# Differences in Chinese and Western tourists faced with Japanese hospitality: A natural language processing approach

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#### 1 Results

1.1 Experiment Experimental results and answering answers to research questions

Our research questions were about two things. In related to two issues. Based on research questions ?? and ??, we decide that the objective of this study was to determine how Chinese and Western tourists interact with respond to the *omotenashi* culture influenced, which influences hospitality and service in Japan, and how are they different in their perceptions in this matter the differences in their perception of this hospitality. We observed the top-ranking positive factors for Chinese tourists across different price ranges, as shown in Table ??, and specifically the word "不错 (not bad)" and its pairings, as shown in Table??. From these observations, we can infer These observations revealed that, while service, cleanliness, and breakfast are were praised in most hotels, location is usually placed above it usually placed higher in importance on the pairings. When we see From the rest of the factors that are lower on the list, we see inferred that the list is was more populated with hard attributes like such as location and transportation availability across different price ranges. From the The negative keyword usages in Table ?? , there are indicate that there were complaints about the lack of a Chinese friendly environment. However, most complaints are also Chinese-friendly environment, but there were more complaints about hard attributes such as the building's age and the distance from other convenient spots. Nevertheless, the most complained about aspect is However, most complaints were about the price of the hotel. Surprisingly, , which included all of the price rangeshave this negative keyword at the top of the list, suggesting that it is the main concern to; therefore, the price was the main concern for Chinese customers with different travel purposes.

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On the other hand, the The word "staff" is the second or third in the all the price ranges in the lists of satisfaction factors in English-written reviews in all the price ranges reviews written in English. This word is followed by a few other keywords that are lower in the top 10 list, such as "helpful" or "friendly". When we look at ." From the pairings of the top-ranking keyword "good" in Table ??, we find that customers mostly realize that customers mainly praise the location, service, breakfast, or English availability. When we look at From the negative keyword "poor" and its pairings in Table ??, we see that it is also service-related concepts that deduce that the Western tourists are disappointed with. With these results, we can observe that also disappointed with service-related concepts. Therefore, both Chinese and English-speaking tourists in Japan have different priorities. However, both populations consider the hotel's location and transport availability transportation availability nearby (subways and trains) nearby as secondary but still essential points in their satisfaction with a hotelas secondary yet essential points to their satisfaction. The Chinese customers are primarily satisfied with the room quality in terms of the spaciousness and cleanliness and as well as the service of breakfast.

In contrast, the English-speaking customers are—were easily upset by any lack of cleanliness uncleanliness and smoke smell from cigarettes. Surprisingly, the cigarette smell is Cigarette smell was an issue even in the middle to middle and high-class hotelsabove, of which the rooms were priced at more than 30,000 yen per night. However, For hotels with rooms priced above 50,000 yen per night, this problem seems however, this problem seemed to disappear from the list of top 10 concerns. Old and dated buildings seem to be Furthermore, the age of the buildings was a concern for both populations. On the positive side Nevertheless, for all price ranges considered, English-speaking tourists value valued staff friendliness over room quality when considering their satisfaction. In contrast, Chinese tourists consider considered location and transportation more often.

We also can can also observe some keywords that are not considered by their counterparts. For example, English-speaking customers mentioned to-bacco smell in many reviews. However, it was not statistically identified as a problem for their Chinese counterparts. On the other hand, while it appears although they appear in both English and Chinese lists, references to "妈彻 (shopping)" are more common in the Chinese lists across hotels of 15,000 yen to 200,000 yen per night. Meanwhile, the term "shopping" only appears in the appeared solely in the top 10 positive keywords list for English speakers who stayed in rooms priced 20,000to 30,000 yen per nighttop 10 positive keywords list for English-speakers.

In our For research questions ?? and ??, we ponder considered how customers of both cultural backgrounds evaluate evaluated the hard and soft attributes of the hotel and how they differ in those evaluations. Herehotels. Here, we define hard attributes as those relating related to the hotel's physical, structural, or environmental aspects. These are often impossible or impractical to change by the hotel management and staff, such as facilities, infrastructure,

the surroundings, view, or and location convenience. On the other handIn contrast, hotel staff and management can change soft attributes, for example, by improving the hotel's services via training or hiring specialized staff, improving the quantity or quality of amenities, bedsheets, or general cleanliness. Our study found discovered that Chinese tourists are mostly positively reacting more mostly positively react to the hotel's hard attributes. There is a slightly hard leaning (53%) concern with hard attributes in negative sentences, albeit this is, albeit the negative evaluations are more uniform than the positive evaluations, with a tendency of 53 % towards hard attributes. English-speaking tourists, on the other hand, are both positively and negatively were more responsive to soft attributes, either positively or negatively. In the case of negative keywords, English-speaking tourists are overwhelmingly more concerned with they were more concerned about the hotel's soft attributes dissatisfaction somehow.

One factor that both populations have had in common is that, when perceiving the hotel negatively, the "老 (old)", "dated", "outdated", " "dated," "outdated" or "陈田 (obsolete)" aspects of the room or the hotel are being criticized across, surprisingly, were surprisingly criticized across most price ranges. This is, however, However, this is a hard attribute and is unlikely to change for most hotels.

#### 1.2 Chinese tourists—: A big and clean space

We found that mainland Chinese tourists are satisfied mostly by Japanese hotels' were mainly satisfied by big and clean spaces. From the adjectival pairings that we in Japanese hotels. The adjectival pairings extracted with dependency parsing and POS tagging in Table??, we can observe that mostly they mean (Table ??) imply big and clean rooms. Other mentions are also included big markets nearby or a big bed. We can observe that across-Across different price ranges, the usage of the word "大 (big)" increases as the hotel increases in price increased with the increasing price of the hotel. However, we can see that they still react positively in a significant manner in they still reacted positively in cheaper hotels. Inspecting When inspecting closer by taking random samples of the pairs of "大 空间 (big space)" or "大 面积 (large area)", we can see that there are ," we notice that there were also many references to the public bathing facilities in the hotel. We can also see them mentioned as Such references were also implied by a word pairing "棒 温泉 湯  $(sent\bar{o})^{"}$ ," which are artificially made constructed public bathing facilities, on occasions including saunas and baths with unique qualities. On the other hand, there are natural hot springs, called "温泉 (onsen)". They can either be." The word "温泉 (onsen)" can be used bathing in the natural source of the water in rock baths or using the hot springs natural hot spring water in artificially made tiled bath facilities. It is a Japanese custom and culture that all customers use the facilities after cleaning first clean themselves in a shower

and go into the baths without any clothes. It can afterward use the baths nude. It could be a cultural shock for many tourists , but this is but a fundamental attraction for many others.

However, the size of the room or the bed is a hard attribute. Without considering rebuilding the hotel, it is not trivial to improve on. On the other handthis attribute. In contrast, cleanliness is mostly relating related to soft attributes when we observe its adjectival pairings. We can observe pairs such as "干净房间 (clean room)" at the top rank of all price ranges , and then variably and thereupon "干净酒店 (clean hotel)"," "干净总体 (clean overall)"," "干净环境 (clean environment)"," and "干净设施 (clean facilities)"," among other examples. In negative reviews, there is was a mention of criticizing the "一般卫生 (general hygiene)" of the hotel, although it is was an uncommon pair. Therefore, we can assert that cleanliness is was an important soft attribute for Chinese customers and that they are mostly pleased with their expectations being metthey were mostly pleased when their expectations were fulfilled.

One key component we A key component found in Chinese customer satisfaction soft factors is was the inclusion of breakfast within the hotel. While other food-related words were extracted, most of them were general, like such as "food" or "eating," which were lower-ranking and were lower-ranking. In contrast, the word "早餐 (breakfast)" refers possibly ," which possibly referred to its inclusion in the hotel commodities, was frequently used in positive texts compared to other food-related words. The word "早餐 (breakfast)" is also observed across was also present in all price ranges, although albeit at different priorities in each of them. However, we assert that it is For this reason, we regard it as an important factor. Observing word pairs from From the word pairs of the positive Chinese keywords in Table ??, we can also see note that "不错 (not bad)" is paired as with "不错 早餐 (nice breakfast)" in four of the seven price ranges with reviews available as part of the top 4-four pairings. It is only slightly lower on in other categories, although it is not shown depicted on the table. Thus, we consider that a recommended strategy for hotel management is to invest in the inclusion or betterment improvement of hotel breakfast to increase the number of good reviews.

## 1.3 Western tourists—; A friendly face —and absolutely clean

From the satisfaction factors of English-speaking tourists, we can see that at least three words relate directly were directly related to staff friendliness and services , being "staff",in the general database, "helpfulstaff," "helpful," and "friendliness" in the general database. "The word "staff" is the second most frequently used word for satisfied customers across most price ranges , and only third in one of them. Adding to that, In addition, the words "helpful" and "friendly" follow it lower in the list in most price ranges. The word "good" is mostly about mainly refers to the location, the service, breakfast, or English availability in Table ??. Like Similar to Chinese customers, Western customers

also seem seemed to enjoy the included breakfasts regarding their satisfaction keyword pairings. However, the relevant word does not appear directly in the top 10 list as in directly, in contrast to their Chinese counterparts. The words "helpful" and "friendly" are mostly paired with "staff", "concierge", "desk", " "concierge," "desk," and "service". When we look at ... By considering the negative keyword 'poor' "poor" and its pairings in Table ??, we see that it is also realized once again that Western tourists were disappointed with service-related concepts that the Western tourists are disappointed with when they react concepts and reacted negatively.

Another soft attribute that is high on the list for most of the price ranges is the word "clean". Since it: because this is an adjective, we have also explored the word pairings well. Customers are mostly praising. Customers largely praised "clean rooms" and "clean bathrooms", while also referring and also referred to the hotel in general. It seems that when When observing the negative keyword frequencies for English-speakers English speakers, we can find words such as "dirty", and "carpet", and from the word pairings as well as word pairings such as "dirty carpet", "dirty room", and "dirty bathroom". Along with complaints about off-putting smells, we can could conclude that Western tourists have had high expectations about cleanliness when traveling in Japan.

An interesting detail of the keyword ranking is that the word "comfortable" is—was high on the satisfaction factors and "uncomfortable" was high on the dissatisfaction factors. The words are were paired with nouns like "bed",or "room", "pillow" or "mattress",generally referring such as "bed," "room," "pillow," and "mattress," when they generally referred to their sleep conditions in the hotel. It seems that Western tourists are highly sensitive to comfort levels in the hotelsand whether it reaches were particularly sensitive about the hotels' comfort levels and whether they reached their expectations. The ranking for the negative keyword "uncomfortable" is similar across most price ranges , except the two most expensive ones, where this keyword disappears from the top 10 list.

While less high Albeit lower in priority, the price range of 15,000 to 20,000 yen hotels also mentions includes "free" as one of the top 10 positive keywords, paired mostly with "wifi" mainly paired with "Wi-Fi." This price range is mostly for corresponds to business hotels, where we infer users would be expecting users would expect this feature the most. Western tourists are highly sensitive to comfort levels in the hotels and whether it reaches their expectations.

## 1.4 Tobacco, what 's is that smell?

A concern for Western tourists was the smell of tobacco in their room, which can be considered regarded as a soft attribute. Tobacco was found not only as a standalone word with "cigarette", but also as but also in word pairs in Table ??. We can find other related word pairs, such as "funny smell". Upon

manual inspection of." By manually inspecting a sample of reviews with this keyword, we found-noticed that the room was often advertised as non-smoking, yet,: however, the smell permeated the room and curtains. Another common complaint was that there were no non-smoking facilities availableat all in the first placenonsmoking facilities available. The smell of smoke can completely ruin some customers' stay and give a bad impression to review writers, thus lead to bad reviews, thereby lowering the number of future customers.

However, in comparison, Chinese customers seem not to In contrast, Chinese customers seemed to not be bothered by thisat all. We consulted studies involving the use of tobacco in different countries. Previous research states . Previous research has stated that 49—60 % of Chinese men (and 2.0—2.8 % of women) currently smoke or have smoked beforesmoked in the past. This was taken derived from a sample of 170,000 Chinese adults in 2013–20142013–2014, which is high compared to many English-speaking countries (Zhang et al. 2019; World Health Organization 2015).

Japan has a polarized view on the topic of smoking. Despite being Although it has one of the world's largest tobacco markets, its tobacco use has decreased in recent years. Smoking in public spaces is prohibited in some wards of Tokyo (namely Chiyoda, Shinjuku, and Shibuya). However, it is generally only urged suggested and not mandatory to have lift smoking restrictions in restaurants, bars, hotels, and public areas. However, many places have designated smoking rooms are available to keep the smoke in an enclosed area and avoid bothering others. Despite this Nevertheless, businesses, especially those who cater to certain customers, will generally be discouraged from having are generally discouraged by smoking restrictions if they want to keep maintain their clientele. If Japanese hotels want to To cater to all kinds of customers, including Western and Asianalike, they, Japanese hotels must provide spaces without tobacco smell. After all, even if it Even if the smoke does not bother a few customers, the lack of such a smell would make it an appropriate space for all customers.

## 1.5 Location, location, location

The hotel's location, closeness to the subway and public transport, and nearby shops' availability were observed transportation, and availability of nearby shops proved to be of importance to both Chinese and English-speaking tourists. In positive word pairings in Tables ?? and ??, we can find pairs such as "不错位置 (nice location)"," "近地铁站 (near subway station)"," "近地铁 (near subway)" in Chinese texts and "good location"," "great location"," and "great view", as well as single keywords "location" and "shopping" for English-speakers English speakers, and "交通 (traffic)"," "购物 (shopping)"," "地铁 (subway)"," and "环境 (environment or surroundings)" for Chinese speakers. All of these keywords and their location in each population's priorities across the price ranges signal that while it was not the priority for either of them, the signify that the hotel's location is was a secondary but

still important point in the hotel's for their satisfaction. However, since this is a hard attribute, unchangeable to the hotel's management, it is not often considered in the literature. Upon inspection of By examining examples from the data, we found recognized that most customers were satisfied if the hotel was near to at least two other subjects of the following facilities: subway, train, and convenience stores.

Japan is a country with a peculiar public transport system. The rush hourmakes for a subway filled to the brim with people in suits making their commute transportation system. During rush hour, the subway is crowded with commuters, and trains and subway stations in Tokyo create a confusing public transport transportation map for a visitor in Tokyo. Buses are also available, although albeit less used than the rail systems in the big metropolitan cities. These three are unusually means of transportation are usually affordable in price. Then there are the more expensive transports There are more expensive means, such as the bullet train *shinkansen* for traveling across the country, and taxis. Taxis in Japan are a luxury The latter is a luxury in Japan compared to other countries. In , especially in less developed countries, a taxi is the cheap method of transport of where this is a low-cost choice. In Japan, taxis are made to provide a high-quality experience with a matching price. This means that for tourists Therefore, subway availability and maps or GPS applications and as well as a plan to travel the city are of utmost necessity for tourists.

Japanese convenience stores , on the other hand, are also famous world-wide. Japanese convenience stores are a haven for the traveler in need. It offers anything, because they offer a wide range of services and products, from drinks and snacks to full meals, copy and scanning machines, alcohol, cleaning supplies, personal hygiene items, underwear, towels, international ATMs, among other thingsand international ATMs. If some trouble occurred occurs, or a traveler forgot to pack a particular item, it is almost sure mostly certain that they can find it.

Therefore, considering that both transport transportation systems and nearby shops are points of interest for Chinese and Western tourists, Japanese hotels have to carefully choose their location from the moment they are constructed. While the location of a Japanese hotel must be carefully chosen prior to construction. Although not a top priority, this is a universal factor for both customer groups , and it can be an instant way and is conducive to generate positive reviews.

## 2 Discussion

Below In this section, we explore the possible interactions with Japanese hospitality, the differences between perceptions of Chinese and Western tourists, the possible cause for them, how they vary as well as the possible causes, variations in perceptions across different price ranges, and what they imply the implications for the industry. We also discuss the differences between the

hotel's hard and soft attributes and how they contribute their contributions to customers' satisfaction.

#### 2.1 Western and Chinese tourists in the Japanese hospitality environment

To this day, scholars continue to correct date, scholars have been correcting our historical bias towards the westWest. Studies have determined that different cultural backgrounds lead to different expectations, which influences influence tourists' satisfaction. MeaningIn other words, tourists of a particular culture will have different leading satisfaction factors across different destinations. However, Japan presents a particular environment. The; the spirit of hospitality and service, omotenashi, excels and is considered to be of the highest standard across the world. Can Our study explores whether such an environment can affect different cultures equally? Or is it only attractive Or whether it is attractive only to certain cultures? Our study brings light to these questions.

Our results indicate that out of the two, Western tourists are the most more satisfied with soft attributes, such as friendly and helpful staff in Japan, than Chinese tourists. As explained earlier in this paper, Japan is famous well known for its customer serviceall over the world. Respectful language and bowing are not exclusive to high priced high-priced hotels or businesses. These can even be found; these are met in convenience stores as well. The level of hospitality in even the cheapest of convenience stores, even in the cheapest convenience store, is starkly different from Westerner experiences. While Western culture. Although it could be a culture cultural shock to some, it is mostly seen positively. After all, the Japanese staff respectfully approved. The Japanese staff treats all customers . However, for some customers, this could be the best way they have been treated until that moment. Now, in higher priced respectfully, and this might be unforeseen by some customers. In higher-priced hotels, the adjectives used to praise the service go-ranged from normal descriptors like "good" to higher levels of praise like "wonderful staff," "wonderful experience", " "excellent service", " and "excellent staff". We can also see that ." Furthermore, Kozak (2002) and Shanka and Taylor (2004) have also found proven that hospitality and staff friendliness is a vital determinant in are two determinants of Western tourists' satisfaction.

However, we can see from the negative English keywords that a big indicate that a large part of the dissatisfaction with Japanese hotels stems stemmed from a lack of hygiene and room cleanliness. Although Chinese customers only had had solely positive keywords about cleanliness, English-speaking customers have found deemed many places unacceptable to their standards. This is particularly true at hotels, particularly hotels with rooms priced below 50,000 yen per night. The most common complaint regarding cleanliness was about the carpet, followed by complaints about cigarette stench and general dirtinesssmell and lack of general hygiene. Kozak (2002) also found proved that hygiene and cleanliness were essential satisfaction determinants for Western

tourists. However, in the previous literature, this was linked merely to satisfaction. In comparison contrast, our research uncovered that words relating to cleanliness are revealed that words related to cleanliness were mostly linked to dissatisfaction. Westerners could be said to have We could assert that Westerners had a high standard of room cleanliness when compared to their Chinese counterparts.

According to previous research, we can see that Western tourists are already inclined to appreciate hospitality for their satisfaction. When presented with Japanese hospitality, this expectation is met and overcome. In contrast, we can see from our resultsthat Chinese tourists had less focus on according to our results. Chinese tourists were more concerned about room quality rather than hospitality, staff, or serviceand were more concerned with room quality. However, when analyzing the word pairs for "不错 (not bad)" and for "棒 (great)";" we can see that they do praise staff, service, and breakfast. Observing By observing the percentage of hard to soft attributes in Figure ???, however, we know discover that Chinese customers are satisfied more were more satisfied with hard attributes , compared to the Western tourists who seem compared to Western tourists, who seemed to be meeting more than their expectations.

It could be considered that Chinese culture does not expect high-level service initially. When an expectation that is not held is met, the satisfaction that stems from this derived is less than that if it was expected. On the other hand, we have the phenomenon of In contrast, some tourists report a "nice surprise": When when an unknown need is unexpectedly met, there is more satisfaction. It is necessary to note the difference between these two phenomenons reactions. The "nice surprise" reaction fulfills a need unexpectedly. Perhaps the hospitality grade in Japan does not fulfill a high enough need need high enough for the Chinese population, thereby resulting in less satisfaction. For greater satisfaction, the existence of a need being metis necessary a need must be met. However, the word "not bad" is at the top of the list at in most price ranges, and one of the uses is related to service. Thus, we cannot say that they are conclude that they were not satisfied with this matter. Rather, they hold the service. Instead, they held other factors at a higher priority, considering; thus the keyword frequency is was higher for other pairings.

Another possibility presents itself occurs when we observe the Chinese tourists' dissatisfaction factors. Chinese tourists may have expectations about the Chinese visitors' treatment that are not being met, even in this high standard high-standard hospitality environment. Japan is known worldwide for their hospitality, but they are also known historically to be monolingual and have This could be because Japan is monolingual and has a relatively large language barrier to tourists (Heinrich 2012; Coulmas and Watanabe 2002). While the Japanese effort to accommodate English speakers is slowly taking shape, developing, efforts for Chinese accommodations can be lagging. Chinese language pamphlets —as well as Chinese texts on instructions for the hotel room —and its appliances and features (e.g., T.V. channels, Wi-Fi setup, etc.), or just the treatment towards Chinese people could be examples. It is

natural to be dissatisfied since traveling in a strange land without knowing the language can be a daunting experience Dissatisfaction in a foreign country is natural if the language native to that region is not known. Ryan and Mo (2001) also found that communication difficulty was one of the main reasons that Chinese customers would state for not visiting again. It seems like this is a problem that is not singular However, this issue is not exclusive to Japan.

Our initial question was whether the environment of high-grade hospitality would affect both cultures equally. This study brought us closer to attempted to determine the answer. On the one hand, there is a possibility It is possible that Chinese customers did have had high-grade hospitality and did not get were equally satisfied with Westerners. In that case, it appears that the difference in perception stems from a psychological source. Expectation ; expectation leads to satisfaction, and a lack of expectation results in lesser satisfaction. On the other hand, there There is also a possibility that Chinese customers are not receiving the highest grade of hospitality because of cultural friction between Japan and China.

It—The case representing the higher possibility is unclear from our results which of these could be the case. One thing is clear for hotel managers, however. Competing . However, competing in hospitality and service does include includes language services, especially in the international tourism industry. Better multilingual support can only improve that already high the hospitality standard in Japan. Considering that most of the tourists in Japan come from other countries in Asia, this is an endeavor that truly can bring benefits to their investment multilingual support is beneficial. Proposals for this endeavor include hiring Chinese speaking staff, preparing pamphlets in Chinese, or have having a translator application readily available with staff trained in interacting through an electronic translator.

#### 2.2 Hard vs. soft satisfaction factors

As we stated in section ??, previous research is focused mostly has mostly focused on the hotel's soft attributes and their influence on customer satisfaction. Examples of soft attributes include staff behavior, commodities, amenities, and appliances that can be improved within the hotel (e.g., Shanka and Taylor 2004; Choi and Chu 2001). However, hard attributes are not usually analyzed in satisfaction studies. Examples of hard attributes include the hotel's location relative to public transport transportation and shops, language immersion of the country, noise pollution, or weather. Because our study left the satisfaction factors to be decided statistically were decided statistically in our study via customers' online reviews, we can see the importance of those the hard or soft attributes in their priorities.

Figure ?? shows that, in regards to Chinese customer satisfaction, in general, 68 % of the top 10 keywords are hard factors. In: in contrast, only 20 % are soft factors. The rates are similar for most price ranges, excepting except the highest-priced hotels, where 35 % of the keywords are undefined. However,

the soft attributes are still similar at 18 %. However, two of these managerial words are all concentrated at the top of the list ("不错 (not bad)"," "干净 (clean)"), plus and the adjective pairs related to soft attributes of "\(\bar{\Lambda}\) 错 (not bad)" which are are also at the top in most price ranges as well. Chinese tourists could may expect spaciousness and cleanliness when coming to Japan. That expectation could be caused by The expectation may be due to reputation, previous experiences, or cultural backgrounds. Some scholars argue that different cultures have different room size perceptions (Saulton et al. 2017). Although the study subjects are German and South Korean, the study Saulton et al. (2017) presents the results as differences influenced by Asian and Western cultures. We argue that one country is not representative of others' cultures, so and thus, there can be differences between South Korea and China in room size perception. However, an interesting point appears. It could be that a different room size perception affects may affect the satisfaction of Chinese tourists in contrast with Westerners . Westerners only start placing a priority on praising to Westerners because Westerners prioritize room size as the price of the hotel goes uproom rises. We can compare these results with previous literature, where traveling Chinese tourists choose their destination based on several factors, including cleanliness, nature, architecture, and scenery (Ryan and Mo 2001). These other few factors found in previous literature could be linked to the keyword "环境 (environment or surroundings)" as well. This keyword is present in was found for hotels priced at more than 20,000 yen per night.

In comparison contrast, English speakers are mostly satisfied with the hotel's soft attributes. Figure ?? shows that soft attributes are above 48 % in all price ranges, the highest being 65 % in the price range of 15,000 to 20,000 yen per nightprice range. This price range corresponds to affordable business hotels, which corresponds to, for example, affordable business hotels. English-speaking customers also have soft attributes at the top of their list. The exception is the hard attribute that is the hotel's location, which is consistently around the middle of the top 10 lists for all price ranges. If one considers the satisfaction of both Chinese and Western tourists' satisfaction, a hotel can improve its services to attract more customers in the future. If it was the other way around, and Otherwise, if the satisfaction was related more with hard attributes overall for 1020 both cultures, hotels would have to compete solely on their should be built considering the location.

For both customer groups, the main reason for dissatisfaction is was pricing, which can be interpreted as a concern about value for money. However, it is interesting to note that while English-speaking customers complain complained about price with a lower rank in lower-priced hotels. In contrast, the Chinese customers consistently have had "价格 (price)" as a top the first or second-most concern across all price ranges. A paper studying study on Chinese tourists found that they had this concern (Truong and King 2009). However, our results indicate that this is less of a concern is less related to the cultural attribute in Japanese hotels and has more to do more related with the pricing of hotels overall. The tourists Tourists coming to Japan could be

both experienced travelers either experienced or first-time travelers. However, the fact is that their expectation of the price for hotels was lower than what they found the actual prices in Japan. In general, Japan is an expensive place to visit, thereby impacting this placement in the ranking. Space is scarce in Japan, and capsule hotels with cramped spaces of 2 x 1 meters cost around 3,000 to 6,000 3000 to 6000 yen per night. Bigger business hotel rooms are relatively expensive, ranging from 5,000 5000 to 12,000 yen per night. For comparison, hotels in the USA with a similar quality can be charge half the price.

Around half of the dissatisfaction factors for both Chinese and Western customers are caused by issues that could be solved with improved management. The previous: this is true for all price ranges. Of course, the The improvements could be staff training (perhaps in language), hiring professional cleaning services for rooms with cigarette smoke smells, or improving the bedding. All of these options: however, all of these considerations can be costly. However, this paper provides a good guideline for which factors to consider first and which ones will be best suited to useful guideline about the factors to be prioritized and the factors that would be the most suitable for each customer group. Hotels can also use the price range categorization in order to choose the appropriate strategy as well. However, once the hotel's location and construction are set for Chinese customers, not much else can be done only a few changes can be made to satisfy them further. As mentioned before previously, Chinese language availability is another soft attribute that can be improved with staff and training investment.

On the other hand, Western tourists are all around dissatisfied with mostly mainly dissatisfied with soft attributes. They show this by having a low-This is revealed by a low satisfaction level of 35 % in the highest price range where undefined factors are the majority and a maximum of 78 % at most in the price range from of 30,000 to 50,000 yen per night in a hotel. The room for improvement for Improvement scope for Western tourists is more extensive than that for their Chinese counterparts. As such, it presents a bigger larger investment opportunity. As mentioned earlier in this paper, Westerners are known as "long-haul" customers, spending since they spend more than 45 %of their budget on hotel lodging. On the other hand, their Asian counterparts only spend Asian tourists spend only 25 % of their budget on hotels (Choi and Chu 2000). With bigger returns on managerial improvements, it seems like we can we recommend investing in improving attributes that dissatisfy Western customers, such as cleanliness and removing tobacco smell. Making more hotel facilities tobacco-free and deodorizing the rooms can be a low-cost investmentthat, which could increase returns many timesover by several times.

However, the opposite argument could also be made that Chinese customers provide a more significant number of customers Chinese customers are more in number, even though they tend to spend less on lodging. Attracting a large number of Chinese customers can be a viable strategy for hotels. However, as mentioned before, they tend to focus more on hard attributes, leaving language

barrier-breaking as; thus, breaking the language barrier breaking is one of the few strategies to accomplish this.

The basic premise of this study is that different cultures lead to different expectations and satisfaction factors. This premise also plays a role in the differentiation between the preference preferences of hard or soft attributes.

In Donthu and Yoo (1998), subjects from 10 different countries were compared in with respect to their expectations of service quality and analyzed through the lens of based on Hofstede's typology of culture (Hofstede 1984). That The previous study states that, although culture has no one specific index, five dimensions of culture can be used to analyze or categorize a country in comparison to others. These are power distance, uncertainty avoidance, individualism-collectivism individualism-collectivism, masculinity-femininity masculinity-femininityand long-term versus-long-term-short-term orientation. In each of these dimensions, at least one element of service expectations was found to be significantly different for countries grouped under contrasting attributes (e.g., individualistic countries vs. collectivist countries, high uncertainty avoidance countries vs. low uncertainty avoidance countries). However, Hofstede's typology has received criticism from academics, particularly for the fifth dimension that Hofstede proposed, which was added afterward with the alternate later added with the alternative name Confucian dynamic. Academics with a Chinese background criticized Hofstede for being misinformed on the philosophical aspects of Confucianism, as well as being considering a difficult dimension to measure (Fang 2003). Other models, such as the GLOBE model, also take issue with consider some of Hofstede's dimensions and replace them with others, making a total of 9-nine dimensions (House et al. 1999). The masculinity-femininity masculinity-femininity dimension, for example, is proposed to be instead of two dimensions: gender egalitarianism and assertiveness. This addition of dimensions avoids assuming that assertiveness is either masculine or feminine, which stems from outdated gender stereotypes. Gender stereotypes such as these Such gender stereotypes have also been the subject of critique for on Hofstede's model(Jeknić 2014). Our study agrees We agree with these critiques and , therefore, will avoid considering these for thus avoid considering such stereotypes in our discussion.

The backgrounds of collectivism in China and individualism in Western countries have been studied before previously (Gao et al. 2017). These backgrounds and as well as the differences in these cultural dimensions could be the underlying cause for differences in expectations. Regardless of the cause, however, measures in the past have proven that these differences in expectations such differences exist (Armstrong et al. 1997).

For our purposes in of contrasting Western vs. Chinese satisfaction stemming from expectations, these dimensions could explain why Chinese customers are generally satisfied more often with hard factors while Westerners are satisfied or dissatisfied with soft factors. Perhaps the The cultural background of Chinese tourists emphasizes their surroundings and their place in nature and the environment. Chinese historical backgrounds of Confucianism, Taoism, and Buddhism permeate the thought processes of Chinese popula-

tions. However, scholars argue that the changes in generations and their economic and recent history gives attaches less importance to these concepts in their lives (Gao et al. 2017).

Nevertheless, one could argue that a Chinese cultural attribute emphasizes that the environment and the place one is in towards location affect satisfaction, rather than the way one is treated treatment. According to previous research, Chinese tourists are collectivist, while collectivists, whereas Westerners are individualists (Kim and Lee 2000). A more anthropocentric and individualistic Western culture could result in correlate more of their expectations and priorities be related to how one is treated to the treatment in social circumstances, rather than the environmentone is in. According to Donthu and Yoo (1998), highly individualistic customers, in contrast to collectivistic customers, have a higher expectation of empathy and assurance from the provider which are aspects of service, a soft attribute of a hotel.

Among other dimensions in both models, we can consider uncertainty avoidance. High uncertainty avoidance customers would Customers of high uncertainty avoidance carefully plan their travel and therefore thus have higher expectations towards service. On the other hand, In contrast, customers of lower uncertainty avoidance customers would have certain room for risk do not take risks in their decisions, and therefore and thus face less disappointment with different expectations. However, according to Xiumei and Jinving (2011), the difference between China and the USA in uncertainty avoidance is not so clear when measuring with the Hofstede typology and the GLOBE typology. While the USA is not representative of Western society, this dimension might not be the one causing the difference in hard-soft-uncertainty avoidance may not cause the difference in hard—soft attribute satisfaction between Chinese and Western cultures. Another Differences in another factor, power distance, was also different when measured were also noted when measuring by Hofstede's method compared to the GLOBAL method, so we decided against making this; therefore, power distance was not considered for comparison.

#### 2.3 Satisfaction across different price ranges

In previous sections of this paper, we have—mentioned the differences reflected in hotel price ranges. Nevertheless, it is interesting to discuss this further. The most visible change in of satisfaction factors across differently priced hotels is the change in voice to describe when describing their satisfaction with the same topics. We can know noticed this by observing the adjective noun—noun pairs and finding pairs with different adjectives for the same nouns. For example, in English, words describing nouns such as "location" or "hotel" are "good" or "nice" in lower-priced hotels. In contrast, the adjectives that pair with the same nouns for more highly-priced higher-priced hotels are "wonderful" and "excellent"..." In Chinese, the change goes ranges from "不错 (not bad)" to "棒 (great)" or "赞 (awesome)"..." We can infer that the level of

satisfaction is high and influences how customers write their reviews. However, when we look at Regarding the negative keywords, the change is however, the change ranges from "annoying" or "worst", to "disappointing". Here we can see." Here, we can determine how expectations influence satisfaction and dissatisfaction in different ways.

In this paper, we follow the definition of satisfaction by Hunt (1975), where meeting or exceeding expectations produces satisfaction. Therefore, the lack-failure of meeting expectations would cause dissatisfaction. In the cases above aforementioned cases, we can infer that a customer that pays more for a higher class of higher-class experience has higher expectations. This is true in dissatisfaction, where their expectation is higher in a more expensive hotel. As such, any lack of cleanliness can lead to disappointment<del>or outrage</del>. In the case of English-speaking customers in the 30,<del>000 to 000-50,000 yen per night price</del> range, cigarette smell is particularly disappointing. However, we consistently see customers with high expectations for high-class hotels reacting even more positively when satisfied. In the positive case, expectations appear to be exceeded in most cases, judging from their reactions. We argue that these are two different kinds of interactions with expectations. We can observe logical expectations. Customers set a standard in their mind expectations: logical and emotional. In the first case, customers are determined that the service must not fall below or be disappointed—a specific standard; for example, a customer being disappointed with dirty they can be disappointed with unhygienic rooms or cigarette smell.

In contrast, we can observe emotional expectations, where the second case, in contrast, customers have a vague idea of having a positive experience . However, they but do not measure it against any standard. For example, having they expect a pleasant customer service experience or being treated hospitably a hospitable treatment by the staff at a high-class hotel. Regardless of their knowledge beforehand of the service to be provided advance, positive emotions give offer them a perception of exceeded expectations and high satisfaction. This is where Thus, hospitality and service come into play and enhances enhance the experience of the customers.

There are interesting differences between Chinese and English-speaking tourists in their change in satisfaction factors to differently priced hotels. For example, we can observe that the Chinese tourists have "妈物 (shopping)" as a top keyword in all the price ranges. In contrast, English-speaking tourists only mention it mention it only as a top keyword in the 20,000to 30 30,000 yen price range. It is common knowledge widely known in Japan that Chinese tourists coming to Japan with the express intention of shoppingare commonmany Chinese tourists visit Japan for shopping. Tsujimoto (2017) analyzed the souvenir purchasing behavior of Chinese tourists in Japan. The study shows that common products besides food and drink are: electronics, cameras, cosmetics, and medicine, among other more traditional souvenir items, such as objects that are representative of the culture or places that they visit Japan Tourism Agency (2014). There is an understanding that touristschoose Furthermore, tourists' choice to shop in Japan has more to do is more related with the qual-

ity of the items rather than their relation to the tourist attractions. Our results suggest suggested that Western tourists are were engaging more in tourist attractions in comparison with rather than shopping activities. Another interesting difference is that English-speaking tourists start using negative keywords about the hotel's price only after if it concerns hotels of 15,000 yen or more, and it rises in its ranking; thereafter, the more expensive the hotelis, the higher the ranking. In contrast, Chinese customers have this keyword as their for Chinese customers, this keyword is the top keyword across all price ranges. Previous research suggests that value for money is a key concern for Chinese and Asian tourists (Choi and Chu 2000, 2001; Truong and King 2009), while whereas Western customers are more concerned with about hospitality (Kozak 2002).

While some aspects of satisfaction and dissatisfaction change depending on the hotel's price range, some other factors stay mostly remain constant for each culture's customers. For example, appreciation for staff from Englishspeaking tourists is ranked close to the top satisfaction factor in all the price ranges. Satisfaction for cleanliness by both cultures constantly stays remains part of the top 10 keywords, except for the most expensive one, where other keywords take that place replace keywords related to satisfaction or cleanliness in the ranking. However, it is ; however, they remain still high on the list. Chinese tourists have a high ranking for the word "早餐 (breakfast)" across all price ranges as well. As discussed in section 1.5, transport transportation and location are also important for hotels of all classes and prices. While the ranking of attributes might differ between price ranges, hard and soft attribute proportions also appear to be constant within at most a 13 % margin of error per attribute, often being lower. This suggests that eulturally, from a cultural aspect, the customers have a particular bias to consider some attributes more than others.

#### 2.4 Implications for hotel managers

Our study presents reached two important conclusions: one about hospitality and cultural differences, and another about managerial decisions towards two different populations. As a whole Overall, Chinese tourists are not showing the most satisfaction towards did not attach much importance to hospitality and service factors. Instead, they focus focused on the hard attributes of a hotel. Either they do not get as much satisfaction from hospitality In particular, they were not satisfied with hospitality as much as Western tourists or feel were; otherwise, they felt that basic language and communication needs are not being met, so they receive a lesser impression. On the other hand, Western tourists are elated were not met, thereby they were not much satisfied. Western tourists were highly satisfied with Japanese hospitality, preferring and preferred soft attributes to hard set hard ones. The other conclusion is that managerial decisions will could mostly benefit Western tourists, except that Chinese language improvements and breakfast inclusion can satisfy more

Chinese customers. Japan is recently seeing could satisfy Chinese customers to a greater extent. Recently, Japan has been facing an increase in Chinese students as well as Western students of students of Western universities. Hiring students as part-time workers could increase the language services of a hotel.

To satisfy both customer types, hotel managers need to invest in cleanliness, deodorizing, and making hotel rooms tobacco-free. It could also be recommended to invest in breakfast inclusion and multilingual services and staff preparedness to deal with Chinese and English speakers. Western tourists were also observed to have high comfort standards, which can be improved upon managerially could be managerially improved for better reviews. Perhaps it could be suggested to perform surveys of the bedding that is most comfortable for Western tourists. However, not all hotels can invest in all of these factors simultaneously. Our results suggest that satisfying cleanliness needs can could satisfy both customer types. A low-cost investment could be to make the facilities tobacco-free. Our results are also divided by price ranges, so thereby a hotel manager can could consider which analysis suits their hotel the most.

While Albeit not manageable after a hotel has finished its construction is completely constructed, hard attributes are essential to consider for should be considered by managers. As previously stated, transport stated before, transportation systems and nearby shops are points of interest for both Chinese and Western tourists. Japanese hotel managers have to should consider the location and surroundings before the hotel is constructed. A suggestion could be to purchase land and start the construction after public plans to make at places where public plans for new subway lines are have already been made.

It is left to the managers to The managers must consider their business model for implementing the next strategy. One option could be attracting more Chinese customers in number with their observed low budgeting. Another could be attracting more high budget Western customers on par with their business modelbig-budget Western customers. For example, investing more in cleanliness could improve Western customers looking for high-quality lodging satisfaction, even though the for an increased price per nightwould increase. On the other hand, hotels might be considered deemed costly by Chinese customers wherever such an investment is made.

## 3 Limitations and Future Work

This paper is not without its limitations. We In this study, we analyzed satisfaction and dissatisfaction keywords based on whether they appeared on satisfied reviews or dissatisfied ones. Following that, we attempted to understand the context in which these words were used by using a dependency parser and observing the related nouns. However, the our study is limited in that it only analyzes because it analyzed solely the words directly related to each keyword and does did not follow the upstream or downstream path down to further connections. This means that if the words are were used in combination with other

keywords, we did not trace the effects of multiple contradicting statements. For example, in the sentence "The room is good, but the food is lacking", we would extract "good food," we extracted "good room" and "lacking food", but do but did not consider the fact that both occurred in the same sentence.

This study analyzed the differences in customers' expectations at different levels of hospitality and service factors by dividing our data into price ranges. However, in the same price range, for example, the highest one, we can find both a western-style Western-style five-star resort and a high-end Japanese-style Japanese style ryokan. Services offered in these hotels are very of high quality, although albeit very different. However, most of our database is was focused on the middle range priced hotels, which is the services of which are comparably less varied in service. However, there is still a divide between western division between Western and Japanese style hotels, which constitutes another limitation of our study.

An essential aspect of this study is that we focus focused on the satisfaction and dissatisfaction towards expectations of the expectations of the individual aspects of the hotels. This gives gave us insight into which factors can focus on the factors that can be considered by hotel managersin applying this knowledge. However, our study was limited in that the overall satisfaction of each customer was not measured. This could be done measurement can be performed by rating the volume of text used to describe satisfaction factors against the text volume used for dissatisfaction and dissatisfaction factors. However, this imposes would impose a few difficulties that, which are out of the scope of this study.

Another limitation is that a large portion of the Asian tourists coming to Japan is are Taiwanese and Korean. We could not analyze these populations because our team members do did not know those languages. Aside from that Moreover, further typology analysis could not be made because of the nature of the data collected (for example, Chinese men and women of different ages or their Westerner counterparts).

In future work, we plan to investigate further into this topicthese topics further. We plan to extend our data to research for different trends for different of different trends and regions of Japanand, different kinds of hotelsand between, and customers traveling alone or in groups, whether for fun or for work. Another point of interest in this study's future work is to use word clusters with similar meanings instead of single words.

### 4 Conclusion

In this study, our objective was to analyze the differences in satisfaction and dissatisfaction between Chinese and English-speaking customers of Japanese hotels, particularly in the context of Japanese hospitality, *omotenashi*. To answer our research questions ?? and ??, we extracted keywords from their online reviews uploaded to the portal sites Ctrip and TripAdvisor using Shannon's entropy calculations. We used these keywords for sentiment classification via

an SVC. We then used dependency parsing and part of speech tagging to extract commonly found pairs of adjectives and nouns —as well as single words. We divided this these data by sentiment and hotel price range —by considering the most expensive room for one night.

In the context of Japanese hospitality, we found that Western tourists had the most satisfaction were most satisfied with staff behavior, cleanliness, and other attributes relating related to the hotel's services and hospitality. However, we found that Chinese customers had other concerns other than hospitality when studying their satisfaction; they were more inclined to praise the room, location, or and hotel's convenience. We found that both cultures have a different reaction to this hospitality environment. Both cultures have a different way of reacting to different prices. From this the two cultures had different reactions to the hospitality environment and the prices. Thus, we discussed two possible theories on the reasons why Chinese tourists respond differently to Westerners in this responded differently from Westerners in the environment of *omotenashi*. One theory is that while they are being, although they were treated well and react thus reacted positively, the environment is was not compatible with them because of language or culture barriers, which lessens deteriorated their experience. The second possible theory is that they react differently to hospitality since they do reacted to hospitality differently since they did not have the same expectations to be satisfied in the same way. We theorized that a lack of expectations could result in lessened satisfaction, even if the same service is presented was present. On the other hand, even when they hold held high expectations in a highly-priced hotel, Western tourists show that Japanese hospitality exceeds their high-priced hotel, Japanese hospitality exceeded Western tourists' expectations, judging by their vocabulary for expressing their satisfaction. We considered that Western tourists are were more reactive to hospitality and service factors than their Chinese counterparts.

Lastly, we measured the satisfaction and dissatisfaction factors, referring to that is, a hotel's hard and soft attributes. Soft attributes can be changed via management and staff by an improvement in services. On the other handIn contrast, hard attributes are physical and impractical elements to change, such as the size of a room that has already been constructed, the location of a hotel, closeness to convenient spots, or elements out of the control of the hotel managers. We found that, for satisfaction, Western tourists favor soft attributes. In contrast, Chinese touristsare favored soft attributes in contrast to Chinese tourists, who were more interested in the hard attributes of hotels, consistently across price ranges across all the price ranges consistently. For dissatisfaction, Western tourists are were also highly inclined to criticize soft attributes, such as cleanliness or cigarette smell in rooms. In contrast, Chinese tourists' dissatisfaction comes evenly derived from both hard and soft attributes evenly.

One possible approach for hotel managers is to improve the satisfaction levels of Chinese tourists, who dedicate <u>less\_lower</u> percentage of their budget to hotels but are more abundant in number. They are less satisfied with soft at-

tributes but have an identifiable method of for improving satisfaction by lessening language barriers and providing a satisfactory breakfast. Another approach we discussed was focusing was focused on the cleanlinessand comfortthat Western tourists expect and making the hotels, comfort, and tobacco-free. We favor "long-haulspace expected by Western tourists. "Long-haul" Western tourists, who spend almost half of their budget on hotels with this strategy. While, were favored. Although Westerners are less in number than Chinese tourists, it could prove to be proven that they have more substantial returns. This is because Chinese customers also favor cleanliness as a satisfaction factor, and both populations could be pleased. This paper provides results and discussion that can be utilized as a guideline for managerial decisions when considering Chinese and Western tourists in Japan. We can observe their stark differences and as well as shared attributes.