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[Article title]

Perceptions of Chinese traditional food and European food among Chinese consumers

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Structured Abstract:

Purpose - This paper explores Chinese consumers' perceptions in relation to both Chinese traditional and European food.

Design/methodology/approach- A web-based free word association test was administered to 302 consumers in China. They were asked to give the first three words that came into their minds when they were presented with each of two stimulus words, 'traditional food' and 'European food'. Three researchers grouped the elicited words into classes and then into dimensions. Chi-square association tests were used to assess and identify statistically significant differences in the frequencies of classes and dimensions for the two food concepts between socio-demographic groups.

Findings - The findings show that Chinese consumers define Chinese traditional food and European food through ten similar dimensions: *Sensory appeal*, *Health*, *Origin*, *Marketing*, *Safety*, *Variety*, *Heritage*, *Symbolic meaning*, *Simplicity* and *Mood*. Additionally, they associate Chinese traditional food with the dimensions *Elaboration*, *Celebration* and *Habit*, as well as link European food to the dimensions *Convenience* and *New*. Although ten dimensions are the same, obvious differences can be identified by comparing the classes for the two food concepts. Further, there are significant differences in the class associations for European food between age groups and in the dimension associations for Chinese traditional food between gender groups.

Originality/value - By using an online qualitative research method, this study is one of the first to address how Chinese consumers define both European food and their own traditional food in China, the largest East Asian country. The findings are particularly useful for the future development of traditional food products and for the future import of European food products onto China and even other countries in East Asia.

Keywords –China; Consumer; Perceptions; Traditional food; European food; Word association

Article Classification- Research paper

Perceptions of Chinese traditional food and European food among Chinese consumers

Introduction

China has the World's largest population, is experiencing sustained growth in personal income and has a dietary consumption pattern inclined towards Westernization (Pingali, 2007, World Bank, 2014). This has led to a dramatic growth in demand for European food products (e.g. wine and beer) in this largest East Asian country recently (Alinna, 2013, Lu, 2014, Balestrini and Gamble, 2006). An increased importance has therefore arisen for the research areas in relation to consumers' attitudes, perceptions and behaviours towards European food products in East Asia, especially in China. A few studies do identify Chinese consumers' impressions of Western local food (*too sweet, low in fruit and vegetables, high in calories, with too many uncooked or cold dishes* and *too much fried food*), as well as the factors influencing their preferences for Western foods (*taste, price, hygiene, safety, appetising assurance* or *familiar flavour*) (Chang et al., 2010, Curtis et al., 2007, Li et al., 2011). However, there is still a lack of understanding with regard to Chinese consumers' perceptions towards European food; how do Chinese consumers define the concept 'European food'?

Meanwhile there are basic cultural, dietary and traditional food differences between East Asian and European countries (Brown and Brown, 2006, Chang et al., 2010, Ebrey and Walthall, 2006, Oh et al., 2013, Sun and Collins, 2004, Wan, 1995). A large variety of traditional Chinese foods still influence modern Chinese dietary consumption patterns (Cai and Situ, 2006, Zhang et al., 2009, Zhao, 2003). Therefore, European food producers face challenges from the differences between the East and the West, as well as competition with domestic producers of Chinese traditional food in China. This brings an increased importance to the research areas in relation to East Asian (especially Chinese) consumers' attitudes, perceptions and behaviours towards their own traditional food.

However, consumer-based traditional food studies have thus far mostly been conducted within Europe (Almli et al., 2011, Cerjak et al., 2014, Guerrero et al., 2010, Guerrero et al., 2012, Guerrero et al., 2009, Pieniak et al., 2009, Vanhonacker et al., 2010a, Vanhonacker et al., 2010b). Despite differences between individual countries in the importance and weight of dimensions or elements of the definition of traditional food (Vanhonacker et al., 2010b), European consumers generally defined traditional food through the following dimensions: *Sensory, Health, Elaboration, Heritage, Variety, Habit, Origin, Simplicity, Special occasions* and *Marketing* (Cerjak et al., 2014, Guerrero et al., 2010, Guerrero et al., 2009). Almli et al. (2011) also concluded that the main patterns of product attribute perceptions of traditional food, e.g. in terms of *specific taste*, *quality*, *appearance*, *healthiness*, or *expensiveness*, were coherent across different European countries. The definition of Chinese traditional food can only be summarised using academic perspectives by researchers themselves, as follows: *having a long history*, *created alongside local cultures and customs, made based on a wealth of experience*, *accepted by the general population, often eaten during festivals* (Li, 2007, Tan

et al., 2009a, Tan et al., 2009b). As such, there is still a lack of understanding with regard to Chinese consumers' perceptions towards their own traditional food; how do Chinese consumers define the concept 'traditional food'?

Given the aforementioned research gaps, it is necessary to increase our knowledge of Chinese consumers' perceptions towards their own traditional food and European food, as perceptions are often considered to be the most important perceptual qualities for a product (Greenacre and Blasius, 1994). A product will succeed in a market only if it matches consumer expectations of its perceived attributes (Hawkins and Mothersbaugh, 2009, Stolzenbach et al., 2013). Therefore, the current qualitative study has been conducted to elicit the perceptions associated with Chinese traditional and European foods by Chinese consumers using a web-based free word association test. The work will provide information on the meanings that foods from Eastern and Western dietary civilisations (Chinese traditional food and European food) hold in the minds of Chinese consumers. Similarities and differences will be identified by comparing the meanings of the two food concepts.

Material and methods

Web-based free word association test

The word association test is a popular projective technique used in consumer and market research, which allows to assess consumers' concepts, beliefs or perceptions towards a product (Ares et al., 2008, Donoghue, 2000, Guerrero et al., 2010). The technique has been successfully carried out online in previous research (Chrysochou et al., 2010).

In our study, a web-based free word association test was conducted in June 2012. The test included four web pages. The introduction text (on the first web page) invited participants to understand the procedure of the test, and informed them that two food concepts would be separately given on the following two web pages. They were asked to provide the first three words that came into their minds when they were presented with the stimulus word on each page. They were told to avoid brand names, particular foods or dishes (Guerrero et al., 2010). Then, the two stimulus words, 'traditional food' and 'European food', were separately presented on the second and third web pages. No specific materials or stimuli, apart from the stimulus words, were included. Finally, the fourth web page probed participants' socio-demographics including their gender, age, involvement in food purchasing and preparation, and current residence. This free word association test was a standalone study, i.e. no additional information was collected.

Participants

The link for the word association test was sent to a random selection of members of a sampling panel of a Chinese market research agency, with strict monitoring of their socio-demographic characteristics (through national ID card) and regional distributions (through IP address). Participation was based on self-selection by the panel members. This non-

probability sampling method yielded 302 valid participants who carefully completed the word association test, of which 59.6% were female and 40.4% were male. All participants were aged over eighteen years and involved in food purchasing or food preparation at home, with 93.7% of them residing in urban areas. Due to the online data collection approach, the sample was biased towards young people, with 62.6% of the participants who were aged 30 years or younger. The average completion time of the word association test was about three minutes (185 s). A data saturation test confirmed a high quality of information obtained by this qualitative study (see Appendix 1 for further details) .

Based on the geographic distribution of the sample, participants were classified into two regional groups: North (including 33.1% of the sample) and South (including 66.9 % of the sample). Southern and northern regions of China have obvious differences in terms of cultural history, dietary habits and lifestyles (He, 2013, Sun, 2012). In addition, participants were classified into a High (including 52.9% of the sample) and a non-High income group (including 47.1% of the sample), based on the local urban personal income rates from 2012 (above and below 30,000 Chinese Yuan in the whole year of 2012) (National Bureau of Statistics of the People's Republic of China, 2013). High-income regions have higher development levels in education, economy, health and environment, as well as more purchasing power and exposure to Western cultures and products than regions with lower income levels in China (Liu et al., 2011, Sun and Collins, 2004).

Data processing and analysis

The Chinese words elicited were translated into English through a process of back-translation (Brislin, 1970). Double answers for one food type from the same participant were deleted before data analysis.

A grouping approach was employed to increase the reliability of this qualitative study (Guerrero et al., 2010, Roininen et al., 2006, Rozin et al., 2002). Three researchers were selected to join in the grouping process. They were bilingual and familiar with Chinese dietary cultures. First, they independently performed the grouping work with naming classes and dimensions based on a semantic analysis and their personal interpretation of different words (elicited words and classes); thereafter a consensus of the grouping was determined through discussion among the involved researchers.

Chi-square tests for contingency tables were employed to measure whether there were statistically significant differences in the frequencies of classes and dimensions for the two food concepts between socio-demographic groups (gender: male and female; age: ≤30 and >30 years of age; southern and northern regions; high and non-high income regions) (SPSS 22.0). Further, the relative frequencies of classes and dimensions for each socio-demographic group were calculated and imported into XLSTAT 2014 for simple correspondence analysis (CA) to identify the main differences in the class and dimension associations between the socio-demographic groups (only the statistically significant differences were further explored

in this study using CA) (Greenacre and Blasius, 1994; Guerrero et al., 2010; Vanhonacker et al., 2010b). A CA aims at highlighting the differences between objects by their profiles with relative occurrence rather than the absolute frequency of occurrence on the CA plot (Greenacre and Blasius, 1994; Guerrero et al., 2010; Vanhonacker et al., 2010b). The distance between the row points (or column points) of the plot represent the inter-row (or inter-column) chi-square distance (Addinsoft, 2016). Classes or dimensions that are located close a socio-demographic factor (e.g. male vs. female) in the CA plot indicate a strong association of the class or dimension with Chinese traditional food or European food in that socio-demographic group; those with central positions in the plot indicate a less variation degree of the class or dimension between the socio-demographic groups; those with remote positions in the plot indicate a higher variation degree of the class or dimension between the socio-demographic groups (Greenacre and Blasius, 1994; Guerrero et al., 2010; Vanhonacker et al., 2010b).

Results and discussion

Grouping the elicited words into classes

Among the 869 and 813 valid elicited words for the two stimulus words 'traditional food' and 'European food', respectively 322 (37%) and 283 (34.8%) words were semantically different. The elicited words for Chinese traditional food were dominated by *Tasty* (n= 78), *Delicious* (n= 76), *Classic* (n=33) and *Healthy* (n=26) (Figure 1). For European food, the most frequently elicited words were *Expensive* (n= 49), *High calorie* (n=27), *Fashion* (n=26), *Tasty* (n=26), *Delicate appearance* (n=21), *Safe* (n=20) and *Import* (n=20) (Figure 1). These elicited words had frequencies equal to or higher than 20.

>> Insert Figure 1

The elicited words were grouped into 36 classes for Chinese traditional food and 35 classes for European food by consensus among the three researchers after their independent grouping processes, shown in Figure 2. Table 1 shows examples of elicited words grouped into classes. Regarding Chinese traditional food, *Tasty* (n=148) was the most frequent class, with a frequency much higher than other classes (e.g. the second frequent class *Local characteristics* only had a frequency of 44). For European food, *Expensive* (n=59) was the most frequent class. The frequency gap between the first and second (*Safe*, n=46) frequent classes for European food was much smaller than for Chinese traditional food.

>> Insert Figure 2

>> Insert Table 1

Chi-square tests for the contingency tables (e.g. 36x2 for Chinese traditional food and 35x2 for European food) revealed a significant difference between age groups (≤30 vs. >30 years

of age) for the class associations of European food (Table 1). No significant difference was found between the age groups for that of Chinese traditional food and between other socio-demographic groups for that of both Chinese traditional food and European food (Table 1).

Figure 3 demonstrates the difference in the class associations for European food between the two age groups based on the results of simple correspondence analysis. Participants who were 30 years of age or younger were close to the classes *Fat*, *Raw* and *Upscale*. While participants older than 30 years of age were inclined towards *Sweet*, *Business*, *Origin*, *Fashion*, *Appearance* and *Safety*. This perception difference might be caused by the different consumption patterns of Western products between different age groups in China. Young Chinese consumer are the main driving force behind Western product consumption, and they pursue emotional satisfaction by better taste or higher status comparing to their older counterparts (Barton et al., 2013, Curtis et al., 2007, Hung et al., 2007, Wang et al., 2013). As such, the younger participant group in our study had a more *Upscale* perception of European food. Their perceptions *Fat* and *Raw* were in line with some true or real characteristics of European or Western food that were reported to have more meaty and raw dishes (e.g. salads) than traditional Chinese food (Behar, 1976, Pingali, 2007, Wan, 1995). Participants who were older than 30 years of age had perceptions of the monotonous taste *Sweet* and *Fashionable* to consume' in relation to European food. They were more likely to associate it with the classes *Business, Origin, Appearance* and *Safety* compared to their young counterparts.

>> Insert Figure 3

Grouping the classes into dimensions

The classes were further grouped into 13 dimensions for Chinese traditional food and 12 dimensions for European food by consensus among the three researchers following their independent grouping processes. Table 2 shows the dimensions and their classes for the two food types. Ten dimensions were elicited for both Chinese traditional food and European food: *Sensory appeal*, *Heritage*, *Origin*, *Symbolic meaning*, *Health*, *Variety*, *Safety*, *Marketing*, *Mood* and *Simplicity*. In addition to these, *Habit*, *Celebration* and *Elaboration* were also elicited for Chinese traditional food. *New* and *Convenience* were two other dimensions obtained for European food.

Figure 4 shows the frequencies of dimension associations for the two food concepts. For both Chinese traditional food and European food, *Sensory appeal* is the most frequently occurring dimension identified by Chinese consumers. This corresponds with the dominance of sensory issues in food preference by the Chinese (Dang, 2010, Wan, 1995). In accordance with Chinese tradition, a good food needs to be excellent in terms of colour, aroma and taste (Wan, 1995). Within this dimension, Chinese consumers define these two food concepts by using some similar classes such as *Tasty*, *Taste*, *Appearance* and *Smell*. However, European food is also linked to a *Delicate appearance,* as well to two specific taste or sensory characteristics *Sweet* and *Greasy*.

Heritage is a dimension with a high frequency in relation to Chinese traditional food,

including several classes such as *History*, *Culture*, *Heritage*, *Old* and *Fame*. It is not a high frequency dimension for European food, with only one class identified - *Heritage*. In both Europe and China, traditional food is an important part of the cultural heritage (Cai and Situ, 2006, Cerjak et al., 2014, Guerrero et al., 2010, Guerrero et al., 2009, Vanhonacker et al., 2010a, Vanhonacker et al., 2010b, Zhang et al., 2009, Zhao, 2003). Compared to Chinese traditional food, European food or Western food is a totally new concept and belongs to another dietary civilisation from the viewpoint of Chinese consumers. They have less knowledge about the Western dietary history, culture, heritage and customs. Chinese consumers view the consumption of Western foods as being fashionable (Curtis et al., 2007, Zhou and Hui, 2003). Therefore, it is reasonable that *Heritage* is an important dimension for the Chinese consumer to define their own traditional food; whereas it is not directly linked to European food by most Chinese consumers.

Origin is also a high frequency dimension for both food concepts. Origin is an important attribute for consumers to evaluate a regional product before buying it (Kelly et al., 2005, Van der Lans et al., 2001; Verbeke and Ward, 2006). 'Local', 'regional' or 'national' are sub-dimensions which reflect the origin attribute of a food product (Vanhonacker et al., 2010b). Our findings show that Chinese consumers define the origin attributes of Chinese traditional and European foods through all of the three sub-dimensions (e.g. the classes *Local characteristic* and *Characteristic* are in line with the classes 'local' and 'regional'; the classes *Chinese* and *Exotic* are related to the class 'national').

The *Marketing* dimension is present for both food concepts, but differed in terms of interpretation. In relation to the class *Price*, Chinese traditional food is associated with *Cheap*. Conversely, European food is linked to *Expensive*. This reflects the fact that Western-style foods, or imported Western food products, have high prices, are perceived as such and are therefore considered to be upscale foods by Chinese consumers (Curtis et al., 2007, Zhou and Hui, 2003). This is obviously different from the range of economical Chinese traditional foods which the Chinese consume on a daily basis (Tan et al., 2009b, Zhao, 2003). Furthermore, *Old brand/shop* is another *Marketing* signal for Chinese traditional food. This is a reflection that Chinese consumers often gain experience of Chinese traditional foods from long established local food shops or brands. This relates to the viewpoint that Chinese *Old brands/shops* inherit traditional techniques, products or services, acquiring a well-deserved reputation and are widely recognised by Chinese communities (Wang et al., 2009).

The dimension *Symbolic meaning* was also identified for both food concepts. *Symbolic meaning* has been mentioned in some previous studies. The symbolic meaning relates to the added value formed in consumers' minds based on their early memories or impressions of certain special foods (Lupton, 1994, Vanhonacker et al., 2010a; Verbeke and Lopez, 2005). The dimension *Symbolic meaning* for Chinese traditional food includes the classes: *Memory*, *Childhood*, *Family* and *Nostalgia*. In China, family relationships are at the foundation of traditional culture and the origin of social relationships. The 'family' has also strongly influenced the development of Chinese diet culture (Zhuo, 1997). The *Symbolic meaning* of Chinese traditional food to Chinese consumers are closely linked to this 'family culture'.

However, this dimension for European food incorporates different classes: *Romantic*, *Upscale* and *Fashion*. The *Symbolic meaning* of European food are related to the documented Chinese consumer behaviours towards Western products. The Chinese consider the consumption of Western foods, or other products, as being fashionable, aesthetically pleasing and a sign of high social status (Curtis et al., 2007, Zhou and Hui, 2003).

In recent years, there has been an unusually high number of food safety incidents in China, leading to increased concerns among consumers with regard to food safety (Liu et al., 2013, Liu et al., 2014, Ortega et al., 2011, Qiao et al., 2012). It is therefore logical that this study has identified the dimension of *Safety* for both traditional and European food. Chinese consumers have positive safety perceptions towards both Chinese traditional food and European food, as *Safe* is the most frequent class for the dimension of the two food concepts, and only two participants and no participant contribute negative elicited words to the *Safety* dimensions of Chinese traditional food and European food, respectively. Nevertheless, more Chinese participants attributed safety-related words or expressions to the concept of European food (n=48) than to traditional Chinese food (n=28).

A dimension *Health* was identified for both food concepts. Many Chinese participants held negative health perceptions in relation to European food, as they attributed high frequent classes with unhealthy meanings, e.g. *Unhealthy* (n=22), *Fat* (n=25) and *Calorie* (n=30), to the dimension *Health*. By contrast, only four participants associated Chinese traditional food with unhealthy meanings. This might be caused by the different dietary cultures and histories between China and Western countries. Under a long history of agricultural civilization, traditional Chinese foods are often plant-based; while Western countries inherit more meat or dairy-based traditional foods from a long history of nomadic civilization (Li, 2007).

Traditional and European foods are both associated with the dimension *Variety*. Local dietary cultures and flavour preferences are formed based on local geography, climate, ingredients and dietary resources. This leads to a wide variety of food products among different regions (Cheng, 1994). China as a whole has an outstanding global image for its dietary culture, and this vast diet-cultural system incorporates within it several local diet-cultural systems with different dietary cultures, flavour preferences and food varieties (Zhao, 2003). Europe also owns a number of diverse local food resources (Jordana, 2000). With regard to the dimension *Variety*, our findings show that European food has some specific expressions about its *Variety* in Chinese consumers' minds, such as *Fried* and *Raw*.

The dimension *Simplicity* has been identified for both traditional and European foods. The meaning of *Simplicity* for a food product is about its uncomplicated, basic, natural, pure and low processed character (Guerrero et al., 2009). In our study, *Simplicity* is not an obvious dimension for either of the two food concepts, as it occurred only with a low frequency.

Traditional and European foods are both linked to the dimension *Mood*. *Mood* is related to people's emotional feelings towards food or eating (Steptoe et al., 1995). For the two food concepts, this dimension includes similar elicited words such as *Happy*, *Joyful* and

Enjoyment.

In addition to the ten dimensions, *Habit*, *Celebration* and *Elaboration* were also identified for Chinese traditional food. This is in line with the perceptions of traditional food by European consumers (Cerjak et al., 2014, Guerrero et al., 2010, Guerrero et al., 2009). Traditional food is considered to be elaborately handmade using traditional methods (*Elaboration*), accepted by the general population who habitually eat it (*Habit*) and linked with special occasions (*Celebration*) (Guerrero et al., 2009).

New and *Convenience* are two other dimensions identified for European food. The dimension *New* comprises two classes *Novel* and *Neophobia*. European food is a new thing for Chinese consumers in comparison with their own traditional food. Chinese consumers treat this 'new' attribute of European food in two opposing ways. Some of them consider it as a 'novel thing'. This can be a reason for them to try it. However, some others indicate that it is unfamiliar or they are unaccustomed to it. This is a reflection of food neophobia for European food among those consumers (Pliner and Hobden, 1992). Chinese consumers link European food to *Convenience*. This fits with the point of view that Western-style food is often considered as being more convenient than conventional food in China (Curtis et al., 2007, Veeck and Veeck, 2000). Many Chinese participants consider European food as *Fast food* (n=24). In China, *Fast food* typically refers to food products sold in Western fast-food restaurants (e.g. hamburger, pizza, sandwich and fries in Kentucky Fried Chicken, Subway, Pizza Hut and McDonald's) (Xue et al., 2016, Zhang et al., 2012). Since entering China in 1980s, the Western fast food industry has experienced a rapid development in this huge market (e.g. now KFC has over 4,200 restaurants and McDonald's owns over 2,000 restaurants in Chinese cities) (Xue et al., 2016, Zhang et al., 2012). Western fast food brings the first impression of Western dietary civilization to Chinese consumers, especially in terms of being quicker in preparation time comparing to traditional Chinese dishes (Pingali, 2007, Wan, 1995, Xue et al., 2016, Zhang et al., 2012). Our results show that this first impression even influences Chinese consumers' perceptions towards European food.

In general, and by abstracting different cultural emphases within the interpretation, we can conclude that the perceptions at dimension level associated with Chinese traditional food by Chinese consumers bear strong similarities to European consumers' perceptions of traditional (European) food, as identified in previous studies (Cerjak et al., 2014, Guerrero et al., 2010, Guerrero et al., 2012, Guerrero et al., 2009, Pieniak et al., 2009, Vanhonacker et al., 2010b). This indicates that the perceptions for traditional food surpass cultural differences, even between the East and the West. Further, three new dimensions have been identified from the Chinese sample in the current study. These are: *Safety*, *Mood* and *Symbolic meaning*. Guerrero et al. (2010) pointed out that the translation and grouping results for the data of a word association test depend on the researchers who participate in the translation and grouping processes. The translation and grouping processes in this study were completed by Chinese researchers, who had a different dietary culture background in comparison with that for European researchers (Chang et al., 2010, Sun and Collins, 2004, Wan, 1995, Zhang et al., 2011). This might explain the three new dimensions for traditional food elicited by the current

study. Additionally, the dimensions and their classes for European food contain information which is closely aligned with documented Chinese consumers' impressions and the determinants for their preferences towards Western food (Chang et al., 2010, Curtis et al., 2007, Li et al., 2011). These commonalities suggest that Chinese consumers have a rather general image of food products from Western countries (within and outside Europe). A potential explanation is that Chinese cuisines and Western (including European) cuisines belong to different genres (the Chinese and French genres) of the world's 'Three Grand Cuisines' with great differences in dietary cultures and dish styles (Wolf, 2010). It might be hard for Chinese consumers to identify the discrepancies of dishes and dietary cultures from different Western and European countries that belong to the same 'French genre'.

As shown in Table 2, using the Chi-Square tests (e.g. thirteen × two for Chinese traditional food and twelve ×two for European food), no statistically significant difference ($p>0.05$) was found for dimension associations of the two food concepts between northern and southern regions, between high and non-high income regions, and between the two age groups. While a significant difference was observed for Chinese traditional food between male and female. This is in line with the gender difference in the dimension associations for traditional food by European consumers in a previous study (Guerrero et al., 2010). Figure 5 demonstrates the difference in the perceptual dimension associations for Chinese traditional food between men and women, based on the results of simple correspondence analysis. Men were close to the dimensions *Health* and *Marketing*, whereas women were inclined towards *Simple*, *Origin* and *Celebration*. Gender differences are common in food consumer studies, especially in domains of attitudes, behaviour and health concerns (Guerrero et al., 2010).

>> Insert Table 2

>> Insert Figure 4

>> Insert Figure 5

Conclusions and limitations

By using an online qualitative research method (word association test), this study is one of the first to address how Chinese consumers define both European food and their own traditional food in China, the largest East Asian country. In summary, Chinese consumers have clear perceptions of the two food concepts, with 13 dimensions emerging for the concept of Chinese traditional food and 12 dimensions for the concept of European food. Although 10 dimensions are the same, obvious differences were identified by comparing the classes for the two food concepts. For example, Chinese consumers' *Health* perceptions of Chinese traditional food were more positive than *Health* perceptions of European food. By contrast, their *Safety* perceptions of European food were more positive than for Chinese traditional food).

Given the qualitative nature of this study, our sample does not fully represent the demographic characteristics of China. Future research is recommended to focus on quantifying the qualitative exploratory insights provided by our study while taking into account a broader range of Chinese consumers' geographic and demographic characteristics and distributions. Furthermore, our test design using two stimulus words may have suffered from an order bias, in that the first stimulus word may have had an impact on the elicited words for the second stimulus word.

Nevertheless, the empirical findings reported in this study provide valuable insight that help bridging the current gap in our understanding of the two food concepts by Chinese consumers. This has important implications not only for Chinese consumers but also for consumers in other East Asian countries (e.g. Japan and Korean) where dietary cultures, habits and traditional foods are highly influenced by ancient China and greatly different from European countries (Brown and Brown, 2006, Ebrey and Walthall, 2006,Oh et al., 2013). Furthermore, this study provides valuable inputs for food producers, marketers and policy makers who wish to improve marketing strategies for European food products to be successful in the huge Chinese market. For example, *Sensory appeal* emerged as the most frequently occurring dimension for both traditional Chinese food and European food. This confirms the dominance of sensory issues in food-related preferences among Chinese consumers (Dang, 2010, Wan, 1995). Food marketers are recommended to choose and sell European food products that match the expectations of Chinese consumers in terms of sensory appeal, while monitoring price and health-related perceptions and capitalising on favourable perceptions of safety and origin.

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645

Table 1 Examples of elicited words grouped in the same classes and the results of Chi-square test for elicited classes in the web-based word association test using 'traditional food' and 'European food' as stimulus

Class	Words	
	Traditional food	European food
Tasty	Tasty, delicious, delicious-food, good-taste…	Tasty, delicious, delicious-food…
Choice	Abundant, various, numerous…	Various, abundant, dull, similar…
Festivals	Spring festival, mid-autumn-festival…	
Heritage	Inheriting, heritage, spreading…	Knife-and-fork, royal food, have- -a-long-history, well-known…
Culture	Culture, customs, chopsticks…	
Family	Reunion, family-love, family…	
Neophobia		Strange, unaccustomed, weird…
Mood	Like, good-feeling, happiness…	Enjoy, like, leisure, interesting…
Business	Brand, marketplace, expensive…	Brand, restaurant, brand-guarantee…
Expensive		Expensive, high-price…
Cheap	Cheap, affordable, economical…	
Origin		UK, France, Italy…
Exotic		Import, imported-foods, foreigner…

Chi-square test				
Socio-demographic group	Traditional food		European food	
	$\chi 2$	*p*	$\chi 2$	*p*
Gender	45.441	0.111	39.125	0.251
Age (≤30 and >30)	33.857	0.523	54.465	0.014
Southern and northern regions	38.644	0.308	25.648	0.848
High and non-high income regions	41.530	0.207	36.257	0.364

Note: *the term 'traditional food' refers specifically to "Chinese traditional food" in this study.*

Table 2 Elicited classes grouped in the same dimensions and the results of Chi-square test for elicited dimensions in the web-based word association test using 'traditional food' and 'European food' as stimulus by three researchers

Dimension	Class	
	Traditional food	European food
Sensory appeal	Tasty, taste, appearance, smell, appetite and bad-taste	Bad-taste, smell, appetite, tasty, taste, sweet, greasy, appearance and delicate-appearance
Heritage	History, old, classic, culture, heritage and fame	Heritage
Origin	Local-characteristic and Chinese	Origin, characteristic and exotic
Symbolic meaning	Memory, childhood, family and nostalgia	Romantic, upscale and fashion
Health	Healthy, health and unhealthy	Health, unhealthy, fat and calorie
Variety	Variety and choice	Fried, raw, choice and variety
Safety	Safe and safety	Safe and safety
Marketing	Business, old-brand/shop and cheap	Expensive, business and price
Mood	Mood	Mood
Simplicity	Simple	Simple
Habit	Common and habit	
Celebration	Festivals	
Elaboration	Elaboration, handmade and craft	
New		Neophobia and novel
Convenience		Convenience and fast-food

Socio-demographic group	Chi-square test			
	Traditional food		European food	
	$\chi 2$	*p*	$\chi 2$	*p*
Gender	29.543	0.003	12.195	0.349
Age (≤30 and >30)	11.795	0.462	17.650	0.090
Southern and northern regions	10.975	0.531	9.047	0.618
High and non-high income regions	10.543	0.568	8.790	0.641

Note: *the term 'traditional food' refers specifically to "Chinese traditional food" in this study.*

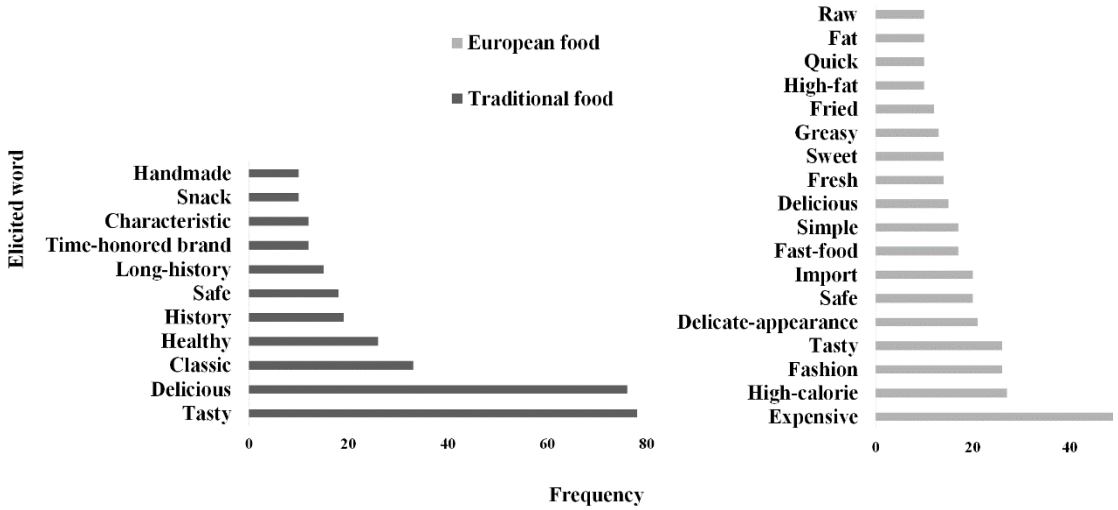

Figure 1 Most frequently elicited words in the web-based word association test using 'traditional food' or 'European food' as stimulus (n≥10 for 302 participants)

Note: *the term 'traditional food' refers specifically to "Chinese traditional food" in this study.*

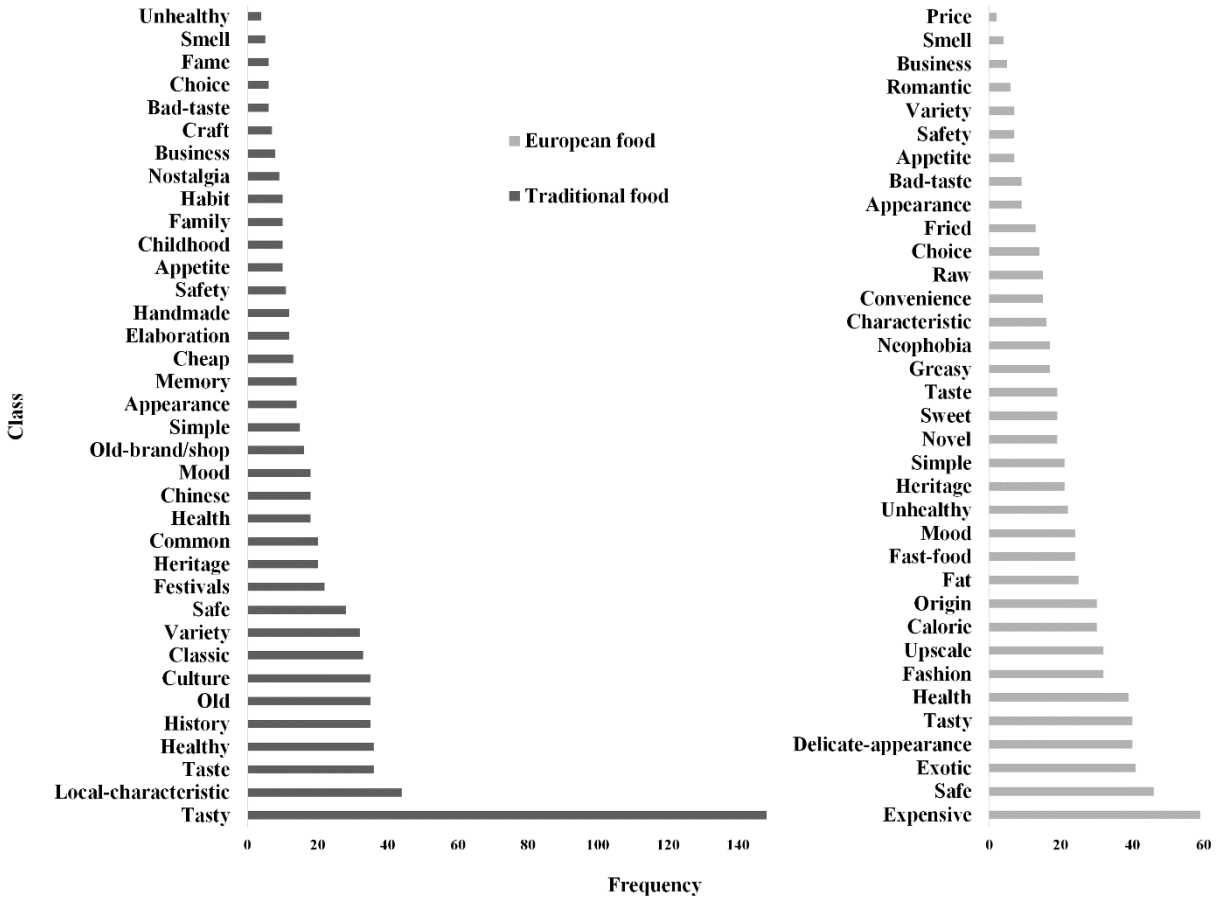

Figure 2 Frequency of elicited classes in the web-based word association test using 'traditional food' or 'European food' as stimulus

Note: *the term 'traditional food' refers specifically to "Chinese traditional food" in this study.*

Figure 3 Main difference of elicited classes for the stimulus word 'European food' between age groups obtained by simple correspondence analysis

***Note**: ≤30= 30 years of age or younger; >30= older than 30 years of age; only classes with squared cosines about 0.5 in both dimensions are shown.*

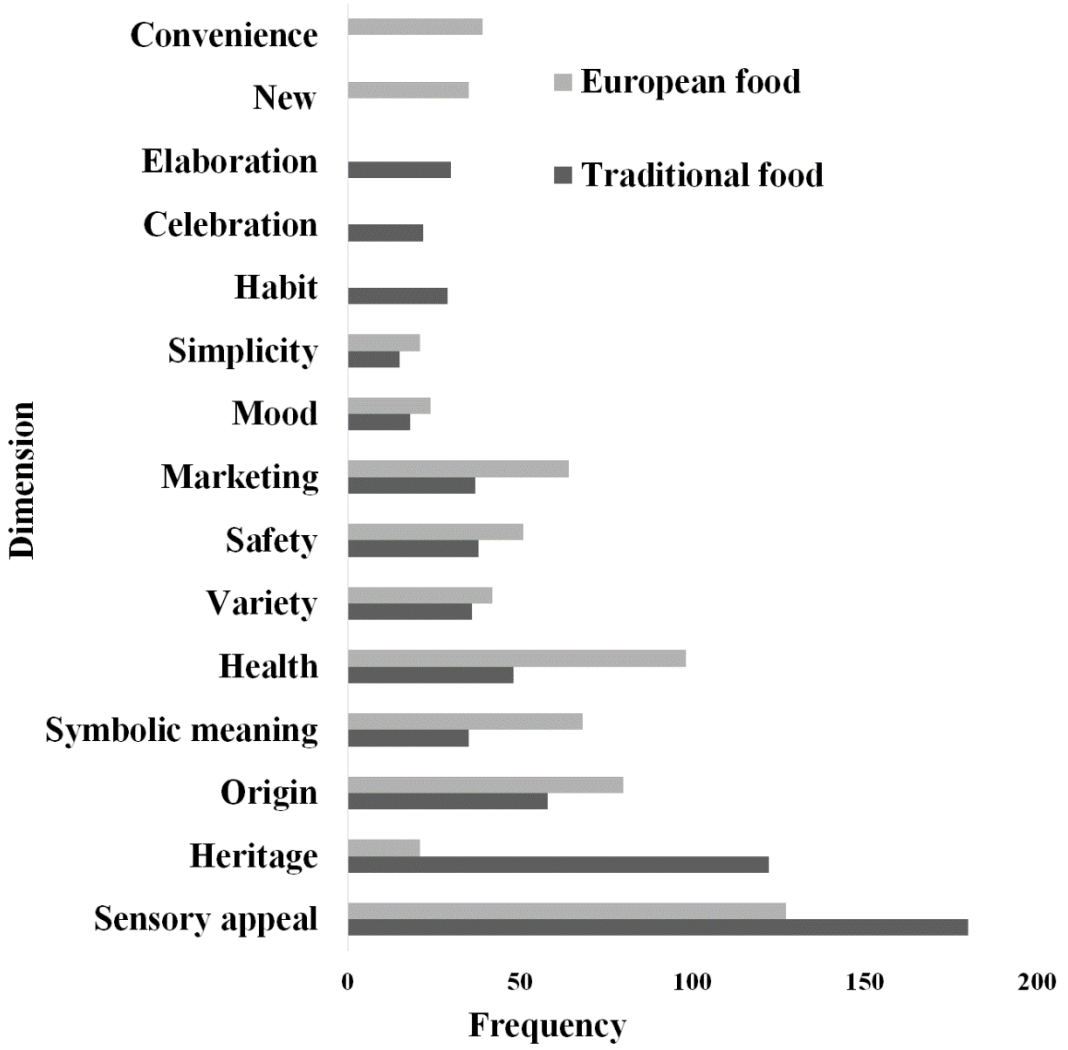

Figure 4 Frequency of elicited dimensions in the web-based word association test using 'traditional food' and 'European food' as stimulus (n=302)

Note: *the term 'traditional food' refers specifically to "Chinese traditional food" in this study.*

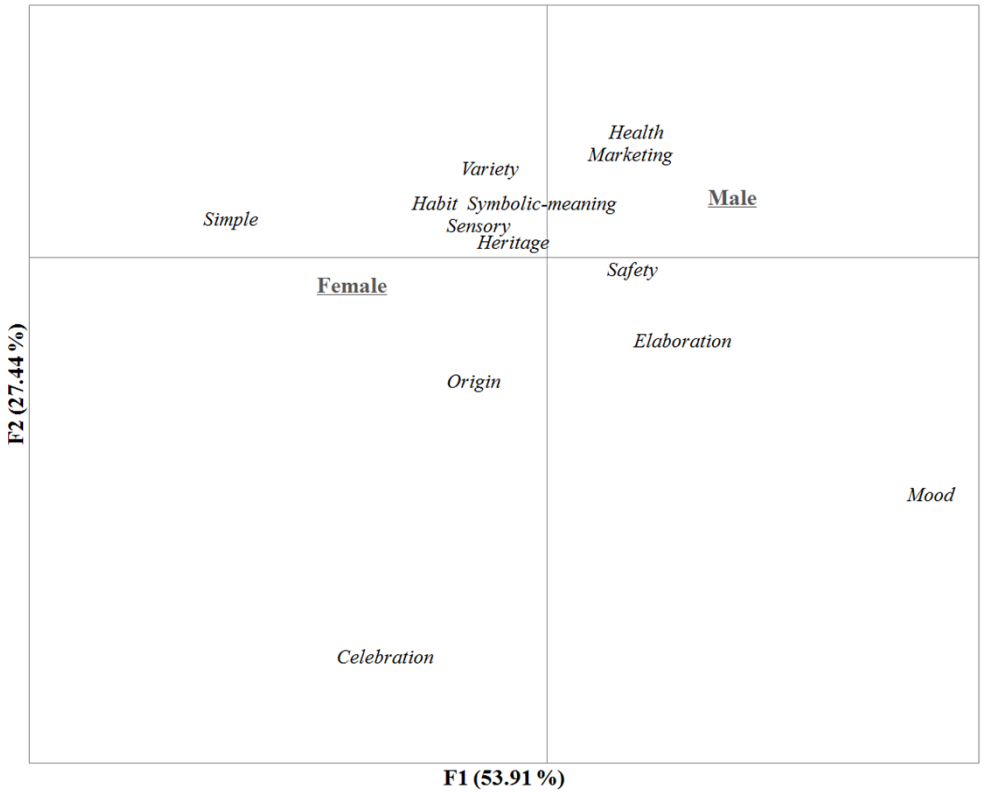

Figure 5 Main difference of elicited dimensions for the stimulus word 'traditional food' between gender groups obtained by simple correspondence analysis

Note: *the term 'traditional food' refers specifically to "Chinese traditional food" in this study.*

Appendix 1

Data saturation is crucial to the quality of the information collected in qualitative exploratory research. Saturation implies that no new information can be gained from including additional sampled units in the study sample (Morse, 1995, Sandelowski, 1995). The 302 participants of our study were classified into three subsample groups based on the time order in which they completed the word association test: the early group (n=100), the intermediate group (n=100) and the late group (n=102). We monitored the numbers of classes and dimensions that emerged in these three subsample groups. If new classes or dimensions for the two food concepts are not found in the sample units with later time orders (the intermediate or the late group in this study), our data can be considered to have reached theoretical saturation (Guest et al., 2006, Sandelowski, 1995).

Regarding these three subsample groups, the early group associated Chinese traditional food with 36 classes and 13 dimensions, and linked European food to 34 classes and 12 dimensions. The intermediate group included 36 classes and 13 dimensions for Chinese traditional food, and 35 classes and 12 dimensions for European food. The late group defined Chinese traditional food through 34 classes and 13 dimensions, and they defined European food by 34 classes and 12 dimensions. All classes were represented in the associations reported by the first 100 participants for Chinese traditional food and by the first 200 participants for European food, and all dimensions were represented in the associations reported by the first 100 participants for both food concepts. No new classes or dimensions were found in newly sampled units in the intermediate and/or the late groups for the two food concepts. Therefore, our sample meets the criterion for data saturation for the class and dimension associations of Chinese traditional food and European food by Chinese consumers, which suggests a high quality of information collected within this qualitative exploratory study.