption; optimal arousal theory; risk perception; moderators

# 1      Introduction

Continuous new product development is an essential way for firms to continue to achieve competitive advantage[3]. However, survey data show that more than half of new products in the market fail, and even successful firms face a 40% risk of failure[5]. Meanwhile, with the rise of consumer sovereignty of social media development, it drives companies to transform from value provision to value co-creation with consumers. Among them, word-of-mouth is an important marketing communication tool [10]. However, with consumers' reliance on online word-of-mouth, a large amount of inconsistent review information (both positive and negative) is generated and even polarized. The content of these inconsistent reviews not only creates decision-making distress for consumers; it also confuses judgmental decisions for firms. So, does the phenomenon of inconsistent reviews always cause negative consequences, and do companies need to completely reject negative reviews?

Scholars have not yet reached a conclusion on this related research, some scholars believe that inconsistent reviews will have a negative impact, reducing product attractiveness and inhibiting purchase intention[14]; while others believe that inconsistent reviews will play a facilitating role [4];there are even a small number of studies that inconsistent reviews have no significant effect on the products and consumer behavior have no significant effect. Meanwhile, review inconsistency is more common for new products that consumers are not familiar with, and reviews are an critical reference for consumers to make purchase decisions[13]. However, there are fewer studies related to online review inconsistency for new products.

# 2      Definition and Measurement

In terms of definition, most scholars believe that it is the existence of different potency (including positive, negative and neutral) of the same commodity[6], and the ratio of positive and negative evaluations reaches a certain level, which makes it difficult for consumers to make a purchase decision[7] (The definitional perspectives are summarized in table 1 below).

**Table 1.** Definitional perspectives of online comment inconsistency

| Scholar/year | define |
|---|---|
| Chatterjee (1996) | The Coexistence of Positive, Negative and Neutral Comments |
| Zhu F. (2010) | Variation: measured by variance or standard deviation |
| Chang (2014) | Degree of consensus |
| Rozenkrants (2017) | preferred or disliked by many consumers |
| Wang (2017) | the complexity of the comments |

For measurement, it is common to display review content with different validity to simulate online shopping situations, but this method may affect accuracy due to review diversity and the difficulty of replicating a large number of reviews in an experiment. To address this issue, researchers have begun to study review inconsistency using rating

distribution maps from online platforms such as Amazon. Such distribution maps can visualize the diversity and polarization trends of consumer reviews[9]. Meanwhile, Luo (2013) proposed to determine the degree of word-of-mouth polarization by observing the percentage of highly rated and low-rated consumers.

# 3      Mechanisms on Adopt New Products

## 3.1      Optimal Arousal Theory Perspective

The optimal arousal theoretical provides an important framework for commenting on the positive effects that incongruence can have. Individuals are generally more likely to develop preferences for stimuli when they are faced with stimuli that are moderately interesting and complex（Crowley & Hoyer，1994）. Thus, when confronted with reviews with a combination of positive and negative information, consumers may feel pleasure and curiosity, which enhances their perception of product uniqueness and their willingness to purchase. In contrast, consistent messages, while easy to process, may lack elements that stimulate consumer interest. Specifically, when consumers are faced with an inconsistent online review distribution compared to a consistent review distribution, this distribution allows consumers to receive cues that positive and negative information exists simultaneously, when complexity tends to inspire stronger motivation to process it, thus triggering the perception of product uniqueness. Huang (2017) explores the two-sided effects caused by review inconsistency, which can affect purchase intention through uniqueness perception and risk perception. Huang (2023) argues that online review inconsistency arouses consumers' curiosity more than consistency[4].

## 3.2      Perceived Usefulness Perspective

Xu (2020) argued that dynamic word-of-mouth enhances the authenticity and value of reviews[11]. Yan(2022) pointed out that inconsistency in ratings directly affects the usefulness of reviews and indirectly influences consumers' decision-making through their rational perceptions. Faced with contradictory reviews, consumers may have psychological conflicts, but are more inclined to make rational choices rather than emotional irrational followers. Cao (2021), by constructing a usefulness perception evaluation index system for consumers after browsing contradictory online reviews (including: three dimensions: reducing the risk of online purchasing, product image visualization, and purchase intention), concluded that the combined perception evaluation of consumers for usefulness perception and purchase intention was more positive. However, the impact on purchase intention is limited. In summary, for unfamiliar products, consumers are likely to engage in external attribution, blaming negative reviews on the individual reviewer, while for familiar products, they are likely to engage in internal attribution, viewing negative reviews as product problems.

### 3.3    Risk-Related Theory Perspective

Bauer (1960) defines perceived risk as the inability of a consumer to be sure of the correctness of his or her decision at the time of purchase, or the concern that the outcome of the purchase may be unpleasant. This risk involves two aspects: uncertainty about whether the purpose of the purchase will be achieved, and uncertainty about the severity of the possible consequences of a wrong decision. In the face of inconsistent online reviews, consumers find it difficult to judge whether a product is good or bad, creating uncertainty about the outcome and potentially increasing consumers' perception that the product is defective, thus increasing perceived risk. Cao (2020) Consumers encountering contradictory information in online reviews may be more uncertain and hesitant, thus affecting purchase decisions[1]. Zhang(2019) experimented that the longer consumers gaze at inconsistent reviews, the higher their perceived intrinsic risk and the lower their degree of purchase intention[14]. Wu (2021) found that consistency in reviews reduces consumer uncertainty and perceived risk, and enhances adoption intention for new products[9].

### 3.4    Moderating Factors

To gain a deeper understanding of the impact of online review inconsistency on the willingness to adopt a new product, scholars are investigating the role of different moderating variables. Firstly, product attributes, Langan (2016) found that for functional products, review inconsistency is more likely to reduce consumers' purchase intention, especially when reviews have negative utility. And Gao (2020) further argues that high rating dispersion increases purchase intention when product utility attributes prevail. When product hedonic attributes prevail, high rating dispersion reduces purchase intention[2.] Secondly, the reviews themselves, Zhao (2023) conducted a study on the proportion of positive and negative reviews and concluded that consumers obtain positive information through online reviews, thus reducing uncertainty[15]. On the other hand, Yan (2020)focuses on the effect of the potency contradiction between online reviews and user Q&A on consumers' product attitudes, revealing the different impacts of attribute-based Q&A and experiential Q&A on consumers' attitude change under different circumstances[12]. Finally, socio-cultural factors also play an important role in this process. Siddiqi (2020) highlights that offline interpersonal information can help consumers resolve uncertainty in online reviews[8]. Wu (2021) suggests that indulgent consumers are more inclined to accept high-inconsistency reviews, whereas abstinent consumers prefer low-inconsistency reviews because consistent positive reviews reduce their perceived risk[9].

## 4     Conclusions

**For the Research Summary:** This review summary the impact of online review inconsistency on the willingness to adopt a new product, including definitions, manipulation methods, influencing mechanisms, and moderating factors, and suggests directions for future research. The definition commonly used in research is the existence of

positive, negative and neutral reviews and is often demonstrated by review distribution graphs. Based on optimal arousal theory, inconsistent reviews can stimulate consumers' interest and increase willingness to try; perceived usefulness is explained in it; and risk-related theory points out that high inconsistency may increase perceived risk, which in turn affects purchase intention. Finally, there is the role of moderating factors such as product type, the reviews themselves and social culture.

**For the contribution:** theoretically, integrating theories and moderating factors provides more views for understanding consumer perception and behavior, and suggests that future research focus on attitudinal ambivalence and social values and incorporate multiple disciplines. Practically, it provides strategies for companies to utilize comment inconsistency to attract consumers, conduct market segmentation, product positioning, and build brand image to gain competitive advantage.

**Research limitations and possible future research directions:** current research has limitations, particularly in terms of in-depth analysis of review content, consumer attitudinal and affective processes, and social media and societal influences. Future research could work in the following three directions:

1. specific types of online review inconsistency: There is a need for more specific research on the types of inconsistent reviews, such as bimodal distribution reviews, and how they affect the attractiveness of consumers with different levels of self-concept clarity. Research should consider the impact of different types of inconsistency (based on product quality, service level, price, etc.) and different dimensions (affective polarity, review extremity, conflicting information) on the willingness to adopt a new product. Combining natural language processing and text mining techniques to analyze review content and explore the impact of hot topics, context, and consumer engagement on consumer perception and behavior.

2. Consumer Attitude Ambivalence and Conflicting Emotions: To study consumers' emotional responses and regulation strategies, such as cognitive reappraisal and emotional expression, in the face of inconsistent reviews, and how these strategies manage negative emotions and affect willingness to adopt new products. In addition, explore how consumers use social media resources to cope with conflicting reviews and how the design of social media platforms affects consumers.

3. Social Values and Social Norms Perspective: Examines the role of social values and social norms in new product marketing and how they can help companies position their brands and build consumer trust and loyalty. Consider how consumers perceive the social value of new products, how social norms influence interpretations of inconsistencies in online reviews, and how these interpretations interact with consumers' social identity and sense of belonging. Examine differences in consumers' perceptions of social value across cultures and how these differences affect their interpretation and adoption of inconsistent reviews of new products.

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