

Cross-Cultural Sentiment Analysis of E-commerce Reviews: Evidence from DJI Action 5 Pro on Taobao and Amazon

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Abstract:

Focusing on the DJI Action 5 Pro action camera, this study investigates the discursive features of online reviews by domestic and overseas consumers from a cross-cultural perspective. User reviews were collected from Taobao and Amazon and analyzed through a combination of computational linguistics techniques, including SnowNLP and VADER sentiment analysis, TF-IDF keyword extraction, and Latent Dirichlet Allocation topic modeling. To provide a fine-grained interpretation of evaluative discourse, the findings were further examined within the framework of Appraisal Theory in Systemic Functional Linguistics. The results indicate that positive sentiment dominates both corpora, the proportion of negative sentiment in Taobao's Chinese reviews 36.82% is significantly higher than that in Amazon's English reviews 10.17%. Furthermore, English-speaking users focus heavily on the objective appreciation of physical performance, such as battery life and stabilization, coupled with cross-brand heteroglossic comparisons. Conversely, the discourse of Chinese users easily undergoes an ecological extension toward full-link supply chain services, such as customer support and logistics, often accompanied by high-force emotional venting.

Keywords:

Sentiment Analysis, Computational Linguistics, Systemic Functional Linguistics, Cross-Border E-Commerce, Cross-Cultural Analysis

1. Introduction

Online reviews have become a major source of information influencing consumer decision-making in the digital era [1]. With the rapid expansion of cross-border e-commerce, the same product often receives markedly different evaluations across markets with distinct cultural backgrounds. Consumer reviews not only reflect users' product experiences but also provide valuable textual data for examining differences in evaluative discourse across platforms and markets. Existing cross-cultural research has primarily focused on differences in consumer behavior, while paying relatively little attention to linguistic characteristics of review texts, such as lexical choices, topical preferences, and evaluative strategies. Moreover, traditional qualitative approaches are insufficient for analyzing large-scale user-generated content, and sentiment analysis alone cannot fully capture the cultural semantics embedded in

online reviews. Against this backdrop, the present study investigates user reviews of the DJI Action 5 Pro collected from Taobao and Amazon by integrating computational linguistic methods into a multidimensional cross-cultural analysis. Specifically, it explores how cultural factors shape consumers' evaluative discourse and provides empirical evidence to inform user engagement and content strategies in cross-border e-commerce.

2. Literature Review

2.1. Research on Sentiment Analysis of Online Review Texts

From a methodological perspective, sentiment analysis has evolved from coarse-grained lexical approaches to increasingly fine-grained computational techniques. Early studies relied primarily on sentiment lexicons [2], whereas TF-IDF vectorization has been recognized as an effective and highly interpretable feature extraction method [3]. More recently, advances in machine learning and deep learning have substantially improved the accuracy of sentiment classification [4].

In terms of applications, sentiment analysis has been widely employed across multiple research domains. Studies of tourism and social media have focused on identifying sentiments associated with spatial environments as well as non-standard and dialectal language [5]. In contrast, research on short-video platforms and e-commerce has emphasized cultural resonance, visual aesthetics, and consumer evaluations of customer service, logistics, and other service-related dimensions [6].

2.2. Research on Cross-Cultural Evaluative Behavior

From a theoretical perspective, Hofstede's cultural dimensions theory and Hall's high- and low-context communication theory provide the principal frameworks for explaining cross-cultural differences in evaluative behavior. Cultural values have been shown to significantly influence consumers' criteria for evaluating online review information [7], while systematic cross-cultural differences have also been identified in perceptions of review credibility [8]. At the level of evaluative strategies, previous research has further demonstrated that culture plays a significant role in shaping consumers' linguistic preferences when expressing evaluations. [9] For example, substantial differences have been observed between English-language reviews on Tripadvisor and Chinese-language reviews on Ctrip in terms of self-reference and the use of hedging devices [10].

The existing cross-cultural studies mostly rely on a single theoretical framework, and lack a systematic and integrated analysis of the intensity of emotional tendency and the focus of topic attention. This study takes DJI Action 5pro user reviews collected from Taobao and Amazon platforms as the research object. Firstly, the text mining method is used to extract the core vocabulary of consumer attention through Frequency-Inverse Document Frequency (TF-IDF) [11]. Secondly, SnowNLP is used in Chinese and Valence Aware Dictionary and Sentiment Reasoner(VADER) sentiment analysis tool is used in English to identify the sentiment tendency of comments [12]. Finally, combined with the latent Dirichlet distribution (LDA) topic model [13], the topic of consumer attention is further analyzed. This study systematically compares the sentiment orientation and topic preference reflected in Chinese and English reviews. On this basis, these results are further interpreted by the appraisal theory in systemic functional linguistics. This study intends to explain the computational results of engineering sentiment analysis from the perspective of

linguistics, and provide linguistic and cultural references for the overseas dissemination of domestic brands.

3. Research Design

3.1. Research Questions

RQ1: What differences and overall patterns characterize the sentiment orientation of Chinese- and English-language e-commerce reviews of the DJI Action 5 Pro?

RQ2: What are the major topical focuses of Chinese and international consumers, and how are these differences reflected in their evaluative discourse?

3.2. Data Collection and Processing

The data for this study consist of online reviews of the DJI Action 5 Pro collected up to June 2026. Using web scraping techniques, more than 7,000 Chinese-language reviews were retrieved from Taobao and over 160 English-language reviews were collected from Amazon. After data cleaning and preprocessing, 2,352 valid Chinese reviews and 123 valid English reviews were retained for analysis.

The disparity in corpus size reflects differences in market scale and review mechanisms between the two e-commerce platforms. Since the objective of this study is to conduct a cross-cultural discourse comparison rather than develop a statistical inference model, all valid reviews were included in the analysis.

3.3. An Integrated Computational–Linguistic Analytical Framework

To systematically investigate cross-cultural differences in sentiment orientation, topical focus, and evaluative expression between Chinese and English e-commerce reviews, this study adopts an integrated computational–linguistic analytical framework. The analysis proceeds in four stages. First, the TF-IDF algorithm is employed to extract high-weight keywords, thereby identifying the primary concerns reflected in the review corpora. Second, language-specific sentiment analysis models are applied to classify review polarity, enabling a quantitative comparison of sentiment distributions across the two languages. Third, Latent Dirichlet Allocation topic modeling is used to uncover the latent thematic structure of the review texts. Finally, the computational findings are interpreted through the lens of Appraisal Theory within Systemic Functional Linguistics to examine the deployment of evaluative resources and their discourse functions. By moving progressively from quantitative corpus-level analysis to qualitative discourse interpretation, this framework integrates computational linguistics with linguistic theory, providing a comprehensive account of cross-cultural evaluative discourse.

3.3.1. TF-IDF-Based Keyword Extraction

To identify the primary concerns reflected in the Chinese and English review corpora, this study employs the TF-IDF to measure the importance of lexical items within each corpus. Following text preprocessing, TF-IDF vectorizer was applied separately to the Chinese and English datasets. Language-specific stop-word lists were used to remove function words and other non-informative lexical items, resulting in a set of representative high-weight keywords for each corpus. The TF-IDF results provide an overview of consumers' principal concerns and serve as the lexical basis for the subsequent topic modeling and Appraisal Theory analyses.

3.3.2. Sentiment Polarity Identification

In view of the differences in language structure and semantic expression between Chinese and English, this study adopts a language-specific sentiment analysis model to ensure the accuracy of classification. For the Chinese corpus, the Python Library SnowNLP, which is designed for Chinese text processing, is used for analysis. The model calculates a sentiment score s for each comment with an interval between $[0,1]$. This study categorizes comments with $s \geq 0.6$ as positive, comments with $s \leq 0.4$ as negative, and comments between $0.4 < s < 0.6$ as neutral. The English Corpus uses a Vader model of rules and dictionaries optimized for English social media and online text. The model outputs a normalized composite sentiment score C for $[-1,1]$ in the interval. This study categorizes reviews with $c \geq 0.05$ as positive, reviews with $C \leq -0.05$ as negative, and reviews between $-0.05 < C < 0.05$ as neutral. After obtaining the polarity classification, this study counted and calculated the frequency and proportion of each emotion category, so as to make a quantitative comparison of cross-language emotion features.

3.3.3. LDA-Based Topic Modeling

To further explore consumers' underlying concerns, this study applies LDA to identify the latent thematic structure of the review corpora through unsupervised topic modeling. To ensure the robustness of topic extraction, the optimal number of topics K was determined by jointly considering perplexity and topic coherence. Experimental results indicated that when $K = 3$ for both the Chinese and English corpora, the model achieved a local optimum in topic coherence while producing semantically coherent and highly interpretable topics. Accordingly, three topics $K = 3$ were selected as the optimal configuration for subsequent topic modeling of both corpora.

4. Results and Analysis

4.1. Comparison of Sentiment Orientation and Polarity Distribution

To examine the overall evaluative orientation of consumer reviews across different linguistic e-commerce platforms, this study conducted sentiment polarity classification on online reviews of the DJI Action 5 Pro using language-specific sentiment analysis tools. VADER was applied to the English reviews collected from Amazon, and SnowNLP was used to analyze the Chinese reviews collected from Taobao. Each review was classified into one of three sentiment categories: positive, negative, and neutral. The distribution of sentiment polarity across the two corpora is presented in Figure 1.

Platform	Positive	Reviews	Proportion	Neutral	Reviews	Proportion	Negative	Reviews	Proportion
Amazon	87		73.73%	19		16.10%	12		10.17%
Taobao	1019		58.90%	74		4.28%	637		36.82%

Figure 1. Comparison of Sentiment Polarity Distribution in Amazon and Taobao Reviews.

Overall, positive sentiment predominates in both corpora, indicating that the DJI Action 5 Pro has been well received across different market environments. Positive reviews account for 73.73% of the Amazon corpus, substantially higher than the 58.90% observed in the Taobao corpus. By contrast, 36.82% of the Taobao reviews are classified as negative, compared with 10.17% of the Amazon reviews. These findings suggest that although consumers on both platforms generally recognize the

product's performance, their evaluative discourse exhibits distinct patterns of sentiment expression across the two linguistic communities.

Neutral reviews account for 16.10% of the Amazon corpus, whereas only 4.28% of the Taobao corpus is classified as neutral. In contrast, the Chinese corpus exhibits a more polarized sentiment distribution, with 58.90% of the reviews expressing positive sentiment and 36.82% expressing negative sentiment. This pattern indicates that Chinese consumers are more likely to adopt explicitly positive or negative evaluative stances, whereas English-language reviews more frequently convey neutral assessments.

Nevertheless, differences in sentiment polarity alone are insufficient to explain the cultural mechanisms underlying these cross-linguistic patterns. Sentiment classification captures variation in overall evaluative orientation but does not reveal which product attributes consumers prioritize or how these evaluative preferences are shaped by cultural and linguistic factors. These issues are therefore explored in the following section through analyses of topical structure and evaluative resources within the framework of Appraisal Theory.

4.2. Analysis of Consumer Concerns and Topic Distribution

To further explore the content dimensions underlying the observed sentiment differences, this study combined TF-IDF keyword extraction and LDA topic modeling to analyze the corpora at both the lexical and semantic levels. The top 20 high-weight keywords and their corresponding TF-IDF scores for the Chinese and English corpora are presented in Figure 2.

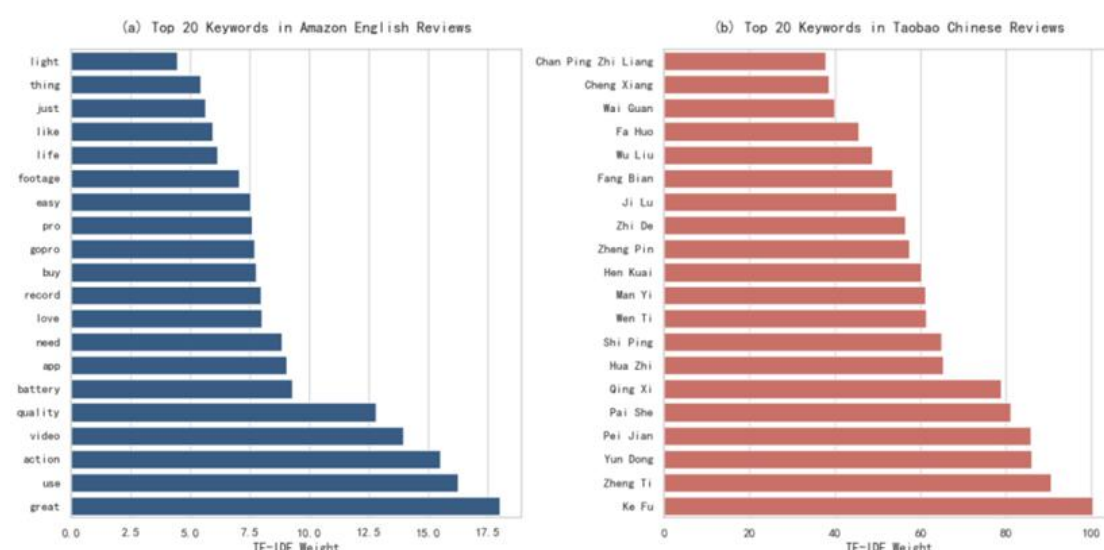


Figure 2. Distribution of High-Weight TF-IDF Keywords in Chinese and English Reviews.

The TF-IDF keyword extraction results demonstrate that both Chinese and English reviews primarily focus on the core functions and user experience of the product, while notable differences emerge in their evaluative priorities.

In the English Amazon corpus, the highest-weight keywords are camera, with a TF-IDF weight of 24.88; great, 16.68; use, 15.24; video, 13.54; quality, 12.73; battery, 8.67; and record, 7.51. The frequent occurrence of terms such as camera, video, quality, and record indicates that English-speaking consumers' evaluations are largely centered on the imaging capabilities of the action camera, particularly video recording performance, image quality, and overall usability. Meanwhile, keywords such as

battery and app suggest that consumers also pay considerable attention to battery endurance and the user experience associated with the accompanying software ecosystem.

By contrast, the Taobao corpus exhibits a more diversified lexical profile. The highest-weight keywords include Ke Fu (“customer service”) with a weight of 100.36, Zheng Ti (“overall”) 90.46, Yun Dong (“sports”) 85.95, Pei Jian (“accessories”) 85.73, Pai She (“shooting”) 81.13, Qing Xi (“clarity”) 78.85, Hua Zhi (“image quality”) 65.32, and Wen Ti (“problem”) 61.30. These findings indicate that Chinese consumers evaluate not only the product's core performance—including image quality, shooting performance, and visual clarity—but also service-related aspects of the purchasing experience, such as customer service, logistics, delivery, and accessories.

Building upon the TF-IDF analysis, LDA topic modeling was subsequently applied to identify the latent thematic structure of the review texts. Based on the distribution of topic-specific keywords, both the Chinese and English corpora were organized into three major evaluative themes. However, the thematic composition differed considerably between the two platforms, suggesting distinct patterns of consumer attention and evaluative discourse across the two linguistic communities. The resulting topics are summarized in Figure 3.

LDA Topic Keywords and Their Weights in Positive and Negative Taobao Reviews											
Positive Reviews						Negative Reviews					
Theme 1		Theme 2		Theme 3		Theme 1		Theme 2		Theme 3	
Keywords	Weight	Keywords	Weight	Keywords	Weight	Keywords	Weight	Keywords	Weight	Keywords	Weight
Yun Dong	0.03	Zheng Ti	0.0284	Xi Huann	0.0296	Shang Jia	0.0266	Pei Jian	0.0324	Wen Ti	0.032
Hua Zhi	0.0253	Wu Liu	0.0189	Hao	0.0243	Wen Ti	0.0266	Quan Xin	0.0205	Jiu Shi	0.0307
Ji Lu	0.024	Tui Jian	0.0178	Hen Kuai	0.0194	Zheng Ti	0.0245	Kuai Di	0.019	Xiao Shi	0.0276
Qing Xi	0.0211	Wai Guan	0.0176	Zheng Ti	0.0194	Pei Jian	0.0171	Hen Kuai	0.0174	Dian Chi	0.0243
Xu Hnag	0.0156	Zheng Ping	0.0173	Pei Jian	0.0188	Dan Shi	0.016	Fa Huo	0.0172	Bu Neng	0.0229
Sheng Huo	0.014	Fu Wu	0.0168	Te Bie	0.0167	Hao Ping	0.0157	Fu Wu	0.0163	Chong Dian	0.0179
Fang Bian	0.0128	Wai Xing	0.0152	Fa Huo	0.0162	Zhe Zhong	0.0156	Chao Ji	0.0153	Ran Hou	0.0172
Fang Dou	0.0128	Pei Jian	0.015	Hao Yong	0.0133	Shou Hou	0.0156	Cao Zuo	0.0153	Fa Re	0.0164
Cao Zuo	0.0114	Wen Ti	0.0138	Qing Xi	0.0123	Jie Guo	0.0154	Shou Ji	0.0146	Pei Jian	0.0119
Hua Mian	0.01	Hen Kuai	0.0137	Hao Ping	0.0112	Te Bie	0.014	Wen Ti	0.014	Fang Shui	0.0117

LDA Topic Keywords and Weights in Positive and Negative Amazon Reviews											
Positive Reviews						Negative Reviews					
Theme 1		Theme 2		Theme 3		Theme 1		Theme 2		Theme 3	
Keywords	Weight	Keywords	Weight	Keywords	Weight	Keywords	Weight	Keywords	Weight	Keywords	Weight
battery	0.0175	quality	0.0203	app	0.028	quality	0.1027	app	0.0891	time	0.0575
quality	0.0167	pro	0.019	video	0.0154	tiempo	0.079	gopro	0.0886	took	0.0575
life	0.0156	your	0.016	easy	0.0141	try	0.079	stars	0.075	need	0.0405
footage	0.0147	record	0.0123	quality	0.014	video	0.0555	activation	0.075	delivery	0.0403
stabilization	0.0114	like	0.012	videos	0.0124	previous	0.0553	download	0.061	customer	0.0403
without	0.0102	using	0.012	gopro	0.0121	duration	0.0553	store	0.0469	helpful	0.0403
even	0.0097	need	0.0104	battery	0.0114	water	0.0553	activate	0.0469	services	0.0403
need	0.0082	day	0.0097	love	0.0103	arrive	0.0553	used	0.0469	contact	0.0403
video	0.008	screen	0.0089	thing	0.0101	pro	0.0553	need	0.0467	long	0.0403
performance	0.0077	light	0.0089	far	0.0092	little	0.0553	next	0.033	disappointed	0.0403

Figure 3. LDA Topic Keywords and Their Weights Across Positive and Negative Reviews in Chinese and English Corpora.

To further uncover the latent semantic relationships underlying the high-frequency keywords, this study conducted separate LDA topic modeling analyses on positive and negative reviews from the Taobao Chinese corpus and Amazon English corpus. Based on the distribution of topic-specific keywords, three representative topics were extracted for each corpus, and their semantic meanings were interpreted according to keyword weights.

For positive Taobao reviews, three major themes were identified. Topic 1: Sports photography and imaging performance was characterized by keywords such as Yun Dong (“sports”), Hua Zhi (“image quality”), Ji Lu (“recording”), and Fang Dou

(“stabilization”), reflecting consumers’ recognition of the camera’s imaging capabilities. Topic 2: Purchasing experience and service quality included keywords such as Zheng Ti (“overall”), Wu Liu (“logistics”), and Fu Wu (“service”), indicating that the purchasing process itself constituted an important dimension of positive evaluation. Topic 3: Overall user experience was represented by terms such as Xi Huan (“like”), Hen Hao (“very good”), and Hao Yong (“easy to use”), reflecting consumers’ overall satisfaction with the product.

In contrast, negative Taobao reviews could also be grouped into three major themes. The first concerns after-sales service and problem feedback, represented by keywords such as Shang Jia (“seller”), Wen Ti (“problem”), and Shou Hou (“after-sales service”). The second theme relates to accessories and logistics experience, including keywords such as Pei Jian (“accessories”), Kuai Di (“delivery”), and Fa Huo (“shipping”). The third theme focuses on device-related performance issues, with representative keywords such as Dian Chi (“battery”), Fa Re (“overheating”), and Chong Dian (“charging”). These findings suggest that negative evaluations in Chinese reviews are not limited to product functionality but also extend to service procedures and the overall usage process.

For Amazon English reviews, positive topics primarily center on three dimensions: battery life and imaging performance, represented by keywords such as battery, footage, and stabilization; professional recording capability, represented by quality, pro, and record; and software experience, represented by app, easy, and video. Negative reviews mainly concern product quality and delivery experience, including keywords such as quality and arrive; software ecosystem issues, represented by app, activation, and download; and delivery and customer service issues, represented by delivery, customer, and services.

By integrating the TF-IDF keyword extraction results with LDA topic modeling, this study reveals both shared concerns and distinct discourse orientations between Taobao Chinese reviews and Amazon English reviews. Both groups of consumers placed substantial emphasis on core product attributes, including image quality, video recording, stabilization performance, and device functionality. This indicates that product performance remains the fundamental basis for evaluating action cameras regardless of linguistic context. However, differences emerged in the extension of evaluative dimensions. Amazon English reviews were primarily organized around product performance, professional shooting capabilities, and software usability, with evaluations largely confined to the functional attributes of the device itself. In contrast, Taobao Chinese reviews not only addressed product performance but also incorporated broader consumption-related dimensions, including logistics, accessories, customer service, and after-sales support. This reflects a more comprehensive evaluation framework in Chinese consumer discourse, in which the overall consumption experience becomes an integral part of product evaluation.

5. Discussion

Building on the TF-IDF keyword extraction and LDA topic modeling results presented in last chapter, this section further applies Appraisal Theory within Systemic Functional Linguistics to provide a linguistic interpretation of evaluative expressions in Taobao Chinese reviews and Amazon English reviews. Unlike last chapter, which focused primarily on what consumers evaluate, the present section explores how evaluations are constructed through linguistic resources. Specifically, it

examines how different linguistic communities employ evaluative resources to construct product value, express attitudinal positions, and intensify evaluative meanings, thereby revealing cross-linguistic patterns in e-commerce evaluative discourse.

5.1. Differences in Evaluative Targets from the Perspective of the Attitude System

Within Appraisal Theory, the Attitude system consists of three subsystems: Appreciation, Judgement, and Affect. Appreciation evaluates the value and quality of objects, products, and processes; Judgement concerns evaluations of human behavior, competence, and responsibility; and Affect directly reflects the emotional responses of evaluators.[14]

The keyword and topic analyses demonstrate that both Chinese and English reviews extensively employ Appreciation resources to evaluate the product performance of the DJI Action 5 Pro. In Amazon English reviews, expressions such as “Great image quality” and “battery life is amazing” frequently occur, where great and amazing function as positive Appreciation resources targeting product attributes such as image quality, stabilization performance, and battery endurance. Similarly, keywords including Hua Zhi (“image quality”), Qing Xi (“clarity”), Pai Shei (“shooting”), and Cheng Xiang (“imaging”) in Taobao reviews reflect consumers’ attention to functional performance. These findings indicate that, regardless of linguistic context, objective appreciation of the action camera’s hardware capabilities remains a central component of consumer evaluation.

However, the two corpora differ substantially in the scope of evaluative targets. In Amazon English reviews, evaluation is primarily directed toward the product itself, including device performance, software experience, and operational convenience. In contrast, Taobao Chinese reviews extend beyond camera functionality to encompass various aspects of the purchasing process, such as logistics, accessories, customer service, and delivery. The frequent occurrence of high-weight keywords including Ke Fu (“customer service”), Wu Liu (“logistics”), and Pei Jian (“accessories”) indicates that Chinese consumers tend to integrate product experience with service experience within a broader evaluative framework.

From the perspective of attitude resource distribution, this difference does not necessarily indicate dissatisfaction with the hardware itself. Instead, negative attitudes in the Chinese corpus demonstrate a significant discursive shift: evaluative targets frequently move from the Appreciation of product performance to the Judgement of service providers and transactional processes. In other words, negative evaluations are often constructed not through criticism of the camera’s technical functions, but through assessments of sellers’ responsibility, service quality, and fulfillment behavior.

The Affect subsystem directly reflects evaluators’ emotional responses and psychological reactions. The Chinese corpus demonstrates a relatively high emotional intensity, with positive reviews frequently containing expressions such as “Chao Ji Xi Huan” (“like it very much”), “Da Ai Zhe Ge Ji Qi” (“love this device”), and “Wan Quan Chao Chu Yu Qi” (“far beyond expectations”). Meanwhile, the 36.82% of negative reviews often involve highly affective expressions such as “Qi Si Wo Le” (“I am extremely angry”), “Ji Du Shi Wang” (“extremely disappointed”), and “Zhi Jie Tui Huo” (“returned it immediately”). These expressions suggest that Chinese

consumers may use e-commerce review spaces not only for product evaluation but also as platforms for emotional expression and experience sharing.

By contrast, emotional resources are less prominent in the Amazon English corpus. English-language reviewers rarely employ highly emotional exclamations or strongly expressive vocabulary. Even when expressing dissatisfaction, they tend to use relatively restrained affective expressions such as disappointed. Overall, Amazon reviews exhibit a more moderated emotional tone, with evaluations relying more heavily on product-oriented descriptions and experiential assessments rather than overt emotional release.

5.2. Construction of Evaluative Stance: An Engagement System Perspective

The Engagement system concerns how evaluators position themselves in discourse and negotiate relationships with alternative viewpoints. Within Appraisal Theory, engagement resources are primarily divided into monogloss and heterogloss, with heteroglossic resources involving the incorporation of other voices, perspectives, or external standards.[15]

The corpus analysis indicates that Amazon English reviews contain a number of competitor-related expressions, particularly references to GoPro. The presence of such terms suggests that some English-language reviewers tend to evaluate the DJI Action 5 Pro through comparisons with other action camera brands. By introducing competing products as reference points, reviewers establish a comparative framework that strengthens the evidential basis of their evaluations. For instance, consumers may assess battery performance, image quality, or software experience by positioning DJI against alternative products.

In contrast, explicit competitor comparisons are relatively limited in Taobao Chinese reviews, where evaluations are more frequently constructed around personal purchasing experiences and individual usage perceptions. From the perspective of the Engagement system, this indicates that the two linguistic communities employ different strategies for constructing evaluative stances. English reviews tend to establish product value through external reference points, whereas Chinese reviews more often rely on personal experience and direct attitudinal expression. This tendency is further corroborated by quantitative evidence from the corpus statistics and sentiment distribution. Although the Taobao Chinese corpus is substantially larger than the Amazon English corpus, the English dataset exhibits a markedly higher relative frequency of cross-brand references, such as GoPro. Despite the fact that negative reviews account for 36.82% of the Chinese corpus, Chinese reviewers rarely invoke external technical benchmarks or competing products to construct heteroglossic evaluations. Instead, they predominantly adopt a monoglossic stance centered on their own purchasing experiences. By contrast, although only 10.17% of the English reviews are negative, English-speaking consumers continue to draw extensively on competitor comparisons when expressing criticism. This pattern suggests that heteroglossic engagement serves to strengthen the objectivity and argumentative force of evaluative positioning in English-language reviews.

Although the Taobao Chinese corpus is much larger than the Amazon English corpus, the English data show a notably higher frequency of cross-brand references. Negative reviews make up 36.82% of the Chinese corpus, yet Chinese reviewers rarely cite external benchmarks or competing products to form heteroglossic evaluations. Instead, they mainly adopt a monoglossic stance based on personal

purchase experience. In contrast, although only 10.17% of English reviews are negative, English-speaking consumers frequently compare competitors when voicing criticism. This indicates that heteroglossic engagement enhances the objectivity and persuasive force of evaluative positioning in English-language reviews.

Such differences may result from the interaction of multiple factors, including platform conventions, product category characteristics, and linguistic preferences. Therefore, this study does not attribute these patterns solely to cultural differences but interprets them as discourse construction tendencies shaped by different linguistic and platform environments.

5.3. Expression of Evaluative Intensity: A Graduation System Perspective

The Graduation system concerns the adjustment of evaluative meanings in terms of intensity and scope through two major dimensions: Force and Focus. Through graduation resources, evaluators can amplify or attenuate their attitudes, thereby producing different degrees of evaluative effects. [16]

From the perspective of Force, both Chinese and English reviews contain numerous intensifying expressions. For example, English words such as great, good, and easy, as well as Chinese expressions such as Hen Hao (“very good”), Xi Huan (“like”), Zhi De (“worth it”), and Man Yi (“satisfied”), function as resources for strengthening positive evaluation. However, the two linguistic communities differ in how intensification is realized.

In English reviews, intensifying expressions are more frequently associated with specific product attributes, as illustrated by phrases such as great camera and good quality, where evaluative modifiers directly enhance descriptions of technical performance. In Chinese reviews, intensified expressions are more often connected with overall consumption experiences, as shown in expressions such as Zheng Ti Man Yi (“overall satisfied”) and Zhi De Gou Mai (“worth purchasing”), which evaluate the product’s comprehensive value. This suggests that English reviews tend to construct evaluative intensity through specific product attributes, whereas Chinese reviews more frequently employ intensification to express holistic evaluations of the consumption experience.

Regarding Focus, the LDA topic modeling results indicate that keywords such as Yun Dong (“sports”), Ji Lu (“recording”), and Sheng Huo (“daily life”) in Chinese reviews associate product evaluation with concrete usage scenarios. In contrast, English keywords such as pro, quality, and record emphasize professional capability and technical performance. These patterns suggest that the two linguistic communities construct product meanings differently: Chinese reviews are more likely to situate the product within specific lived contexts, whereas English reviews tend to foreground functional attributes and technological performance.

Overall, the Appraisal Theory analysis demonstrates that Taobao Chinese reviews and Amazon English reviews exhibit distinct patterns in the deployment of evaluative resources. Although both corpora are centered on product performance, differences emerge in terms of evaluative targets, stance construction, and intensity expression. These differences should not be interpreted simply as psychological distinctions between consumer groups; rather, they reflect different modes of evaluative discourse construction shaped by linguistic and platform contexts. By integrating computational analysis with Appraisal Theory, this study moves beyond identifying what consumers

evaluate toward explaining how evaluations are linguistically constructed, offering a new perspective for cross-linguistic research on online evaluative discourse.

6. Conclusions

Using Chinese-language reviews from Taobao and English-language reviews from Amazon, this study examined the cross-cultural mechanisms underlying consumer evaluations of the DJI Action 5 Pro.

The findings demonstrate that positive evaluations predominated in both corpora, indicating broad consumer recognition of the camera's core performance across different markets. Nevertheless, important cross-cultural differences emerged in the focus of evaluative discourse. TF-IDF and LDA analyses revealed that consumers in both linguistic communities consistently emphasized key product attributes, including imaging quality, battery performance, and video recording capabilities. However, English-language reviews primarily concentrated on technical performance, professional applications, and software usability, whereas Chinese-language reviews extended their evaluations to logistics, customer service, accessories, and other service-related aspects of the purchasing experience. These findings suggest that online reviews reflect not only perceptions of product quality but also culturally shaped evaluative frameworks encompassing different dimensions of the consumption experience.

Analysis within the framework of Appraisal Theory further revealed systematic differences in the deployment of evaluative resources. From the perspective of the Attitude system, English reviews focused predominantly on product attributes, whereas Chinese reviews expanded their evaluative targets to include service experiences. Within the Engagement system, English reviewers were more likely to construct evaluative authority through cross-brand comparisons, while Chinese reviewers relied primarily on personal experience to express their attitudes. From the perspective of the Graduation system, both groups employed intensified evaluative resources to express satisfaction or dissatisfaction, although they differed in the linguistic realization and discourse functions of these resources.

From a practical perspective, the findings offer implications for DJI's cross-border marketing strategy. In the domestic Chinese market, maintaining high product performance should be accompanied by continued improvements in logistics efficiency, accessory availability, and customer service responsiveness, thereby preventing supply-chain-related issues from undermining brand reputation. In overseas markets, marketing strategies should continue to emphasize the product attributes most valued by international consumers, particularly battery life, image stabilization, and other core performance capabilities.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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