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The differential roles of verbs, nouns, and adjectives in English and Chinese messages among bilingual consumers

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ABSTRACT

Different word categories have distinct impacts on consumers' perceptions of a good or a service. Through 3 studies, this article tests the use of verbs, nouns, and adjectives among bilingual consumers. Study 1 examines word category use among bilinguals who speak both English and Chinese through an open-ended questionnaire. Study 2 measures the participants' reactions toward advertisements which are composed of different word categories. In Study 3, two experiments test the word category effect in the service domain. The findings indicate that: (1) to describe a good or a service, bilinguals prefer adjectives and nouns in general, while using more verbs in Chinese contexts; (2) English advertisements are perceived as more informative than Chinese ones, and noun-composed advertisements are perceived as more informative than the ones with verbs or adjectives; (3) the interaction effect of language and word category on purchase intentions is true for both advertisements and services; specifically, noun-composed messages are more efficient in affecting bilinguals' purchase decisions in Chinese contexts, while adjective-composed advertisements work better in English contexts; and (4) in the service domain, the interaction of language and word category has an impact on positive word-of-mouth and website use experience satisfaction. Conceptual and managerial implications are provided.

1. Introduction

The importance of language in marketing communications as well as in service encounters is acknowledged in the literature (Holmqvist & Grönroos, 2012; Van Vaerenbergh & Holmqvist, 2014). Choosing the right language and the most effective terms has always been the main concerns of strategic planners. Given the prominent relationship between advertising and services (Turley & Kelley, 1997), and the essential role of language in services, to investigate the use of words in advertising and service encounters is of great importance. Suggett (2014) reports the 10 most powerful words that could boost advertising return on investment. Although these powerful words may work well in general, companies usually ignore the interactive aspects of communications between a company and its consumers in advertising practices, and fail to design their strategies in a customer-centric view (Holmqvist, Van Vaerenbergh, & Grönroos, 2014; Vargo & Lusch, 2004). Also language is a prominent element in this interaction (Holmqvist, Guest, & Grönroos, 2015). Not only should the linguistic symbols used by native speakers be studied, but also the relevant word categories. For example, all the 10 powerful words reported by Suggett (2014) fall into either the adjective (e.g., new), verb (e.g., discover), or noun (e.g., results) categories. Speaking the consumers' language facilitates the communications between a company and its consumers (Holmqvist & Grönroos, 2012); consequently, this impacts consumers' purchase decisions and post-purchase behaviors (Holmqvist et al., 2015). However, to speak the right language and to choose the right words are never easy; thus this topic is worthy of further investigation.

A consumer's evaluation of a good or a service can be influenced by many factors, but culture has been researched on various aspects (Laroche, Toffoli, Zhang, & Pons, 2001; Mazaheri, Richard, & Laroche, 2011). A typical culture can influence an individuals' judgment through specific regulations and norms. Among all the cultural elements, language is a factor that should not be neglected (Semin, 2012), inasmuch as the right language and words can smooth the consumption experience, and even save a company from service failure (Van Vaerenbergh & Holmqvist, 2014). Previous research focused on the language phonetical, structural, lexical and other related attributes, and reported the attributes' effect on cognitive processes, emotional reactions, and so on (Tavassoli, 1999; Tavassoli & Han, 2001; Tavassoli & Lee, 2003).

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In modern societies, people travel and migrate more frequently. To hear people speak a language other than their mother tongue is not rare. Given this trend, linguists have investigated the second language acquisition and learning processes, the differences between the first and the second languages, and even the impact of the language differences on individual behavior in a marketing context (Laroche et al., 2001; Zhang & Schmitt, 2004). Scholars find that the different languages used in advertising would prime people with different cultures. This impact of language makes people respond differently to the Chinese version of a questionnaire compared to the English one (Toffoli & Laroche, 2002). Sometimes, people from different cultures use different word categories to describe the same object. In Maass, Karasawa, Politi, and Suga (2006) study, when participants are asked to describe their close persons (i.e. their families and friends), Italians are more likely to use adjectives whereas Japanese are more prone to using verbs. In accordance with the construal level theory (Maass et al., 2006), individuals with different cultural backgrounds have distinctive preferences in language use. For instance, individuals have different perceptions of the psychological distance from the exposure of different languages in service settings (Holmqvist et al., 2015). Forming language in line with customers' preferences (e.g. their native language) can reduce the psychological distance and perceived risk toward the company, and even create value (Holmqvist & Grönroos, 2012; Holmqvist et al., 2014, 2015). In addition, consumers may be emotionally attached to the service language in service encounters if the consumers' desired languages are spoken (Holmqvist, 2011). Knowing that language is important, more questions arise: Do marketers interpret consumers' preferences correctly and use their desired languages and words? Are the findings from interpersonal descriptions applicable to non-interpersonal contexts? Will the same results be obtained in the service domain? How companies' language strategies respond to bilingual or multilingual consumers? These questions relate to the call for research on language in service encounters (Grönroos & Voima, 2013; Holmqvist & Grönroos, 2012; Holmqvist et al., 2014).

To be specific, this article focuses on the language preferences of bilinguals who speak both English (alphabetic) and Chinese (ideographic) (Schmitt, Pan, & Tavassoli, 1994). Being as two representative languages from alphabetic and ideographic systems, as well as being distinctive and essential in marketing, English and Chinese are two typical languages to investigate (Francis, Lam, & Walls, 2002; Schmitt et al., 1994). This article aims to find out: 1) if bilinguals (i.e. speaking both English and Chinese) use more adjectives to describe a product when responding in English, but use more verbs when responding in Chinese; 2) if an advertisement or a service encounter using Chinese (English) is perceived as more favorable when composed with verbs (adjectives); and 3) how consumers react to nouns given their powerful role in marketing.

By answering these questions, this article contributes to a better understanding of bilingual consumers' language and word uses. This article also helps managers use proper language to achieve more effective communications, and provide better services. Furthermore, this research is the first to investigate nouns, and to test the role of nouns for bilinguals in comparison to adjectives and verbs. Through a more thorough knowledge of consumers' language and word uses, companies are more able to provide effective communications, and facilitate the value-in-use, value-in-context, and value-in-experience processes with their customers (Grönroos & Voima, 2013; Helkkula, Kelleher, & Pihlström, 2012).

In particular, this article examines the language use in service encounters. Because communications are prominent in the provider sphere, joint sphere, and customer sphere, this study also benefits the language interactions between a company and its customers through the whole service encounter process (Grönroos & Voima, 2013). Finally, this work responds to the call for research on web based service encounters, and contributes to a fruitful knowledge of language use in online phenomena (Holmqvist & Grönroos, 2012).

2. Literature review

2.1. Cognitive processing: abstract versus concrete construal levels

Individuals are distinct information processors (Wyer, 2012). A person with a different processing style may use a more distinctive (e.g., lexical) language than others. For instance, people may see an object in the frame of either the present or future, the close or distant, the expected or unexpected, and so on (Semin, 2012; Trope & Liberman, 2012). Trope and Liberman (2012) claim in their construal level theory that two distinctive construal levels – high and low – are observed in an individual's evaluation, judgment, and selection (Liberman & Trope, 1998). They define high-level construals as "schematic, decontextualized representations that extract the gist from the available information, emphasizing a few superordinate core feature of event," and low-level construals as "relative unconstructed, contextualized representations that include subordinate and incidental features of events" (p. 120). Temporal, spatial, social, and hypothetical are the different dimensions used to capture the construal levels. Accordingly, the future, distal, and unexpected characters are categorized as high construal levels, which are often summarized and abstract; in this case, people emphasize the invariant attributes and central features, which usually are the goals. In contrast, the present, proximal, and expected attributes are associated with low construal levels, representing detail and concrete; in this case, peripheral attributes are more plausible (Trope & Liberman, 2012).

In line with the Trope and Liberman's (2012) concrete versus abstract construal levels, Semin and his colleagues (Semin, 2012; Semin & Fiedler, 1988; Semin, Higgins, de Montes, Estourget, & Valencia, 2005) extend the distinctive dimensions into the language use contexts. In a series of experiments, respondents use different abstract levels of language in their interpersonal descriptions. One of the four levels in the linguistic category model (LCM; Semin & Fiedler, 1988), is the descriptive action verb (DAV), representing the most concrete level. This group of words depicts things concretely through the action verbs (e.g., hug). Interpretive action verbs (IAV) and state verbs (SV) are more abstract than DAVs; they indicate verbal descriptions and interpretable meaning. The difference between IAV and SV is that SV associates with less overt actions, such as envy (SV) versus cheat (IAV). The most abstract group is labeled as adjective (Adj), aiming to characterize the traits. One example is "aggressive" (Semin & Fiedler, 1988). Apart from the linguistic category model which essentially deals with verbs and adjectives, Coenen, Hedebouw, and Semin (2006) stress that nouns could be classified as adjectives in some circumstances, inasmuch as nouns can "refer to actions, objects, and situations" just like adjectives (p. 11).

Holmqvist et al. (2015) extend the construal level theory into the language study in service contexts. They believe that the asymmetry between a company's language policy and its consumers' level of construal causes a psychological distance. An effective service communication strategy which aligns with a consumer's construal level can diminish this distance, and increase positive word-of-mouth (WOM), as well as the value creation process (Helkkula et al., 2012; Holmqvist et al., 2015; Vargo & Lusch, 2004).

2.2. Cultural emphasis: English-abstract-adjective versus Chinese-concrete-verb

Following the LCM study, Maass et al. (2006) report that individuals' cultural backgrounds influence them to use different words from the four categories for interpersonal descriptions. More specifically, Italians use adjectives more often than the Japanese, but the Japanese use more verbs, which is eight times as frequent as the Italians. Both of them regard adjectives as more enduring whereas verbs are more situational (Maass et al., 2006). Although the cultural differences are easily observed in this study, is this distinction applicable to other languages,

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and even among bilinguals? Furthermore, will the interpersonal differences still hold for non-interpersonal objects? More specifically, will the language use alter subsequent purchase decisions in the service domain?

Triandis and Gelfand (1998) state that people can have multiple traits. Previous research claims that bilinguals switch their coding strategies when confronted with different languages. This observation is supported by both questionnaire-based experiments and fMRI studies (Chee et al., 2000). In line with the Maass et al.'s (2006) findings, these may be applicable to the English versus Chinese contexts. Thus, bilinguals might use more adjectives in English-speaking conditions while using more verbs in Chinese-speaking conditions. The collectivism versus individualism theory helps clarify this cultural difference. According to Triandis and his colleague (Triandis, 1995; Triandis & Gelfand, 1998, 2012), individualism weights self-related goals heavier than other-oriented ones, while collectivism emphasizes relationships with others. The two groups have different values and norms, which are that individualism stresses pleasure and independence, whereas collectivism focuses on equality and responsibility; thus they pay attention to different aspects of the environment (Schwartz & Bilsky, 1990). For instance, Westerners are more individualistic, focusing on the core attributes; whereas Easterners are more collectivistic, focusing on the peripheral details (Triandis & Gelfand, 1998). Given that language is an important component of culture (Noriega & Blair, 2008), to find that English-speaking cultures (mainly Westerners) are more central feature driven, whereas Chinese-speaking cultures (mainly Easterners) are more detail driven is not surprising (Triandis & Gelfand, 2012). This statement is supported by brain activity studies. An fMRI study reports the self-construal and language related regions to be mPFC (medial prefrontal cortex), which is more consistent across languages; and TPJ (temporo-parietal junction), which is more specific to English-speaking cultures (Caldwell, 2010). This group of studies provides a biological evidence of the relationship between language use and construal levels. Based on the individualism/collectivism and linguistic category theories, and the brain activity evidence, individuals should use more central goal related language (i.e., adjectives) in English-speaking environments, and more detail driven language (i.e., verbs) in Chinese-speaking settings (Triandis & Gelfand, 2012). The interpersonal description difference may be applicable to brands and products, especially given that brands are often animated and personalized in advertising (Aaker, 1997). Thus, the first hypothesis is:

H1. Bilinguals who speak both English and Chinese use more adjectives to describe a product in an English questionnaire, but more verbs to describe a product in a Chinese questionnaire.

2.3. Service and language use

Knowing that bilinguals react differently to questionnaires in different languages, how they would react toward some services and advertisements using different word categories is still unknown. If one tends to use more adjectives in describing a product, one would also favor services delivered by the adjective-composed language, and likewise for the adjective-composed advertisement.

Captured by four different dimensions, namely intangibility, heterogeneity, inseparability, and perishability (Zeithaml, Parasuraman, & Berry, 1985), a service is defined as "a business logic means facilitating interactive processes that support customers' value creation in their everyday practices" (Grönroos, 2008; p.300). In the service encounter, communication is the core of the interaction between customers and brands. Whether the service provider uses the right language has an impact on the perceptions of the service quality and on subsequent consumer behavior (Bitner, 1990; Van Vaerenbergh & Holmqvist, 2014). Researchers find that speaking the consumers' first language causes a higher probability of spreading positive WOM than speaking their second language (Van Vaerenbergh & Holmqvist, 2014). Since an effective advertisement has a strong impact on the perceptions of the service experience, and given the prominent role of language in advertising and services, it is important to investigate both advertising and service encounters to study the language effects in services (Berry, 2000; Turley & Kelley, 1997).

Previous research reports the different use of adjectives and verbs between Westerners and Easterners (Maass et al., 2006; Triandis & Gelfand, 2012). Researchers claim that nouns and adjectives are not distinctive for the Chinese. Although Coenen et al. (2006) code nouns as adjectives in their study, no evidence shows that English speakers consider the nouns to be the same as adjectives. Bilinguals may react differently to nouns compared to adjectives when served in different languages. Following this argument, the second hypothesis is:

H2. For bilinguals who speak both English and Chinese, the verb-(vs. adjective- and noun-) composed messages are more effective when delivered in Chinese (vs. English); whereas the adjective-(vs. verb- and noun-) composed messages are more effective when delivered in English (vs. Chinese).

3. Methodology

To study the differences in bilinguals' descriptions and evaluations of goods and services, three experimental studies are carried out. In Study 1, participants respond to open-ended questions about products and brands. Study 2 tests the variety in bilinguals' evaluations of advertising messages composed of different words. Study 3 examines the language effect in two service contexts. Keeping all other information consistent, only the word category (i.e., adjective, verb, and noun) is manipulated in Study 2 and Study 3.

3.1. Study 1: products and brands

Study 1 aims to examine the word category effect among bilinguals under different language conditions. According to previous research, people from different cultural and language backgrounds use different terms to describe others (Bond & Cheung, 1983; Maass et al., 2006). This difference could also be observed among individuals in their association with product descriptions. Study 1 explores the language abstract level (Semin & Fiedler, 1988), and examines language use differences among bilinguals.

3.1.1. Respondents and procedures

Through on-campus posters and emails, 106 (42 males and 64 females) participants are recruited from a major Northeastern university. All respondents are fluent in both English and Chinese in reading, listening, speaking, and writing. The study is carried out on laboratory computers. All respondents receive $5 for their participation.

Study 1 adopts the free-response method from Maass et al. (2006) who asked both Italian and Japanese participants to write down ten aspects of a person. Similarly, but with a slight adjustment, this study asks participants to write down a type of product first. Then they indicate the corresponding brand, if applicable. A product is often more tangible and easier to describe than a service, and the observation of the product domain in Study 1 serves as a guide for the following service-based experiments (Grönroos, 2008). Participants list ten aspects to describe that product. All ten aspects are compulsory. This method guarantees ten chances of obtaining adjectives, verbs, and nouns from each participant. More details are included in the analyses and findings. Two different versions are randomly distributed to participants. A respondent receives either an English or a Chinese version of the questionnaire, and answers in the corresponding language.

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3.1.2. Dependent variables

Two measures are used to test the different uses of words. The first is the value that each participant receives on adjective, verb, and noun occurrences. As mentioned, each participant writes ten aspects of a product. Each aspect is coded separately on three different word categories. Once a respondent uses an adjective in one aspect, this aspect is coded 1 for adjective. A 0 is given if no adjective is found. Each aspect receives either 1 or 0. This procedure is repeated to code verbs and nouns for all ten aspects. At the end, ten aspects are summed separately on adjective, verb, and noun categories. The coding for the three word categories is independent from each other. This method guarantees an equal chance of coding each category, and excludes the possibility of replicating coding for one aspect.

To examine the abstract level of the describing terms, this study uses the level of abstraction (i.e., DAVs, IAVs, and SVs) as the second measure, where the verb is categorized into three subgroups. The same procedure as for the first measure is applied. However, the three abstract levels are dependent on each other. Once a term is coded 1 as DAVs, a 0 is automatically assigned to IAVs and SVs.

Two bilingual students who were blind to the research purpose are trained on the measurement coding. Each one codes all answers for both English and Chinese versions. Disagreements are resolved by discussion with one of the researchers.

3.1.3. Findings

After screening the data, one respondent who is below 18 is excluded, with all adult participants remaining. Two participants who have written their answers in both English and Chinese are also excluded. Finally, 103 responses are used for further analysis.

3.1.3.1. Adjectives versus verbs versus nouns. A one-way ANOVA is used to test the different term uses. The analysis is done separately for adjectives, verbs, and nouns (Table 1).

According to the findings, bilinguals in both language settings prefer adjectives and nouns to verbs. A significant difference is obtained for verbs ($F(1,101) = 4.47$, $p < 0.05$). A bilingual tends to use more verbs to describe products or brands in the Chinese version ($M = 3.67$) than in the English one ($M = 2.76$). No significant difference is observed between the uses of adjectives and nouns in different language settings. However, according to the mean value, bilinguals tend to use more adjectives and nouns in the English (vs. Chinese) version (Table 1).

The results illustrate the different uses of verbs when describing products. Similar to the findings by Maass et al. (2006), Study 1 shows that verbs are more likely associated with Chinese contexts. Even for a bilingual who is exposed to the Chinese questionnaire, the difference still exists. However, different patterns for adjectives are observed. In the study, bilinguals use the adjectives in product and brand descriptions with similar frequencies. For nouns, which is an exploratory investigation, no significant difference is obtained between the two language groups.

3.1.3.2. Levels of abstraction. The different abstraction levels of verbal terms are analyzed through the same method as above. The sums of DAVs, IAVs, and SVs are used for a series of one-way ANOVAs (Table 2). In both English and Chinese versions, bilinguals use more DVAs and IAVs than SVs. Moreover, bilinguals use more DAVs and IAVs in the Chinese context, and slightly more SVs in the English one.

Table 1
Mean (standard deviation) differences in word use ($n = 103$).

	Adjective	Verb	Noun
Chinese	5.54 (2.07)	3.67 (2.11)	5.06 (1.92)
English	5.88 (2.20)	2.76 (2.25)	5.65 (2.10)

Table 2
Mean (standard deviation) differences in abstract levels ($n = 103$).

	DAV	IAV	SV
Chinese	1.85 (1.65)	1.56 (1.38)	0.17 (0.43)
English	1.45 (1.62)	1.18 (1.35)	0.31 (0.62)

3.1.4. Discussion

The findings do not fully support the first hypothesis. No more frequent use of adjectives is found in the English compared to the Chinese versions. Further exploratory analysis does not show any difference in terms of the language abstraction. However, the first study contributes to a better understanding of consumers' word uses in product descriptions, and extends the findings from interpersonal contexts to the product and brand fields. The verb using differences can help marketing managers develop better strategies. A brand may emphasize more verbs while designing international campaigns or services for the Chinese markets than for the English ones.

No significant difference is found in using adjectives and nouns. The reason may be the dominant use of adjective and noun vocabulary in the marketplace. When asked to proactively describe, rather than reactively measure, bilinguals switch coding verbs to describe products, but not adjectives and nouns.

Study 1 sheds some light on understanding consumers' use of different word categories. The study illustrates consumers' proactive use of words, meaning that consumers use their own describing vocabulary. However, in the marketplace consumers do not yet create and deliver advertising messages. Companies still dominate the interactions with their customers. Therefore, to know how consumers react to services and advertisements composed of different word categories (i.e., adjective, verb, and noun) is important. Two studies are carried out on word category effects in advertising and services contexts.

3.2. Study 2: advertising

Study 2 tests how different word categories and terms influence consumers' decision making. Study 1 focuses on the differences between adjectives and verbs, while nouns are considered as an exploration. Study 2 tests three word categories, namely adjectives, verbs, and nouns. Previous studies suggest an important relationship between language, advertising and services; thus testing the language and word category effects in advertising is reasonable and necessary to guide further investigations into the services context (Berry, 2000; Turley & Kelley, 1997). Pictures and slogans are created and three different slogans are created for each advertisement by changing the word category only. Each advertisement is composed either of adjectives, verbs, or nouns. Both English and Chinese versions are used following the back-translation procedure (Bhalla & Lin, 1987).

3.2.1. Pretest

To select appropriate stimuli, a pretest is carried out. Three product categories are selected, representing goods, services and experiences. To be specific, advertisements are developed for a down coat (good), a restaurant (service) and a travel agency (experience).

The adjective, verb, and noun versions are developed based on the criteria in Maass et al.'s (2006) study 4, which are: similar in meaning, phonetics length, as well as other important criteria. For example, enjoy is a verb often used in travel advertising, then the semantically similar words are selected from adjective and noun categories, namely enjoyable and enjoyment. Then the words are back-translated and polished by a bilingual Chinese judge who is fluent in both English and Chinese (Bhalla & Lin, 1987). Both English and Chinese words are selected. The same procedure is applied to the restaurant and down coat advertisements. The adjectives, verbs, and nouns for travel are: enjoyable, enjoy, and enjoyment (in Chinese: 愉快,享受,享乐). The words

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tasty, taste (verb; e.g. taste it), and taste (noun; e.g. the taste) (in Chinese: 美味,品尝,味道) are selected for the restaurant. Here the same word taste is used for both verb and noun categories, but the characteristic of the word is altered in different contexts. In addition, the words selected for the down coat advertisement are: warm (adj; e.g. keep warm), warm (verb; e.g. warm up), and warmth (in Chinese: 温暖for all three categories). The final advertisement expands the semantic similarity but categorical differences into Chinese.

The nine words are randomly ordered. A participant receives either an English or a Chinese version, and indicates the categories to which the words belong. For the same written word (e.g. taste in the restaurant advertisement), a sample phrase for each category is provided in brackets. Participants are allowed to check more than one category for one word. The analysis is carried out for each category. Respondents also rate the words' attractiveness and informativeness. Eighteen questionnaires are included in the pretest. Since the evaluation of each word category is independent from each other, and because that the current study is interested in knowing whether the selected word fits that category, a series of 2 (language) × 3 (word category) ANOVAs are carried out. Findings show that the words are perceived just as indicated by their categories. Table 3 shows the means of each term in different word categories. For example, enjoyable receives 1.00 as an adjective. The bracket shows the category that receives the highest value for that word. So, enjoyable receives the highest score as an adjective, thus being a perfect adjective for that advertisement. Most of the words fit well their categories, with the exception of enjoy and enjoyment (in italics in Table 3). In the Chinese version, enjoy receives the highest score on both verb and noun, which makes sense in daily language use. Enjoyment receives only 0.50 for its mean in the noun category, with the highest score on verb. Maybe the translation and multiple meanings of Chinese words cause the misperception of nouns and verbs. Each verb and noun is further tested in a short sentence, and the noun-verb problem ceases to be an issue. Thus all these words are qualified. Nine slogans are selected for the main study. Each slogan sentence is composed following the same rule as in Maass et al. (2006).

Besides the word category, the informativeness and attractiveness of each word are also examined. Results show that the advertising words for travel (i.e. enjoyable, enjoy, and enjoyment) are perceived as indifferent in terms of informativeness and attractiveness, in both Chinese and English versions ($F_{Attractiveness}(2,12) = 0.02$, n.s.; $F_{Informativeness}(2,12) = 0.40$, n.s.). Similar findings are obtained for both restaurant and down coat advertisements (Restaurant: $F_{Attractiveness}(2,12) = 0.75$, n.s.; $F_{Informativeness}(2,12) = 0.12$, n.s.; Down coat: $F_{Attractiveness}(2,12) = 1.38$, n.s.; $F_{Informativeness}(2,12) = 3.10$, n.s.)). Thus, adjectives, verbs, and nouns are not perceived differently in each advertisement regarding their attractiveness and informativeness. All the words are representing their category well and used in the main study.

3.2.2. Main study

To test the interaction of language and word category, a 2 (language: English, Chinese) × 3 (word category: adjective, verb, noun) between-subjects experiment is carried out. The stimuli refined from the pretest are used.

3.2.2.1. Participants, procedure, and measurements.

In Study 2, 110 participants (43 males and 67 females) are recruited through posters and emails, following the same procedure as in Study 1. The ages range from 18 to 55, including both students and working people.

A laboratory experiment is carried out and participants are told that an advertising agency has developed some advertisements, and needs feedback from potential customers. The English and Chinese versions are created and back-translated by a bilingual judge (Bhalla & Lin, 1987). Each participant reads three different and unrelated advertisements, and answers some questions. All advertisements are counterbalanced to minimize order effects (Anderson & Farkas, 1973). Between advertisements, respondents take a 5 min break on a relaxing activity designed by the researchers to clear out their memories from the previous advertisement. Since Study 2 focuses on generalizing the findings, rather than testing the effects of product types, the answers from the three advertisements are recoded, with 330 data points used for later analyses. After reading the advertisement, respondents write down the slogan they read. Reporting the correct words guarantees exposure to the right word category. Three responses are excluded because of failure to report the correct words.

After reporting the slogan words, participants indicate their opinions on attractiveness, informativeness, and purchase intentions. To measure attitudes toward the advertisement, they indicate their opinions on three items anchored by good-bad, like-dislike, and interesting-uninteresting (Mitchell & Olson, 1981; $\alpha = 0.92$). The fourth pair (irritating-not irritating) is excluded due to weak reliability in the pretest. Following Maass et al. (2006), three items are adopted to measure perceived informativeness. A sample question is: "How much information regarding the restaurant's characteristic is provided by the advertisement?" Participants indicate their opinions on a 7-point Likert scale (1 = very little, 7 = very much; $\alpha = 0.91$). Since this study attempts to find whether the different advertising settings~~-~~ the word category~~-~~ impact the following behavior, a three items 7-point Likert scale is adopted from Tian, Wang, and Yang (2011) to measure purchase intentions. Participants chose the value from 1 = strongly disagree to 7 = strongly agree. A sample question is: "If I were planning to go on a vacation, I will choose this trip" ($\alpha = 0.97$).

3.2.2.2. Covariate: language fluency.

According to the literature, language fluency impacts language associated judgments (Puntoni, Langhe, & Van Osselaer, 2009; Zhang & Schmitt, 2004). An individual whose mother tongue is English has a higher ability to understand and code contexts than those speaking English as a second language (Zhang & Schmitt, 2004). Respondents indicate their fluency for their questionnaire language (1 = basic, 6 = first language), and fluency is included as a covariate.

Table 3
Highest mean values for each category.

		Enjoyable/enjoy/enjoyment	Tasty/taste (verb)/taste (noun)	Warm (adj)/warm (verb)/warmth
Chinese version	Adjective	1.00 (adj)	0.50 (adj)	0.50 (adj)
	Verb	1.00 (*noun*)	1.00 (verb)	1.00 (verb)
	Noun	0.50 (*verb*)	1.00 (noun)	1.00 (noun)
English version	Adjective	1.00 (adj)	1.00 (adj)	1.00 (adj)
	Verb	1.00 (verb)	1.00 (verb)	1.00 (verb)
	Noun	1.00 (noun)	1.00 (noun)	1.00 (noun)
Total	Adjective	1.00 (adj)	0.83 (adj)	0.83 (adj)
	Verb	0.83 (verb)	1.00 (verb)	1.00 (verb)
	Noun	0.67 (noun)	1.00 (noun)	1.00 (noun)

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3.2.2.3. Findings. A series of 2 × 3 ANOVA analyses are performed on attitude, informativeness, and purchase intentions, using language fluency as a control variable.

3.2.2.3.1. Attitude toward the advertisement. No difference is observed for word categories between languages ($F(2,320) = 1.76$, n.s.). Participants do not show different attitudes toward adjectives, verbs, and nouns between English and Chinese versions. However, a main effect of word category is obtained ($F(2,320) = 3.50$, $p < 0.05$). When simply looking at the different word categories without considering the language, respondents perceive noun composed advertisements better ($M = 2.86$), compared to the ones composed of adjectives ($M = 2.65$) and verbs ($M = 2.73$). Through Bonferroni contrast analyses, a significant difference between adjective and noun is obtained ($p < 0.05$). No other pairwise difference is observed.

3.2.2.3.2. Perceived informativeness. Findings show that no interaction of language and word category on perceived informativeness is obtained ($F(2,320) = 0.92$, n.s.). However, main effects are found for language ($F(1,320) = 8.44$, $p < 0.01$) and word category ($F(2,320) = 7.86$, $p < 0.001$). Overall, English advertisements are perceived as more informative ($M = 3.61$) than Chinese ones ($M = 2.66$). Similar to perceived attractiveness, nouns receive a higher score ($M = 3.38$) than adjectives ($M = 2.86$) and verbs ($M = 3.28$). The Bonferroni contrast analyses report a significant difference between adjectives and verbs ($p < 0.05$), and between adjectives and nouns ($p < 0.001$).

3.2.2.3.3. Purchase intentions. A partially significant interaction is obtained for purchase intentions between the language and the word category ($F(2,320) = 2.80$, $p = 0.06$; Table 4). When bilinguals are exposed to the advertising messages delivered in Chinese, they show higher purchase intentions for the noun composed advertisements ($M = 3.02$) than the adjective ($M = 2.36$) or verb ($M = 2.75$) composed ones. For the English version, bilinguals show higher purchase intentions for the adjective composed advertisements ($M_{adj} = 3.40$, $M_{verb} = 3.25$, $M_{noun} = 3.19$). No main effect is found for language ($F(1,320) = 0.06$, n.s.) or the word category ($F(2,320) = 1.09$, n.s.).

3.2.2.3.4. Further exploration: adjectives versus nouns. Indicated by the findings of interaction between language and word category, a further examination of pairwise interactions, namely adjectives and nouns, is done. Previous literature posits a similar effect of adjectives and nouns (Coenen et al., 2006). However, according to the findings of Study 2, a significant contrast between adjectives and nouns in different language conditions occurs. A 2 (language: English, Chinese) × 2 (word category: adjective, noun) ANOVA on purchase intentions is performed. Purchase intentions, as the focal marketplace interest, is included as the only dependent variable in the analysis, and is preliminarily supported by the interaction results in Study 2.

An interaction between language and adjectives versus nouns is found ($F(1,202) = 5.53$, $p < 05$; Table 4). Bilinguals' purchase intentions are more likely influenced by the noun composed Chinese written advertisements, and they are more easily affected by adjective slogans when confronted with the English versions.

3.2.2.4. Discussion. Study 2 shows that bilinguals perceive different word categories differently in advertising. Certain types of word are associated with certain languages. Specifically, the effects of the advertisement on a consumer's purchase intentions are stronger when using nouns in Chinese, and adjectives in English. This article also addresses the importance of understanding the effects of nouns which are absent in previous research. Apart from Coenen et al. (2006), and according to the current findings, bilinguals process adjectives and nouns differently in different language settings. These findings further help managers develop more effective advertising messages in the current bilingual global marketplaces.

Table 4
Mean (standard deviation) values of purchase intentions for Study 2 ($n = 327$).

	Adjectives	Verbs	Nouns
Chinese	2.36 (1.25)	2.75 (1.39)	3.02 (1.43)
English	3.40 (1.44)	3.25 (1.59)	3.19 (1.85)

3.3. Study 3: services

Given the differences among the adjectives, verbs, and nouns in their influences on consumers' decision making in advertising contexts, which corresponds to the pre-service phase, study 3 examines whether the word category effects are the same in service encounters. Since language is essential in services, and research indicates that consumers are less likely to spread positive WOM about a company if the service encounter is given in the second language (Van Vaerenbergh & Holmqvist, 2014), the study 3 would answer the question of whether word category moderates these language effects. Following the findings of Study 2, the word category (adjectives, verbs, and nouns) may play a similar moderating role in services. Study 3 aims to test the moderation between language and word category for bilinguals during the service, and to replicate the findings on purchase intentions.

With the development of technology and the rise of e-commerce, service encounters are happening more often online (Belk, 2014; Yang, Jun, & Peterson, 2004). Scholars ask for more investigation on online service encounters. Holmqvist et al. (2015) believe that current online service communications are deficient because of the lack of accurate translation, and insufficient knowledge of the new phenomenon, which requires a thorough understanding by researchers and practitioners. Airbnb and Uber are two typical companies using online service platforms. Not only this phenomenon is catching media attention due to new legal issues, but the unique sharing economy business model makes the two companies interesting cases to study (Belk, 2014).

3.3.1. Pretest and website design

Airbnb and Uber are selected to represent the new online service economy. The new e-commerce emphasizes the importance of a company's website, which may serve as the forefront for consumer-brand interactions, subsequently influencing consumers' purchase intentions (Bai, Law, & Wen, 2008). To capture the real online service phenomenon, websites are created to simulate the real online platform. In online services, languages and terms are part of the design and help set up the tone, which then impacts the online service encounter (Bai et al., 2008).

The online service platforms are differentiated by using different words. Similar to the pretest in Study 2, adjectives, verbs, and nouns are selected based on their meanings, phonetics lengths, and other criteria (Maass et al., 2006). The Chinese version is created by applying the back-translation method by bilingual judges (Bhalla & Lin, 1987). The finalized adjective, verb, and noun for Airbnb are welcoming, welcomes, and welcome (in Chinese: 温暖,欢迎,欢迎). For Uber, these words are riding ("riding high"), ride, and ride (in Chinese: 热门之乘,选乘,座驾). To maximize the simulation of the original website, the same designs and pictures are used, and the phrases appearing on both websites are adjusted to be consistent with the word category group.

3.3.2. Study 3a: Airbnb

The simulated Airbnb websites are used. Online panel participants answer the questionnaires based on their experiences on the websites, and indicate their opinions of the service provided by the online platforms. A 2 (language: English, Chinese) × 3 (word category: adjective, verb, noun) between-subjects experiment is carried out. Participants need to type Chinese characters to answer a qualifying question; 123 participants answer the qualifying question correctly and complete the questionnaire. The IP addresses are checked, and 21 questionnaires with identical IPs are dropped, leaving 102 participants in the analysis.

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3.3.2.1. Procedure. First, participants are asked to visit the website. Failing to click on the link leads the respondents to invalidate the questionnaire. The website simulates the whole process of booking an Airbnb stay, which effectively captures the real online shopping experience. After visiting the website, participants need to write down the words they saw on the website. This procedure guarantees that participants get exposure to the adjective (or verb/noun) constructed information.

3.3.2.2. Measurements. To test the interaction effects of language and word category on purchase intentions in the service context, a three items 7-point Likert scale is used (Tian et al., 2011), and averaged for the following analyses ($\alpha = 0.75$). This study uses Airbnb as a real brand. People may have different familiarity levels of Airbnb, and previous literature indicates that consumers' familiarity levels for a brand have strong impacts on their purchase intentions (Spielmann & Delvert, 2014). Therefore, brand familiarity, along with language fluency, are used as control variables (Spielmann & Delvert, 2014; Zhang & Schmitt, 2004). A three-item semantic differential scale is used to measure familiarity toward a brand, anchored by unfamiliar-familiar, haven't experienced-experienced, and not knowledgeable-knowledgeable (Spielmann & Delvert, 2014; $\alpha = 0.71$).

3.3.2.2.1. Findings. A 2 × 3 ANOVA analysis is carried out on purchase intentions, with language fluency and brand familiarity as covariates. A similar pattern as in Study 2 is obtained. The interaction between language and word category is partially significant ($F(2,94) = 2.75$, $p = 0.07$; Table 5). Bilinguals perceive adjectives, verbs, and nouns differently in different language contexts. Adjectives drive higher purchase intentions under English settings ($M_{adj} = 3.59$, $M_{verb} = 3.53$, $M_{noun} = 3.19$), while nouns are more effective in driving purchase intentions in Chinese contexts ($M_{adj} = 2.82$, $M_{verb} = 3.09$, $M_{noun} = 3.22$). Although, the main language effect is not statistically significant in Study 2, this effect is significant in the service context ($F(1,94) = 8.42$, $p < 0.01$), which confirms the essential role of language in services. Bilinguals are more willing to pay for the services when the encounter language is English ($M = 3.61$) than Chinese ($M = 3.07$). Similar to the findings in Study 2, a significant difference between adjectives and nouns is found ($F(1,51) = 6.51$, $p < 0.05$). Adjectives work better to boost consumers' purchase intentions than nouns when the service language is English ($M = 3.22$), while nouns work better when the service language is Chinese ($M = 3.59$).

3.3.3. Study 3b: Uber

Study 3b aims to generalize the findings of Study 3a by using another online service company in the sharing economy, namely Uber. Following the same procedure as in Study 3a, a website is created using the original design, while having the words adjusted accordingly. Participants recruited online answer the questionnaire after experiencing Uber's online service platforms. A 2 (language: English, Chinese) × 3 (word category: adjective, verb, noun) between-subjects experiment is performed. Participants need to pass a qualifying question before starting the main study. Six surveys are not completed, and 14 duplicate IPs are detected, leaving 99 usable questionnaires for analysis.

3.3.3.1. Procedure. The same procedure as in Study 3a is used. First, participants have to click on the website link before answering any question. Failing to do so codes the questionnaire as incomplete. To guarantee exposure to the word category information, participants need to report the words they saw on the website.

Table 5
Mean (standard deviation) values of purchase intentions for Airbnb ($n = 102$).

	Adjectives	Verbs	Nouns
Chinese	2.82 (0.75)	3.09 (0.88)	3.22 (0.78)
English	3.59 (0.60)	3.53 (0.66)	3.19 (0.72)

3.3.3.2. Measurements. Tian et al.'s (2011) measurement on purchase behavior is used ($\alpha = 0.73$). Other service related behaviors are also worth studying. Previous literature reports that language use in service encounters has an influence on consumers' intentions for positive WOM (Maxham & Netemeyer, 2002). The way an employee responds can alter a customer's satisfaction level (Bitner, 1990). Thus, Study 3b includes a 3-item scale measuring positive WOM ($\alpha = 0.79$) and a single item measuring satisfaction (Maxham & Netemeyer, 2002; Westbrook, 1980).

3.3.3.3. Findings. Language fluency and brand familiarity are included as control variables in a 2 × 3 ANOVA analysis against purchase intentions (Spielmann & Delvert, 2014; Zhang & Schmitt, 2004). The findings of Study 3a are replicated. The two-way interaction is not found in the Uber case. Only the language main effect is obtained again ($F(1,91) = 4.01$, $p < 0.05$; Table 6). In terms of the service language, for bilinguals English ($M = 3.62$) drives more purchase intentions compared to Chinese ($M = 3.30$). As in the Airbnb case, the difference between the adjectives and nouns is significant across different language contexts ($F(1,52) = 4.58$, $p < 0.05$). Bilinguals are more willing to use the service when the service language is English and adjectively composed ($M_{adj} = 3.71$, $M_{noun} = 3.49$), while they are more likely to use the service when the encounter language is Chinese and noun based ($M_{adj} = 3.00$, $M_{noun} = 3.40$).

The interactions of language and word category are also obtained for positive WOM and for the website use experience satisfaction. With language fluency and brand familiarity included as covariates, a series of 2 × 3 ANOVAs are run against positive WOM and website use experience satisfaction. Consumers have different levels of positive WOM intentions for the different word categories under English versus Chinese condition ($F(2,91) = 3.59$, $p < 0.05$; Table 6). When served in English, bilinguals are more likely to spread positive words about a brand after seeing the verb constructed information ($M_{adj} = 3.79$, $M_{verb} = 3.92$, $M_{noun} = 3.73$). However when served in Chinese, bilinguals are more willing to spread positive WOM if the information is noun oriented ($M_{adj} = 2.91$, $M_{verb} = 3.48$, $M_{noun} = 3.93$). Also, different word categories interacting with language can generate different levels of satisfaction ($F(2,91) = 3.47$, $p < 0.05$; Table 6). Again, verbs are playing a more important role in the English dominated service environments ($M_{adj} = 5.12$, $M_{verb} = 5.68$, $M_{noun} = 5.20$), while nouns are more likely to make consumers feel satisfied when the service language is Chinese ($M_{adj} = 4.00$, $M_{verb} = 4.59$, $M_{noun} = 5.40$).

3.3.4. Discussion

Different from Study 2, Study 3a and Study 3b use real brands and maximize the simulation of real online experiences. The findings confirm the prominent role of language in services, even in non-traditional service markets (Babin, Lee, Kim, & Griffin, 2005; Bitner, 1990; Spielmann & Delvert, 2014). When physical surrounding cues are absent, language is crucial in forming consumers' attitudes and purchase intentions (Holmqvist & Grönroos, 2012). The simulated Airbnb and Uber websites maximize real world online shopping experiences, and demonstrate the word category effect under different language settings. In both Airbnb and Uber cases, consumers are more likely to use the service when encountering English with adjective-composed information, and when encountering Chinese with noun-composed information. Nouns are also contributing to the higher intentions of positive WOM and higher satisfaction when the encounter language is Chinese. Verbs are more effective in driving higher intentions of positive WOM and higher satisfaction in the English settings. Taken altogether, different words play specific roles for different outcomes. In line with the proposition by Holmqvist and Grönroos (2012), Study 3 claims that speaking a customer's language increases positive WOM. This study confirms that the message copy should never be standardized in multicultural markets (Spielmann & Delvert, 2014).

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Table 6
Summary of mean (standard deviation) values for Uber ($n = 99$).

	English			Chinese		
	Adjectives	Verbs	Nouns	Adjectives	Verbs	Nouns
Purchase intentions	3.71 (0.61)	3.65 (0.60)	3.49 (0.60)	3.00 (0.83)	3.38 (0.74)	3.40 (0.46)
Positive WOM	3.79 (0.59)	3.92 (0.80)	3.73 (0.80)	2.91 (1.11)	3.48 (1.04)	3.93 (0.70)
Website experience satisfaction	5.12 (0.93)	5.68 (1.11)	5.20 (0.86)	4.00 (1.41)	4.59 (1.50)	5.40 (1.18)

4. General discussion, conceptual and managerial implications

As shown in both cross product/service and online service studies, language is essential in service encounter communications. This article contributes to a better understanding of language use by bilinguals via indicating the appropriate word category associated with a certain language setting. Three separate studies, including both laboratory and simulated experiments, address the important role of adjectives in English contexts, and nouns in Chinese ones. The use of adjectives in English and nouns in Chinese affects consumers' purchase intentions to a greater extent than the other two word categories. In addition, verbs are also important in English settings for online services. Verbs induce higher intentions of spreading positive words and higher satisfaction when the service language is English. Nouns consistently have an important role in Chinese contexts. Nouns are important in driving purchase intentions, and they are also effective in generating positive WOM and satisfaction.

Maass et al. (2006) report the different uses of adjectives and verbs in different languages for non-bilinguals. This article extends these findings to bilinguals, and non-interpersonal contexts. Moreover, the role of nouns is considered. This research provides a better understanding of bilinguals' language and word category uses, in both advertising and service encounters. In particular, the different results of language and word category effects between Study 2 and Study 3 validate the stronger impact of language in service interactions (Holmqvist & Grönroos, 2012). Specifically, the three studies provide a detailed illustration of bilinguals' word uses in English versus Chinese settings.

This article provides theoretical developments as well as managerial implications. First, the word category effect is investigated and expanded into the product and service fields. Findings show that the words used to describe a product are different from those used to describe a person. In addition, service providers should speak the consumers' language, not only by adjusting their first or second languages, but also by selecting the appropriate words (Holmqvist & Grönroos, 2012; Van Vaerenbergh & Holmqvist, 2014). This communication strategy should be adapted not only before the service encounter (i.e. advertisement in Study 2), but also during the service encounter (i.e. service platform interactions in Study 3). This provides another means of developing effective communications beyond focusing on speaking the consumers' native language, and establishes the role of service language communications in a more general setting.

This article fills a gap in understanding bilinguals' word category preferences, and is the first one to investigate the word category effects between two languages in service encounters, and extends the construal level theory in a broader context (Holmqvist et al., 2015; Maass et al., 2006; Trope & Liberman, 2012). Considering the increasing number of bilinguals and multilinguals, this study answers the call for new strategic developments in the new market realities. Furthermore, nouns have been ignored by researchers. This article demonstrates how important nouns could be, especially for bilinguals when exposed to messages and services delivered in Chinese.

Finally, the findings help managers tailor their language strategies in advertising and services. Accordingly, managers should emphasize nouns when their information is delivered in Chinese. Given that the brand names fall linguistically into the noun category, managers should consider addressing their brands and brand related nouns more often in Chinese contexts (Bloom & Wynn, 1997; Duke, 1995). However, this strategy may not be as effective when promoting a brand in English. In contrast, to boost sales, adjectives should be used more often in English settings. Finally verbs should be used to increase positive WOM and satisfaction. So managers should not assume verbs to be favorable in Chinese contexts, and they should update their language strategies by using more nouns. Within the global economy, this article provides guidance to managers in tailoring their advertising and services to their bilingual consumers.

5. Limitations and future research

Some limitations should be addressed. Bilinguals were recruited without differentiating their first language (English or Chinese). The research place may explain the high number of immigrants in the target sample, and the host culture makes people wanting to learn English. Recruiting only English first language or Chinese first language speakers is difficult. To accommodate the first language issue, at the recruiting stage participants indicate their level of proficiency in listening, reading, speaking, and writing for both English and Chinese. Besides, since language fluency could impact language processing (Zhang & Schmitt, 2004) and to reduce any confounding effect, language fluency is included as a control variable. Another limitation could be the narrow focus on two languages, namely English and Chinese. Only bilinguals who are fluent in English and Chinese are recruited. Other languages are not tested. However, the attempt is to focus on two representative languages, and to explore the categorical differences between them. Future research can generalize these findings from English and Chinese into more languages. Since English is an alphabetic language, and Chinese is an ideographic language (Schmitt et al., 1994), we don't know whether the word type differences between English and Chinese would be observed within alphabetic or ideographic languages as well. Future research may focus on extending the findings from the inter language system to the intra language system. For example, future research may examine whether the use difference is applicable to Chinese and Japanese? Furthermore, are the differences due to language structures, or to culture related backgrounds? The underlying mechanisms need to be further investigated. Finally, future research could investigate the product/service types, to figure out whether the match of product/service types to certain word categories may alter the current findings.

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