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Investigating the Multilingual Linguistic Landscape on Local Food Packaging in China: A Three-Dimensional Analytical Model

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ABSTRACT

As the process of globalization continues to deepen, multilingualism has increasingly permeated various aspects of Chinese society, with local food packaging emerging as a particularly prominent site of linguistic display. The multilingual linguistic landscape on food packaging serves both informational and symbolic functions. However, in practice, its presentation often reveals discrepancies with current language policy in China. This study employs Trumper-Hecht's three-dimensional analytical model to examine the multilingual linguistic landscape on local food packaging in China. It aims to uncover discrepancies between the linguistic landscape and official language policy, as well as consumers' perceptions and attitudes toward these discrepancies. Drawing on the field investigation method, the study collected 944 food packaging samples and conducted a questionnaire with 114 valid responses. Quantitative analysis of the packaging samples revealed that approximately 22% featured foreign-language text(s) in a larger font than Chinese, while a similar proportion lacked corresponding Chinese translations for the foreign-language content. Descriptive analysis of the questionnaire data suggests that consumers' perceptions and attitudes toward these discrepancies are neither clear nor consistent. While most respondents acknowledge the existence of such issues, the overall level of concern is relatively low, and explicit expressions of opposition are limited—particularly in cases where foreign-language text(s) appear in a larger font than Chinese. This subdued public response may, to some extent, contribute to the persistence and growing visibility of such linguistic deviations over time. The findings suggest that relevant authorities need to strengthen supervision of food

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manufacturers, establish and enforce clearer regulatory systems, and enhance public awareness through targeted campaigns.
Keywords: Local Food Packaging; Multilingual Linguistic Landscape; Language Policy; Perception; Attitude

1. Introduction

As globalization continues to reshape contemporary societies, multilingualism increasingly influences various aspects of everyday life in China. Among these, local food packaging is a particularly visible and symbolic site of this linguistic shift. In recent years, an increasing number of multilingual texts have appeared on the packaging of local food sold in the Chinese market, with common combinations including, for example, Chinese + English + Japanese, or Chinese + English + Korean. These multilingual texts not only make product information more accessible to foreign consumers both in China and abroad, but also boost sales and reflect the ongoing internationalization of China's food industry. Traditionally, the concept of the linguistic landscape (hereafter LL) refers to the visibility and salience of languages on public and commercial signs within a given territory or region [1]. However, the food packaging signs examined in this study fall under what Shang and Zhou [2] define as "atypical/dynamic LL", in which the carriers and texts of the signs may be mobile, changeable, temporarily displayed, or even written in a non-conforming manner. As they further point out, the choice and presentation of languages in such atypical landscapes result from a complex negotiation among factors such as language policy, audience needs, economic benefits, historical and cultural contexts, and affective considerations, and they often embody the creators' intentions and ideologies.

Building on the above conceptualization of multilingual food packaging as part of atypical/dynamic LL, preliminary observations in the present study reveal that some instances of multilingual LL on local Chinese food packaging actually contravene existing national language policy. While several Chinese scholars have examined this phenomenon, their research has largely concentrated on describing and documenting it, with comparatively little attention paid to consumers' perceptions and attitudes. Backhaus [3] emphasizes that LL derives their meaning only through readers' interpretations, and, in line with this, Said [4] argues that studies neglecting people's attitudes remain limited to descriptive extrapolations of the sociolinguistic environment under investigation. Against this backdrop, the present study seeks to address this gap by analyzing both linguistic practices and public perceptions.

The present study adopts a three-dimensional model encompassing political, physical, and experiential dimensions. Within this framework, it examines how multilingual LL on local food packaging in China deviates from official language policy and explores consumers' perceptions and attitudes toward these discrepancies. The findings are expected to inform government efforts to review or revise language policy related to local food packaging. Moreover, given that atypical signs occupy a marginal position in the linguistic life of cities, the collection of corpora and the analysis of data often present significant challenges, which has long contributed to their exclusion from mainstream LL research [2]. Against this backdrop, the theoretical contribution of the present study lies in providing methodological insights for future investigations of atypical LLs.

2. Literature Review

2.1. Multilingual LL on Commercialization

In the field of commercialization, research on multilingual LL has largely focused on static objects such as shop signs and advertising billboards, with growing attention to dynamic commodities like postcards, clothing, and food packaging. With regard to static objects, studies by Shang and Guo [5], Wang [6], and Anuarudin, Andria, Heng, and Abdullah [7] examined multilingual LL on shop signs in Singapore, non-official shop signs in Beijing, and billboard advertising in Malaysia, respectively. These studies mainly investigate the use of dominant languages in signs and assess how such practices align with language policy and their underlying motivations. Specifically, Shang and Guo [5] found that Chinese occupies a dominant position in bilingual and multilingual shop signs and is typically employed for primary shop names. They argue that this phenomenon stems from the Singapore government's non-interventionist policy regarding language

use in shop signs, which grants business owners considerable autonomy in the design and language choice of their signs. Similarly, Anuarudin et al.[7] demonstrated that the linguistic choices in billboard advertising often deviate from Malaysia's official language policy. They attributed this to the government's lenient enforcement of language policy, which allows advertisers to adopt the language they believe resonates most effectively with the public—a language that is not necessarily the national language. By contrast, Wang[6] observed that, despite Beijing's multilingual context, the language on shop signs strictly complies with legal regulations, reflecting the city's political centrality and the government's tight control over signage.

On the other hand, research on the LL of dynamic commodities has paid more attention to the functions of LL. For instance, Jaworski[8] analyzed the functions of the LL on postcards. Almasy[9], using a diachronic perspective, examined how postcards can reveal patterns of language distribution and language vitality in linguistically mixed regions. Huang[10], from a multimodal perspective, analyzed the semiotic meanings of the LL on T-shirts as well as the process of their construction. In addition, a number of scholars have investigated the functions of the LL on food packaging[11–15].

Overall, research on LL in commercialization has primarily addressed its physical and political dimensions. By contrast, studies of its experiential dimension—specifically, sign readers' perceptions and attitudes—remain relatively limited.

2.2. The Interaction between Multilingual LL on Local Food Packaging and Language Policy in China

The aforementioned scholars, Huang et al.[15] and Zhu et al.[13], investigated the semiotic meanings of specific languages—particularly Japanese—on local Chinese food packaging. They also analyzed the dominance of languages in the multilingual LL of the collected food packaging samples based on certain criteria, and summarized the proportion of cases in which Chinese functioned as a non-dominant language. Specifically, Zhu et al.[13] assessed language dominance based on a hierarchical set of criteria: amount of information, font size, and positional placement (e.g., top/bottom or left/right). Their analysis revealed that Chinese was dominant on 83.7% of the packages while foreign languages were dominant in 16.3% of the cases. In contrast, Huang et al.[15] evaluated language dominance using criteria such as relative font size, order of appearance, and overall visual salience. They found that foreign languages were dominant in 14.3% of the samples, and in 3.2% of the cases, Chinese and a foreign language were equally dominant. Both studies point out that the multilingual LL on local Chinese food packaging exhibits phenomena that are inconsistent with official language policy. However, the policy-oriented analyses in the two studies display certain biases. Although China's language policy do require that local food packaging use Chinese as the dominant language, the criteria for determining dominance primarily focus on font size and whether corresponding Chinese translations are provided for foreign-language content, rather than on the order of appearance or positional placement emphasized in these studies. Therefore, the conclusions of the two studies cannot fully capture how far the multilingual LL on local Chinese food packaging diverges from official language policy.

2.3. Attitudes of Consumers toward Multilingual LL on Local Food Packaging in China

The studies by Huang et al.[15] and Zhu et al.[13] both address the experiential dimension, using questionnaires to examine Chinese consumers' perceptions of the use of Japanese on local food packaging. Huang et al.[15] found that 54% of respondents were more inclined to purchase products with Japanese on the packaging, with 54.6% stating that such products "look more high-end" and 45.4% considering them "cuter". Zhu et al.[13] reported that 88.9% of respondents felt that the presence of Japanese did not affect their understanding of the product's attributes; additionally, 68.2% indicated that Japanese usage would not influence their purchasing decisions, while 31.8% stated that the inclusion of Japanese would increase their purchase intention. In summary, although these two studies address the experiential dimension, they primarily focus on consumers' attitudes toward the use of specific languages on food packaging, rather than on the LL of the packaging itself. Specifically, while the studies point out that the LL on local Chinese food packaging sometimes deviates from official language policy, they do not examine consumers' attitudes toward these deviations.

A review of existing research on LL of local food packaging in China shows that it generally revolves around four

aspects: the functions of the LL on food packaging, the ways in which the LL is presented, the discrepancies between the LL and language policy, and consumers' attitudes toward specific languages on packaging. In other words, previous studies have addressed the three dimensions proposed in this research framework—physical, political, and experiential—but have not used a systematic framework to integrate them into a coherent whole. Consequently, the research exhibits certain issues: the analysis of discrepancies between the physical and political dimensions is somewhat flawed, and the examination of the experiential dimension is not fully grounded in an assessment of the discrepancies between the physical and political dimensions. Based on this, the present study proposes using a three-dimensional (physical, political, and experiential) analytical approach as its theoretical framework to provide a comprehensive interpretation of the multilingual LL on local food packaging in China.

3. Theoretical Framework for the Current Study

Referring to Lefebvre's[16] conceptualization of space as consisting of three dimensions: "spatial practice", "conceived space" and "lived space"—Trumper-Hecht[17] develops a three-dimensional analytical model for understanding the LL. In this model, "spatial practice" as the *physical* dimension of the LL, "conceived space" as the *political* dimension of LL, and "lived space" as the *experiential* dimension of LL. Specifically, the physical dimension of the LL refers to the actual presentation of signs, the political dimension of the LL refers to policymakers' perspectives and corresponding LL policies, and the experiential dimension of the LL concerns how sign readers perceive and interact with the LL (see **Figure 1**).

To verify the interconnections among the physical, political, and experiential dimensions, Trumper-Hecht[17] applied this framework to examine the LL of the city of Upper Nazareth. By comparing residents' perceptions of the LL (experiential dimension) with the documented reality of signage captured by cameras (the physical dimension), researchers could assess the extent to which residents actually notice the LL. Furthermore, comparing residents' perceptions and attitudes toward the LL (experiential dimension) with the views of local policymakers and their corresponding policies (political dimension) offered valuable insights into the forces shaping Upper Nazareth's LL—and, by extension, the city's identity.

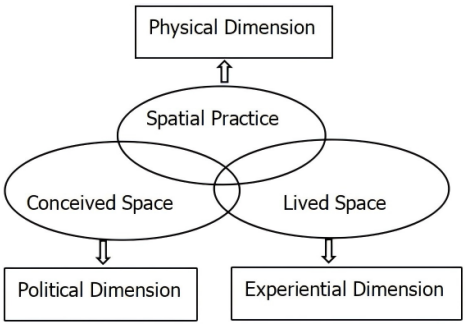

Figure 1. Three-dimensional Analytical Model.

This study adopts the three-dimensional analytical model as its theoretical framework. Based on this framework, it examines relevant language policy concerning the use of multiple languages on local food packaging in China from the political dimension, analyzes the overall multilingual LL on local food packaging from the physical dimension, and identifies discrepancies between the observed LL and official policy. Finally, from the experiential dimension, it investigates consumers' perceptions of and attitudes toward these discrepancies.

4. Data and Methods

4.1. Data Collection

This study adopts a combination of quantitative and qualitative research methods. As shown in **Table 1**, each dimension of the study corresponds to a different data collection method.

Table 1. Data Collection Methods Across Different Dimensions.

Types of Dimension	Data Collection Method
Political	Secondary Data
Physical	Field Investigation
Experiential	Questionnaire

First, language policies related to the use of language on local food packaging in China (the political dimension) were collected from official government websites.

Before commencing data collection for the second dimension—the physical dimension—it is necessary to define the scope of food packaging. Given the broad and diverse nature of the food category, it is not feasible to include all types of food within the scope of this research. Drawing on the findings of Huang et al.[15], which indicate that snack packaging exhibits the highest frequency of foreign language use among the samples collected, this study narrows its focus accordingly. Here, "snack" refers specifically to pre-packaged, commercially produced food items intended for consumption between meals, where the packaging serves as a platform for linguistic expression. Unpackaged or bulk snacks are excluded from the analysis, as the study targets products with clearly printed and identifiable language elements on their packaging. In addition, since this study focuses on the multilingual LL of local food packaging in China, the term "local" specifically refers to products developed by Chinese domestic brands and manufactured within China. Imported foods, as well as products produced in China under contract manufacturing for foreign brands, are excluded from the scope of this research.

To investigate the physical dimension of the multilingual LL, samples of local snack packaging were collected through field investigation in August 2024. The field investigation approach was chosen for its effectiveness in capturing detailed, context-rich data[18]. Given the large volume and wide geographic distribution of such packaging, a typical case sampling strategy was employed to ensure the representativeness of the data. Representative sampling sites included major supermarkets (RT-Mart, Aeon), local snack shops (ZhaoYiming, Busy For You, and TangChao), as well as popular online platforms (Taobao.com, Pinduoduo). This multi-channel approach allowed for the inclusion of products that reflect mainstream patterns of multilingual usage in the Chinese snack market. Following Gorter's[19] approach to LL research, which emphasizes photographic documentation, this study systematically photographed physical packaging collected from offline sources and archived digital samples from online platforms.

Finally, data on consumers' perceptions of and attitudes (experiential dimension) were collected through a questionnaire. The questionnaire consisted of three sections. The first section collected demographic information. The second section focused on the perceptions and included three items, adapted from Qi, Zhang, and Sorokina[20]. The third section addressed the attitudes, comprising seven items adapted from the questionnaires of Shang[21], Ujvari[22], and Akhter, Fareed, and Shafqat[23]. The questionnaire targeted participants aged 18 and above with experience in purchasing snacks. It employed convenience sampling—a type of non-probability sampling in which members of the target population are selected based on practical criteria such as ease of access, geographical proximity, availability at a given time, or willingness to participate[24]. This approach is widely used in social research because of its efficiency and feasibility in reaching respondents[25]. However, convenience sampling also has limitations, such as potential selection bias and restricted generalizability[26]. To mitigate these limitations, this study recruited participants through the "mutual response" function of the Wenjuanxing platform, thereby expanding the participant pool. The community consists of a large number of registered users who voluntarily complete each other's surveys in exchange for having their own surveys answered, which helps ensure a relatively diverse sample in terms of age, occupation, and geographic distribution within China.

4.2. Data Analysis

4.2.1. Snack Packaging Data

Within the physical dimension, a total of 944 snack packaging samples were collected through field investigation. As shown in **Figure 2**, each flat surface, such as the one illustrated was counted as a single sample. In accordance with language policy, the analysis of the multilingual LL on snack packaging adopted a quantitative approach, focusing primarily on three aspects: language combinations, information arrangement, and the correspondence between foreign languages and Chinese.

4.2.2. Questionnaire Data

(1) Participants of the questionnaire

A total of 119 responses were collected, of which 114 were deemed valid after removing five incomplete or inconsistent responses. Among the 114 respondents, 42 were male and 72 were female. In terms of age distribution, the largest group was aged 30–40, accounting for 40.3%, followed by

the 18–30 age group, which made up 33.3%. According to statistics from iiMedia Research[27], nearly 80% of snack consumers in China are between the ages of 22 and 40. This closely aligns with the age distribution of the sample in this study, indicating that the survey sample is relatively representative. In terms of purchase frequency, nearly half of the respondents (47.3%) reported buying snacks 1–2 times per week, while 29.82% purchased snacks 3–5 times per week, and 7% indicated that they buy snacks almost daily. Overall, 84% of participants demonstrated a relatively high frequency of snack consumption, providing a solid behavioral foundation for their responses on the perception and attitude scales. Finally, regarding the preferences for domestic and foreign snack brands, the survey results indicate that 38.6% of consumers purchase both but favor domestic brands in terms of frequency. In contrast, 21.9% demonstrate a clear preference for imported brands. Notably, all respondents have experience consuming both domestic and foreign snack brands—a sample characteristic that ensures the validity of their responses to the subsequent scale-based items.

(2) Descriptive analysis and correlational analysis of the questionnaire data

The questionnaire data in this study were analyzed using two approaches: descriptive analysis and correlational analysis, conducted with SPSS 26.0. The descriptive analysis comprised four key components: (1) the demographic characteristics of respondents; (2) the frequencies and percentages of responses to individual items, which revealed general response patterns; (3) measures of central tendency (e.g., mean, mode, and median), which were used to identify overall tendencies in the major variables; and (4) measures of dispersion (e.g., standard deviation and range), which reflected the variability and distribution of opinions among respondents. These analyses aimed to provide a comprehensive overview of consumers' perceptions of and attitudes toward the discrepancies between multilingual LL and existing language policy. On the other hand, the correlational analysis primarily focused on the associations between demographic variables (mainly age, frequency of snack purchases, and preference for domestic versus imported snack brands) and the two dimensions of perception and attitude.

(3) Reliability analysis of the questionnaire

The reliability analysis of the questionnaire, conducted using SPSS 26.0, is presented in **Table 2**. According to the criteria outlined by Hinton et al.[28], the perception dimension exhibits moderate internal consistency, whereas the attitude dimension demonstrates high reliability. Additionally, the overall Cronbach's alpha coefficient exceeds 0.80, suggesting that the questionnaire has good internal consistency and is considered reliable.

Figure 2. Food Packaging Sample.

Notes:
特怡诗 (Teyishi); 整粒草莓呦! (Whole strawberry!); いちごの一粒 (One whole strawberry); 每颗内有整粒草莓・牛奶味 (Each piece contains a whole strawberry · Milk flavor); 代可可脂巧克力制品 (Compound chocolate product); 新鲜挑选新鲜草莓鲜果 (Freshly selected strawberries); 真空冷冻脱水保留草莓鲜果的营养成分 (Vacuum freeze-dried to retain the strawberry's nutrients); 浓香醇厚的感觉包裹着完整的草莓果 (Rich and creamy taste wrapping a whole strawberry); 牛奶味 (Milk flavor); ミルクの味 (Taste of milk); 净含量：60 克 (Net weight: 60g).

Table 2. Cronbach's Alpha Coefficients Assessing the Reliability of the Questionnaire.

Dimension	Items	Cronbach's Alpha Coefficient
Perception	3	0.623
Attitude	7	0.744
Total (All 10 items)		0.810

5. Results and Findings

In this chapter, the collected data will be analyzed from three different dimensions.

5.1. Political Dimension: Regulations on Language Usage on Local Food Packaging

As an explicit expression of language policy[29], the *Law of the People's Republic of China on the Standard Spoken and Written Chinese Language* was adopted at the 18th Meeting of the Standing Committee of the Ninth National People's Congress in 2000 and officially promulgated in 2001. Article 3 of Chapter 1 affirms that the state promotes the use of Putonghua and standardized Chinese characters. This provision establishes Chinese as the official language of China, with Putonghua as its standard dialect. This law also addresses language use on packaging. Article 14 of Chapter Two stipulates that shop signs, advertisements, as well as the packaging and instructions of goods sold within the country, shall primarily use the national standard spoken and written language.

This law also stipulates the use of both Chinese and foreign languages in certain contexts. Article 13 of the Law states that when foreign languages are used in signs, advertisements, and notices intended for public service purposes, standardized Chinese characters must also be used simultaneously. Regarding the use of foreign languages in the field of local food packaging, the government has established clear guidelines and has successively issued documents such as the *Food Labeling Management Regulations (2009),* the *General Rules for the Labeling of Prepackaged Foods* (2011), the *Measures for the Supervision and Inspection of Food Production and Business Operations* (2022), etc. The *Food Labeling Management Regulations* (2009) stipulates that food labels may simultaneously use Hanyu Pinyin or minority languages, as well as foreign languages, provided there is a corresponding relationship with the Chinese text. The size of the foreign-language text must not exceed that of the corresponding Chinese, with the exception of registered trademarks. The *General Rules for the Labeling of Prepackaged Foods* (2011) specified that foreign languages may be used on labels of prepackaged foods, but must correspond to the Chinese text, except in the case of trademarks, names and addresses of manufacturers and distributors of imported food, and website addresses. All foreign language text must not be larger than the corresponding Chinese characters, again with the exception of trademarks. The *Measures for the Supervision and Inspection of Food Production and Business Operations* (2022) states that inaccurate translations or cases where the font size or height of foreign language text exceeds that of the Chinese may be deemed labeling defects as defined in Article 125, Paragraph 2 of the Food Safety Law. In summary, two core principles governing the use of foreign languages on food packaging are as follows: the font size of foreign languages must not exceed that of the Chinese text; moreover, all foreign language content must have a corresponding Chinese translation.

5.2. Physical Dimension: Multilingual LL on Local Food Packaging in China

5.2.1. Language Combinations Presented on Local Food Packaging Signs

This study identified a total of five languages used on the snack packaging, excluding Chinese dialects and minority scripts. These languages are Chinese, English, Japanese, Korean, and Thai. It was also revealed that there were five types of multilingual language combinations present in the signs. Among these, the most frequent combination was "Chinese + English + Japanese" accounting for an overwhelming 97.6% of the total. This was followed by "Chinese + English + Korean", with a share of 1.5%. "Chinese + English + Thai", "Chinese + Japanese + Korean" and "Chinese + English + Japanese + Korean" had a smaller share of 0.3% each. These findings are summarized in **Table 3**.

5.2.2. Font Size Comparisons

Although 944 samples were collected, the proportion of language combinations other than "Chinese + English + Japanese" was too small to allow meaningful comparison. Therefore, the analysis of font size was limited to Chinese, English, and Japanese in snack packaging signs, and only 921 samples were included in this part of the study. As shown in **Table 4**, seven types of language combinations were identified. Unlike road signs or billboards, snack packaging signs typically consist of several components—such as the brand name, product name, description, and catchphrases. Another notable feature is that different parts of the same packaging often display text in varying font sizes. In this study,

any instance in which the font size of a foreign language exceeds that of the Chinese characters on a single packaging is considered non-compliant with existing policy.

According to the data presented in **Table 4**, 42% of the packaging samples feature Chinese text in a larger font size. However, 22.4% of the samples show instances where the foreign-language text(s) appear larger than the Chinese, with Japanese being the most prominent. This indicates that, in terms of font size, 22.4% of the samples do not comply with current language policy regulations.

Table 3. Language combinations used on snack packaging signs (N = 944).

Types	Counted Signs	Percentage %
Chinese + English + Japanese	921	97.6%
Chinese + English + Korean	14	1.5%
Chinese + English + Thai	3	0.3%
Chinese + Japanese + Korean	3	0.3%
Chinese + English + Japanese + Korean	3	0.3%

Table 4. The font size comparisons between Chinese and foreign languages on food packaging signs (N = 921).

Types	Counted Signs	Percentage %
Chinese font is bigger	387	42.0%
English and Japanese the same size with Chinese font	55	6.0%
Japanese font the same with Chinese while English font smaller than Chinese	167	18.1%
English font the same with Chinese while Japanese font smaller than Chinese	106	11.5%
Both English and Japanese font are bigger	28	3.0%
Japanese font bigger than Chinese while English font is smaller or the same with Chinese	102	11.1%
English font bigger than Chinese while Japanese font smaller or the same with Chinese	76	8.3%

5.2.3. Information Arrangement

When analyzing multilingual signs, translations cannot be ignored as part of the realities in a LL, as they can help to understand the relationship between different languages on one sign[30]. In other words, the analysis of information arrangement is related to the next aspect of this study. As shown in **Table 5**, the number of samples in which all information is reproduced at all is very small, only 1%. The most common type was fragmentary, which means the full information of multilingual texts in packaging is given only in Chinese, but in which selected parts have been translated into an additional language(s). There are also exceptions. Some samples show all the information presented in Japanese, with other parts in English or Chinese. Such cases clearly violate current language policy. The second most frequent type is overlapping translation, where no single language on the packaging conveys all the product information. In these cases, the foreign language lacks a complete Chinese counterpart, with Japanese being the most common example. The least frequent type is complementary translation, in which different languages on the packaging convey distinct pieces of information, with no duplication between them.

5.2.4. Corresponding Relationship between Different Languages

As shown in **Table 6**, 78.0% of the English and Japanese texts corresponded with the Chinese on the signs, indicating compliance with language policy. However, 22% of the signs did not meet this requirement. The most notable discrepancies were found in the Japanese texts, which often lacked corresponding Chinese translations. As illustrated in **Figures 3** and **4**, the most frequently untranslated Japanese phrases were "おいしい" (meaning "delicious") and "かりかり" (meaning "crunchy"). Notably, 4.1% of the signs featured both English and Japanese texts without corresponding Chinese equivalents.

Table 5. Information arrangement (N = 921).

Types	Counted Signs	Percentage %
Duplicating	9	1.0%
Fragmentary	711	77.2%

Table 5. *Cont.*

Types	Counted Signs	Percentage %
Overlapping	196	21.3%
Complementary	5	0.5%

Table 6. Corresponding relationship between Chinese and foreign languages (N = 921).

Types	Counted Signs	Percentage %
All the texts of English and Japanese corresponded with Chinese	718	78.0%
Had case(s)that Japanese did not correspond with Chinese	126	13.7%
Had case(s) that English did not correspond with Chinese	38	4.1%
Had case(s) that Japanese and English did not correspond with Chinese	39	4.2%

Figure 3. “おいしい”with no Chinese translation.
Notes:
千载缘 (qianzaiyuan); 北海道牛乳饼干 (Hokkaido Milk Biscuits); おいしいですの (It’s delicious); 北海道牛乳ビスケット (Hokkaido Milk Biscuits); 精選上質牛乳 3.6 (Selected high-quality milk 3.6); 牛乳味 (Milk flavor); 净含量：85g (Net weight: 85g); 图片仅供参考 (Image for reference only).

Figure 4. “かりかり”with no Chinese translation.
Notes:
原味の味が (Original flavor taste); 藤野いむら (fujinoimura); 鱼酥のかりかり (Crispy fish snack); 魚の肉 40%含量 (Contains 40% fish meat); 鱼肉含量 (Fish meat content); 膨化食品 (Puffed food); 净含量：42 克 (Net weight: 42g); 图案仅供参考 (Image for reference only).

5.3. Experiential Dimension: Consumers’ Perceptions and Attitudes

5.3.1. Perceptions of Discrepancies between Multilingual LL on Local Food Packaging and Language Policy

(1) Descriptive analysis

A questionnaire on consumers’ perceptions of the discrepancies between multilingual LL and language policy on local food packaging was conducted, with the specific data results shown in **Table 7**. The descriptive statistics for the variable “I frequently encounter local snacks in China with packaging that includes multiple language” indicate a mean score of 3.53 (SD = 0.864) on a 5-point Likert scale. This suggests that, on average, participants somewhat agree with the statement, indicating a moderate level of exposure to multilingual packaging on local snacks in China. The relatively low standard deviation (0.864) implies that most responses clustered around the mean, reflecting a general consensus among participants regarding the frequency of encountering such packaging. For the variable “I have noticed that the font size of foreign-language text(s) on local Chinese snack packaging is larger than that of the Chinese text”, the mean score is 3.24 with a standard deviation of

1.016. This result suggests that participants' agreement with the statement is slightly above the midpoint (3), indicating a moderate level of awareness of this phenomenon. The standard deviation of 1.016, which is moderately high, reflects a wide range of responses, suggesting that participants were divided in their perceptions regarding the prominence of foreign-language text compared to Chinese in terms of font size. Finally, the mean score for the variable "I have noticed that foreign-language text(s) on Chinese snack packaging without corresponding Chinese translations" is slightly higher than that of the previous item. This suggests that the absence of Chinese translations alongside foreign-language text on packaging is more noticeable to consumers and may attract greater attention.

(2) Correlation analysis

As shown in **Table 8**, age and brand preference (domestic vs. foreign) were not significantly related to any of the perception variables, including awareness of multiple language annotations, noticing larger foreign-language fonts, or missing Chinese translations (all $p > 0.05$). Regarding snack purchasing frequency, a significant negative correlation was found only with noticing that foreign languages appear in larger font than Chinese ($r = -0.214$, $p = 0.022$), suggesting that frequent buyers are less likely to perceive foreign languages as more visually salient. No significant correlations were observed between purchasing frequency and the other two perception variables ($r = -0.131$, $p = 0.163$; $r = -0.032$, $p = 0.736$).

5.3.2. Attitude towards Discrepancies between Multilingual LL on Local Food Packaging and Language Policy

(1) Descriptive analysis

This section investigates participants' attitudes toward the discrepancies between the LL on local snack packaging and established language policy, as measured through seven related items. As shown in **Table 9**, the mean scores for all variables range from 3.12 to 3.58, indicating a generally neutral to slightly positive stance. In other words, participants tend to hold a moderately accepting but not strongly affirmative attitude toward such discrepancies, with some variation in their responses.

Among the items, participants' attitudes toward the absence of corresponding Chinese translations on local snack packaging were relatively clear. This is reflected in three variables: the perception that such packaging is a waste of time to read, creates barriers to understanding, and reminds them of foreign products. Besides, participants' acceptance of foreign-language text appearing in larger font sizes than Chinese, as well as the absence of corresponding Chinese translations on local snack packaging, remained at a moderate level, with mean scores of 3.29 and 3.12 respectively. The variable "It is acceptable when foreign-language text(s) appear on the packaging of Chinese snacks without corresponding Chinese translation(s)" recorded the lowest mean score, indicating relatively low acceptance of this phenomenon. In contrast, the three items evaluating the difficulties caused by this absence—such as wasted time, comprehension barriers, and associations with foreign products—received the highest mean scores. This contrast demonstrates a logical consistency between participants' low acceptance of the phenomenon and their recognition of the problems it creates.

(2) Correlation analysis

As shown in **Table 10**, age, purchase frequency, and brand preference were not significantly correlated with any of the three cognitive variables. Age and purchase frequency showed no significant associations with perceiving larger foreign font size or the absence of Chinese translations as making products appear high-end, as a sign of internationalization, or as evoking foreign associations (all $p > 0.05$). Brand preference also showed no significant correlations, although its link with perceiving these features as a sign of internationalization was marginal ($r = -0.171$, $p = 0.069$). Overall, demographic and behavioral factors do not appear to shape consumers' attitudes toward LL deviations on domestic snack packaging.

As shown in **Table 11**, age and brand preference were not significantly correlated with either of the two behavioral variables ($p > 0.05$). However, purchase frequency was negatively correlated with perceiving untranslated foreign text(s) as a waste of time ($r = -0.265$, $p = 0.004$), indicating that frequent buyers are more tolerant of such packaging. No significant relationship was found between purchase frequency and perceiving untranslated text as difficult to understand ($p = 0.379$).

The results in **Table 12** show that age and brand preference are not significantly correlated with acceptance of larger foreign font size and no Chinese translation (all $p > 0.34$). In contrast, purchase frequency is negatively associated with

acceptance of larger foreign font size (r = −0.205, p = 0.029) and marginally with no Chinese translation (r = −0.170, p = 0.070), suggesting that frequent buyers are less accepting of these practices.

Table 7. Descriptive Statistics for Perception Dimension Items.

Variable	Mean	Standard Deviation
I frequently encounter local snacks in China with packaging that includes multiple languages.	3.53	0.864
I have noticed that the font size of foreign-language text(s) on local Chinese snack packaging is larger than that of the Chinese text.	3.24	1.016
I have noticed that foreign-language text(s) on Chinese snack packaging without corresponding Chinese translations.	3.47	1.024

Table 8. Correlation Analysis for Perception Dimension Items.

	Your Age	Frequency of Purchasing Snacks	Brand Preference (Domestic vs. Foreign)	I Frequently Encounter Local Snacks in China with Packaging that Includes Multiple Languages.	I Have Noticed That the Font Size of Foreign-Language Text(s) on Local Chinese Snack Packaging is Larger Than That of The Chinese Text	I Have Noticed That Foreign-Language Text(s) on Chinese Snack Packaging without Corresponding Chinese Translations.
Your age	1	0.001	−0.006	0.058	0.047	−0.024
Sig. (2-tailed)		0.988	0.953	0.539	0.618	0.801
N		114	114	114	114	114
Frequency of purchasing snacks	0.001	1	0.081	−0.131	−0.214*	−0.032
Sig. (2-tailed)	0.988		0.393	0.163	0.022	0.736
N	114		114	114	114	114
Brand preference (domestic vs. foreign)	−0.006	0.081	1	0.096	−0.033	0.094
Sig. (2-tailed)	0.953	0.393		0.311	0.727	0.320
N	114	114		114	114	114

Note. * p < 0.05 (two-tailed).

Table 9. Descriptive Statistics for Attitude Dimension Items.

Variable	Mean	Standard Deviation
When I choose a Chinese snack, I think that reading foreign-language text(s) on the packaging without corresponding Chinese translation(s) is a waste of time.	3.52	1.024
When selecting a Chinese snack, I find it difficult to understand the meaning of foreign-language text(s) on the packaging when no corresponding Chinese translation(s) are provided.	3.55	1.082
Local snack packaging that features foreign-language text(s) in larger font sizes than Chinese, or lacks corresponding Chinese translations, appears unique and upscale.	3.18	1.214
Local snack packaging that features foreign-language text(s) in larger font sizes than Chinese, or lacks corresponding Chinese translations, is a symbol of internationalization.	3.24	1.243
Local snack packaging that features foreign-language text(s) in larger font sizes than Chinese, or lacks corresponding Chinese translations, reminds me of foreign products.	3.58	1.088
It is acceptable when foreign-language text(s) appear in larger font(s) than Chinese characters on the packaging of Chinese snacks.	3.29	1.188
It is acceptable when foreign-language text(s) appear on the packaging of Chinese snacks without corresponding Chinese translation(s).	3.12	

Table 10. Correlation Analysis for Attitude Dimension (Cognitive).

	Your Age	**Frequency of Purchasing Snacks**	**Brand Preference (Domestic vs. Foreign)**	**Local Snack Packaging That Features Foreign-Language Text(s) in Larger Font Sizes Than Chinese, or Lacks Corresponding Chinese Translations, Appears Unique and Upscale.**	**Local Snack Packaging That Features Foreign-Language Text(s) in Larger Font Sizes Than Chinese, or Lacks Corresponding Chinese Translations, is a Symbol of Internationalization.**	**Local Snack Packaging That Features Foreign-Language Text(s) in Larger Font Sizes Than Chinese, or Lacks Corresponding Chinese Translations, Reminds Me of Foreign Products.**
Your age (Pearson correlation)	1	0.001	−0.006	0.035	0.101	−0.035
Sig. (2-tailed)		0.988	0.953	0.711	0.286	0.709
N	114	114	114	114	114	114
Frequency of purchasing snacks (Pearson Correlation)	0.001	1	0.081	−0.137	−0.138	0.040
Sig. (2-tailed)	0.988		0.393	0.147	0.142	0.674
N	114	114	114	114	114	114
Brand preference (domestic vs. foreign)	−0.006	0.081	1	−0.026	−0.171	−0.029
Sig. (2-tailed)	0.953	0.393		0.780	0.069	0.757
N	114	114	114	114	114	114

Table 11. Correlation Analysis for Attitude Dimension (Behavioral).

	Your Age	**Frequency of Purchasing Snacks**	**Brand Preference (Domestic vs. Foreign)**	**When I Choose a Chinese Snack, I Think that Reading Foreign-Language Text(s) on the Packaging Without Corresponding Chinese Translation(s) is a Waste of Time.**	**When Selecting a Chinese Snack, I Find It Difficult to Understand the Meaning of Foreign- Language Text(s) on the Packaging When No Corresponding Chinese Translation(s) are Provided.**
Your age (Pearson correlation)	1	0.001	−0.006	0.058	0.013
Sig. (2-tailed)		0.988	0.953	0.541	0.888
N	114	114	114	114	114
Frequency of purchasing snacks (Pearson correlation)	0.001	1	0.081	−0.265**	−0.083
Sig. (2-tailed)	0.988		0.393	0.004	0.379
N	114	114	114	114	114
Brand preference (domestic vs. foreign) (Pearson correlation)	−0.006	0.081	1	−0.136	0.023
Sig. (2-tailed)	0.953	0.393		0.149	0.804
N	114	114	114	114	114

Note. ** $p < 0.01$ (two-tailed).

Table 12. Correlation Analysis for Attitude Dimension (Affective).

	Your Age	Frequency of Purchasing Snacks	Brand Preference (Domestic vs. Foreign)	It is Acceptable When Foreign-Language Text(s) Appear in Larger Font(s) Than Chinese Characters on the Packaging of Chinese Snacks.	It is Acceptable When Foreign-Language Text(s) Appear on the Packaging of Chinese Snacks without Corresponding Chinese Translation(s).
Your age (Pearson correlation)	1	0.001	−0.006	0.089	0.042
Sig. (2-tailed)		0.988	0.953	0.348	0.661
N		114	114	114	114
Frequency of purchasing snacks (Pearson correlation)	0.001	1	0.081	−0.205*	−0.170
Sig. (2-tailed)	0.988		0.393	0.029	0.070
N	114		114	114	114
Brand preference (domestic vs. foreign) (Pearson correlation)	−0.006	0.081	1	−0.046	0.040
Sig. (2-tailed)	0.953	0.393		0.626	0.672
N	114	114		114	114

Note. * $p < 0.05$ (two-tailed).

6. Disscussion

6.1. Discrepancies between Multilingual LL on Local Food Packaging and Language Policy

According to the field investigation data, approximately 22.4% of the sampled products failed to comply with the policy stipulating that foreign-language text should not appear in a larger font than Chinese. Additionally, 22% did not comply with the policy that all foreign-language text be accompanied by corresponding Chinese translations. Compared with earlier studies by Huang et al.[15] and Zhu et al.[13], this proportion has shown a slight increase. This trend may be partly attributed to the practices of sign makers, who,when constructing LL on food packaging, often seek to to enhance the uniqueness of the design or elevate the product's perceived quality by incorporating foreign-language text. However, a lack of awareness or disregard for relevant language policies among some sign makers may lead to unintended deviations. Against the backdrop of the growing prevalence of multilingualism on local snack packaging in China, discrepancies between the multilingual LL and official language policy appear to be becoming more pronounced. This phenomena not only stems from some producers' insufficient awareness of language norms but also reflects the tension between the commodification of language in a globalized context and the governance of local languages.

6.2. General Awareness of the Discrepancies between Multilingual LL on Local Food Packaging and Language Policy

Based on the data above, nearly half of the respondents reported having noticed discrepancies between the multilingual LL on local snack packaging and current language policy, suggesting a general awareness of such phenomenon. Naturally, participants' awareness of specific features of the LL varied. Specifically, nearly 51% of the participants indicated that they had noticed instances where foreign-language text lacked corresponding Chinese translations, whereas only 46% reported noticing that the font size of foreign languages was larger than that of Chinese. This discrepancy may suggest that consumers' sensitivity to linguistic features on packaging is partly shaped by perceived functional relevance. Missing translations could directly hinder understanding or influence purchasing decisions, making them more salient. In contrast, differences in font size typically do not affect access to essential information, and thus may receive less attention. This result aligns with the "language instrumental-

ism" cognitive pattern, which posits that the public's sensitivity to linguistic phenomena is positively correlated with their communicative utility.

In addition, demographic characteristics have a limited influence on consumers' perception of multilingual LL and deviations from language policy on local snack packaging. Specifically, age and brand preference show no significant relationship with such perceptions, whereas snack purchasing frequency is negatively associated with noticing that foreign-language text(s) appear in larger font than Chinese. This finding may suggest that frequent buyers are less sensitive to packaging design or pay less attention to visual differences due to habitual exposure to familiar brands.

6.3. Moderate Opposition to Discrepancies between Multilingual LL on Local Food Packaging and Language Policy

According to the survey results, the proportion of participants who agreed or expressed support for various viewpoints—whether concerning the negative effects of foreign-language text(s) on local snack packaging without corresponding Chinese translations (such as causing reading difficulties or wasting time), the perceived positive effects of such features (such as evoking associations with foreign products or enhancing the sense of internationalization and product prestige), or the overall acceptability of these phenomena—generally hovered around 50%. In other words, the participants did not demonstrate a strong consensus regarding the discrepancies between multilingual LL on snack packaging and official language policy. The distribution of responses—whether supporting, opposing, or accepting such features—remained relatively balanced around the midpoint, suggesting a generally moderate or ambivalent stance. According to consumer culture theory, consumption behavior not only reflects functional choices but also conveys expressions of identity and social relationships. In selecting snack packaging, some consumers focus more on the convenience of accessing textual information, while others pay greater attention to the sense of prestige conveyed by the packaging as a way to enhance their social status. With the overall improvement of language proficiency among the population, coupled with the relatively low difficulty of foreign-language text on food packaging, there is no clear tendency for consumers to perceive the lack of corresponding Chinese translations on local snack packaging as a strongly negative issue. At the same time, with the ongoing process of China's internationalization, the rise of domestic brands, and the continuous strengthening of cultural confidence, the era in which foreign-language text functioned as a "language of prestige" symbolizing product high-end status may be gradually fading. Consequently, the perceived positive effects of this phenomenon have also not gained broad recognition among consumers.

In addition, the above findings indicate that demographic factors such as age and brand preference have limited influence on consumers' attitudes toward discrepancies from language policy in the LL of domestic snack packaging. In contrast, purchasing frequency appears to play a more nuanced role: frequent buyers are less likely to perceive small amounts of untranslated foreign-language text(s) as a waste of time; however, they show lower acceptance of more visually salient deviations, such as foreign text appearing in significantly larger fonts than chinese or completely lacking chinese translations. Based on the above findings, namely that snack purchasing frequency is negatively associated with noticing that foreign-language text(s) appear in larger fonts than Chinese, it can be inferred that frequent snack buyers have developed habitual perceptions of familiar packaging. Consequently, they are more likely to maintain their existing cognitive patterns when encountering relatively minor design variations on the packaging (such as foreign-language text(s) in larger fonts than Chinese or untranslated foreign-language text(s)) and are less inclined to disrupt this habitual perception.

According to the MIPS framework proposed by Gorter[31], language policy, the presentation of LL, the role of sign makers in shaping them, and the perceptions of and attitudes of sign readers form a dynamic and interrelated cycle. As part of this ongoing interaction, sign readers' attitudes toward the LL may, in turn, influence how such LLs are constructed and may even contribute to revisions or adjustments in language policy. Based on the findings of this study, it can be inferred that although consumers are generally aware of discrepancies between the multilingual LL on food packaging and existing language policy, and they express neutral negative views, such awareness and attitudes have not yet reached a level that prompts sign makers or manufacturers to take corrective action. Moreover, within the context of China's domestic market, some consumers—

particularly loyal supporters of local brands—may not be sensitive to these linguistic inconsistencies. Instead, they may interpret the use of foreign-language elements as signs of internationalization or brand sophistication, rather than as violations of language policy. This perceptual bias further weakens the potential for consumers to exert bottom-up influence on shaping or reinforcing compliance with language norms. Based on this, the regulation of language norms on local food packaging in contemporary China faces a significant challenge: there exists a divergence between policymakers' normative intentions, the language commodification strategies of market actors, and consumers' interpretations. An effective governance model should move beyond one-sided compliance monitoring and instead regard these three elements as an interconnected, dynamic whole, promoting their positive interaction through appropriate measures.

7. Conclusions

A gap often exists between the official (de jure) language policies and the actual (de facto) language practices and their public visibility[31]. Therefore, examining the relationship between language policy and the LL remains a central concern in LL research. This study examines the discrepancies between multilingual LL and language policies on local food packaging in China. Drawing on Trumper-Hecht's three-dimensional analytical model, this research systematically reviews relevant language policy regulations, analyzes specific manifestations of policy-LL mismatches in packaging practices, and investigates consumer perceptions and attitudes through a questionnaire survey. In doing so, it contributes to addressing a gap in the existing body of research.

Based on the collected samples of local food packaging, discrepancies with language policy were observed in two key areas: first, the font size of foreign-language text is larger than that of Chinese, and second, foreign-language text lacks corresponding Chinese translations. In both cases, non-compliance was found in approximately 22% of the samples. Although relevant language regulations have been continually introduced at the national level, the findings of this study suggest that such deviations are becoming more pronounced compared to earlier research.

Moreover, the questionnaire results indicate that consumers' perceptions and attitudes toward the discrepancies do not exhibit a clear or consistent pattern. While most respondents are aware of the existence of such issues, the overall level of concern remains low, and expressions of opposition are relatively weak—particularly in response to cases where foreign-language text(s) appear in a larger font than Chinese. This limited public reaction may, to some extent, contribute to the persistence of these discrepancies—an issue that, as previously discussed, appears to be growing more pronounced over time. In addition, the results indicate that demographic factors examined in this questionnaire, such as age, snack purchasing frequency, and brand preference, have no significant impact on consumers' perceptions and attitudes. Whether other potential factors, such as educational background or foreign language proficiency, exert a more pronounced influence on consumers' perceptions and attitudes remains to be further investigated.

Empirical insights drawn from LL studies can inform the development or revision of formal language policies, contributing to the ongoing negotiation and transformation of the sociolinguistic environment[32]. How people evaluate language choices and usage in the LL is crucial for understanding how the LL is constructed[33]. This study found that a considerable proportion of domestic food packaging publicly sold in China displays LL phenomena that violate relevant language policies. This situation can be traced back to the fact that private sign producers enjoy substantial autonomy in allocating linguistic resources, while supervisory authorities often adopt flexible and lenient management practices in implementation. As a result, top-level language policies tend to remain largely symbolic and fail to be effectively enforced[33]. Moreover, consumers exhibit only a certain degree of awareness and limited opposition toward such phenomena, which to some extent further contributes to their persistence. Based on these findings, the present study puts forward the following recommendations: Relevant government authorities should establish a coordinated multi-departmental supervision mechanism, clarify compliance standards for language use on food packaging, and formulate enforceable penalty regulations. Food manufacturers should pay closer attention to consumers' actual needs, incorporate compliance with language policies into their product quality management systems, introduce third-party language review procedures during the design phase, and enhance employees' understanding and implementation of foreign-language text standards through targeted training.

In addition, universities or training institutions offering programs in packaging design should strengthen the teaching of language policy, cultivate students' awareness of legal compliance, and reinforce their responsibility to safeguard the primacy of Chinese in design practice.

Despite yielding empirical insights into the discrepancies between multilingual LL on local food packaging and language policies, and offering concrete recommendations, this study has several limitations. First, the sample size and coverage were limited, focusing primarily on specific types of products, which may not fully represent the nationwide situation. Second, the use of convenience sampling in the questionnaire survey may constrain the generalizability of the findings. In addition, the demographic variables examined in this study did not fully capture other potential factors that may influence consumers' perceptions and attitudes, such as educational background, foreign language proficiency, or cultural experience, which warrant further investigation in future research. Finally, this study relied mainly on questionnaire data and packaging sample analysis, lacking in-depth qualitative interviews, and therefore provides only a limited understanding of consumers' psychology and decision-making processes.

Author Contributions

Conceptualization, M.Y. and V.P.A.; methodology, M.Y. and V.P.A.; validation, M.Y.; formal analysis, M.Y.; data curation, M.Y.; writing—original draft preparation, M.Y.; writing—review and editing, V.P.A. and P.S.; visualization, M.Y.; supervision, V.P.A. and P.S. All authors have read and agreed to the published version of the manuscript.

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Data Availability Statement

The datasets generated and analyzed during the current study are not publicly available due to privacy and ethical restrictions but are available from the corresponding author on reasonable request.

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Conflicts of Interest

The authors declare no conflict of interest.

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