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# **Branding the memory in the virtual world: a study on the Palace Museum in Beijing**

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# Abstract

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## ***Branding the memory in the virtual world: a study on the Palace Museum in Beijing***

Many museums face the problem of low engagement on social media which is disadvantageous for them to improve brand relationships with their audience. This study aims to investigate the influential factors on the online audience perception of the museum by applying the brand resonance model. The Palace Museum in Beijing is selected as the case study and the followers of this museum on Weibo as the research target group. A mixed method approach was applied while performing the study in order to have a deep understanding of the perception from the online audience. The qualitative part was a content analysis of posts released from 01 March 2018 to 01 March 2019 from the Palace Museum official account. The quantitative part was an online survey to the museum followers and a post picture rating. Notably, it was found that high engagement does not always lead to high evaluation of the post. Moreover, data analysis results revealed that pictorial content, museum familiarity, and demographics had either positive or negative impacts on the brand relationship building. Hence, to improve brand relationships with the online audience, museums should consider these factors when designing social media communication strategies.

*Keywords:* brand communication; social media communication; museum communication; online audience; brand relationships

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# Acknowledgement

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Historical memory does not simply mean something abstract. As a matter of fact, people can find and learn history from collections in museums. In China, we are more and more cherishing those cultural relics and traditional cultures which are preserved and inherited from the past. This is because our beliefs and our ways of living are based on the profound culture and words left by our ancestors. One of the most important places for us to touch this kind of memory is going to the museum. This is from where I wanted to start my research, for the interests of studying how museums communicate with their audience in the 21<sup>st</sup> century, how they shift stereotypes in the audience's minds and how they make classical and traditional elements closer to our life. Thus, departing from those, I took the Palace Museum in Beijing as the case study. It has a long history as well as one of the leading museums of social media communication in China.

I did the whole research from January to May 2019. Getting in contact with people who are followers of the Palace Museum on Weibo and investigated what they were thinking about this museum. During the process of this research, I met some difficulties, I knew very well that I could not finish this research as now without those who supported me a lot. My supervisors, Maria and Nils, thank you for your generous support and genius suggestions during these months. My participants, thank you for your kindly help and encouragement to a person who was in tough situations of getting survey attendances. My teachers, friends, classmates, and families, thank you for your warm and kind support. I am very thankful to have all of you in my life.

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Hope you all the best.

Siyi Ma

Helsingborg, May 20, 2019

# Chapter 1 Introduction

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*Museums are the treasure-houses of the human race. They store the memories of the world's peoples, their cultures, their dreams and their hopes.*

(Timothy & Crispin, 2012, p.19)

Besides preserving memories about human history on site, sharing those memories on social media is a comparatively new initiative among museums (Giaccardi, 2012). Social media is made up of many platforms for spreading information through interactions, such as websites and blogs (Fletcher & Lee, 2012). According to a report on Statista (2017), there will be 3.02 billion social media users active on a monthly basis by 2021. In addition, a report from Hootsuite (2018) revealed the importance of using social media as a primary platform for maintaining a relationship with an organisation's audience based on an investigation of 9,278 organisations around the world. 90% use social media as the main platform for maintaining brand awareness, and 71% for interacting with their audience (Hootsuite, 2018). There is also a common trend for museums to present themselves on social media platforms (Camarero, Garrido, & San José, 2016; Fletcher & Lee, 2012; Lee, Kang, & Ahn, 2017). To serve their purposes of education, study, and enjoyment, museums need to acquire, conserve, research, communicate and exhibit the tangible and intangible heritage of humanity and their environment (ICOM, 2007, p. 3). With promoting the latest information about events, exhibitions, and other activities, social media lets museums have a platform to provide their audiences with a pre-taste of the museum experience, as well as extend their networks (Özdemir & Çelebi, 2017).

Social media communication is essential for museums since it enables those museums to develop relationships with existing and potential visitors (Özdemir & Çelebi, 2017). First, managing social sustainability is a challenge for museums to cope with in this era because each museum should gain recognition in their social

community and cultivate a relationship with their audience, stakeholders, and funders (Gheorghilaş, Dumbrăveanu, Tudoricu, & Crăciun, 2017). Facing a highly competitive environment as there are other institutions which also provide leisure time service (Mancini & Carreras, 2010), a strong social network can support museums to further develop under the competition. Social media enables museums to spread their collection knowledge, as well as maintain the relationship with their audience (Russo, 2012; Lee et al., 2017). Secondly, another challenge to museums now is that museums used to have a small and narrow audience a few decades ago (Kotler & Kotler, 2000). The traditional communication mode at that time was one-way communication, but currently this mode is no longer suitable for museums to capitalise on their educational and entertaining aspects (Camarero et al., 2016). Thirdly, most museums cannot afford large-scale advertising campaigns (Pusa & Uusitalo, 2014) since they are non-profit organisations and most of them are experiencing economic pressure (Gheorghilas et al., 2017). This implies the importance for them to be aware of social media as a cost-effective communication tool (Lee et al., 2017; Özdemir & Çelebi, 2017).

Having a brand is also important for museums to maintain a relationship with visitors from the visitor's perspective (Lin, Liu & Lin, 2015). Creating a memorable and unique brand is a key task for future museums (Belenioti & Vassiliadis, 2017; Belenioti, Tsourvakas, & Vassiliadis, 2017). The growth of social media has made it increasingly essential in brand communication because it offers organisations the chance to present themselves and communicate with the public (Keller, 2013). However, there is some evidence that many museums receive a low level of engagement on social media, which means that the audience do not actively react to their posts (Caerols-Mateo, 2017; Langa, 2014; Suzić, Karliček, & Strítěský, 2016). In other words, those museums do not gain much attention from their online audience through social media communication. If the level of engagement is low, then it means that communication is not effective, and it is detrimental for museums sustaining the relationship with their audience. To a certain extent, some museums do not know how to utilise the potential of social media platforms which can help to improve the interaction as well as the relationship with their audience (Suzić et al., 2016). In order to better understand the problem of low engagement, it is important to explore the online audience's attitudes and perceptions. With this



knowledge, museums can improve their social media communication as well as their brand building.

Most previous studies in the museum communication area applied the qualitative method to study social media content. There is a lack of knowledge of the attitudes of the online audience towards the posts. There are also a limited number of studies about branding in the museum context. Belenioti and Vassiliadis (2017) suggested that museums should take branding as a strategic tool, while the influence of social media in museum branding should also be examined. They proposed applying the brand resonance model in the museum context, same as Pham and Gam-moh (2015), who realised that only a few studies addressed the influence of social media communication on brand feelings, brand judgments, and brand resonance. Moreover, this model has not been used in the museum context but has been tested in other areas, for example, bank service (Aziz & Yasin, 2010; Farhana & Islam, 2012; Gautam & Kumar, 2012; Raja Ambedkar, Murugesan, & Thamaraiselvan, 2018) and hotel service (Moura, Ferreira, de Oliveira, & da Silveira Cunha, Nina Rosa, 2019). The brand resonance model consists of six elements that should be followed for organisations to create brand equity which means differential values that a brand brings up (Swaminathan, 2016). Meanwhile, as stated by Keller (2013), this model is used for displaying how to establish a strong relationship with the target group and it is suitable for social media studies. Brand resonance means the extent of customers' feelings about the brand, the sense of knowing the brand in depth and having an intense connection with the brand (Keller, 2013). The concept of resonance also has a link to the museum experience since it stands for the phenomenon when people are influenced by the collections, and they recall related cultural forces in their mind (Greenblatt, 1991).

How organisations present and promote themselves through various activities is an important research area in strategic communication (Hallahan, Holtzhausen, van Ruler, Verc̃ic̃, & Sriramesh, 2007). Maintaining and improving relationships is key in strategic communication, including social media communication (Zerfass & Holtzhausen, 2015). As addressed by Falkheimer and Heide (2018), the role of media relations is critical since it is in the centre of daily work among communication professionals. Branding as one of the integrated fields in strategic communication should not be neglected due to the fact that contemporary organisations invest much money and efforts to establish and maintain their brand (Falkheimer & Heide,

2018). Moreover, building up a high brand resonance is very crucial for brands, but this has not been a big research focus (Burgess & Spinks, 2014). Thus, it is worth studying museum branding in social media from a strategic communication perspective. This research will study social media communication in a history museum, for the need that more research should be taken to discover brand resonance, and for the need that more research should be implemented in the area of branding the culture (Timothy & Crispin, 2012; Belenioti & Vassiliadis, 2017). Since communication is a significant function of museums (UNESCO, 2015), to learn the opinions of the online audience can provide museums with a better understanding of their social media performance and lead to an improvement in their work in building and maintaining brand relationships. To have a strong relationship is beneficial for museum communication since this is a way of connecting closely with their audience.

## **1.1 Purpose**

Posts with low engagement on social media platforms do not help museums to generate a stable and dynamic relationship with their online audience from a long-term perspective. Compared to profit organisations, social media is vital for museums to present themselves since it is cost-effective, non-geographically restricted, and has much potential for museums to utilise to improve their social networks. Thus, the problem of lacking engagement should be emphasised for museums to maintain their social relationships. It is crucial to have a deep understanding of the online audience's perception of museum performance on social media. Therefore, this study aims to explore the online audience's attitudes towards the museum communication on social media and discover the influential factors on their connections to the museum.

To reach the aim, this study applies the brand resonance model while three highly relevant dimensions are included in order to learn whether they affect brand relationships. First is the pictorial content dimension, which is about to what extent animate and inanimate elements show up in the post pictures. Pictures can help to attract a higher number of views since they have emotional effects (Camarero et al., 2016). As suggested by Lloyd and Woodside (2013), combining animal symbols in brand communication stimulates the association with the brand automatically. Secondly is the museum familiarity dimension. The main reason that this was included

is that people who pay attention to the museum on social media are more active and visit the museum more than those use other digital tools such as webpage (Amirano, Gargiulo, & Bifulco, 2018). Thirdly is the demographic dimension, which includes age and education level, both should be taken into account to have a more precise view of the online audience's perceptions towards communication on social media (Hudson, Huang, Roth, & Madden, 2016). Hence, the research questions for this study have been designed as follows:

Main RQ: What kinds of factors can help to build and maintain brand relationships with the online audience for museums?

*RQ1: How do different types of posts influence the online audience's attitudes?*

*RQ2: How do pictorial content, museum familiarity, and demographics influence brand relationships between the museum and the online audience?*

In order to answer these research questions, the Palace Museum in Beijing, China has been used as a case study. This museum has the highest number of followers on Weibo (one of the most popular social media platforms in China) among history museums in China. Moreover, the Palace Museum puts local young people as their primary target group on their social media communication (Ji, 2019, my translation). According to tourism data in 2018, 40% of tourists to the museum are under the age of thirty (CGTN, 2018). It is significant to learn how young people online perceive post content since it will determine their attitudes and enhance the effectiveness of information communication (Duffett, 2017). In addition, local people are the majority of visitors, as well as museum members and volunteers (Cole, 2008). The local people are crucial for museums because they have different kinds of contributions to the museum operation and they are the key group of maintaining a long-term relationship with the museum. Thus, this research mainly focuses on exploring the relationship between local young people and the history museum in the Chinese context.

## **1.2 Disposition**

There are seven chapters to follow. The second chapter contains information about the case museum, the Palace Museum in Beijing and the reasons for choosing it. The third chapter gathers and reflects on previous research on the topic of social media in museums and branding in museums. The fourth chapter illustrates the theoretical framework that is selected as the main theoretical basis in this research. It helps to design the research as well as helps to understand the perspective of the audience towards the museum. The fifth chapter is about research methods that are included in this research, introducing the research strategy and outlining details of the process of designing and implementing the research. The sixth chapter presents the data results of the collected data by using statistical analysis. The seventh chapter is discussion, which summarises the results from the previous chapter and discusses these findings. The last chapter is the conclusion, which pinpoints the contribution, limitations, and suggestions for future research.

# Chapter 2 The Palace Museum in Beijing

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*“With a more and more open attitude, we invite you to walk into this place which used to be mysterious, walk into the sanctuary of Chinese traditional culture.”*

(The Palace Museum, 2015a, my translation)

Above is a statement on the Palace Museum’s official website. It reflects the meaning of this museum to the public and the call for a friendly relationship with the audience. The Palace Museum, which is also called the Forbidden City. As established in 1925, before its transformation to the museum (The Palace Museum, 2015b), it was the resident palace for emperors from Ming (1368-1644) to Qing (1644-1911). Meanwhile, it has been one of the UNESCO World Heritage sites since 1987 and owns more than 1.8 million collections (The Palace Museum, 2015b). According to Lu (2013), museums in China today can be divided into three classifications, which are museums of social sciences, museums of humanities and the arts, and museums of science and technology. Based on this classification, the Palace Museum belongs to the category of museums of humanities and the arts since it is a history museum (Lu, 2013).

The Palace Museum is the leading museum in the trend of branding in museums in China. Specifically, the Internet plays a vital role in their branding, communication, and innovation process (Zhang, 2018, my translation). The Palace Museum created its brand by promoting its merchandise products on e-commerce platforms, the digital museum, and related apps (Zhang, 2018, my translation). Regarding social media performance, the Palace Museum ranked in the first in the 2018 Weibo performance ranking of museums in China (People's Daily, 2019, my translation). To be noted, Weibo, one of the leading social media platforms, is known as the Twitter of China (Gao, 2016; Maruma, 2014). It is one of the main social media platforms that the Palace Museum presents themselves, and this is the ninth year

since it joined Weibo. It has the highest number of followers on Weibo (more than six million) among museums of humanities and the arts in China.

As the case study to investigate the research questions and get deep into museum communication in this digital age. The competitiveness and influential status on social media of the Palace Museum are the primary reasons for choosing it. Such advantages can provide us with more materials to utilise because some museums which do not update very often cannot offer us fruitful content to compare and analyse. Being aware that even this museum has many followers, it does not mean every post gained a high level of attention. Then it is necessary to take a complete view through research. Meanwhile, taking a museum in China as the case study can bring up more insights into museums in Asian countries since many research on museum communication used Western museums as examples. It is valuable to study museums in China due to the fact that they occupy a certain part of being responsible for cultivating the country's memory and traditions (Lu, 2013). The history museums which preserve and promote human memories in other countries can take the research outcomes as references. The next chapter introduces previous studies in museum communication in social media and the branding area.

# Chapter 3 Literature review

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This chapter presents studies related to museums in social media communication and brand communication. The values of social media and the essential aspects of managing social media compose the first part of the role of social media in museums. Then the values and importance of brand communication in the museum context acts as the following part to emphasise the fact that branding is a significant issue for museums to pay attention to because it has both social and economic benefits. Finally, a reflection part summarises the knowledge mentioned and pinpoints the connection to this study.

## **3.1 Social media in museums**

Social media can be viewed as a valuable tool in museum communication, thus museums should acknowledge the importance of designing suitable strategies that can fully utilise various functions of social media (De Man & Oliveira, 2016). As addressed by Villaespesa (2013), when describing the presence of museums on social media, there are two forms. On the one hand, the museums display their information to the audience, on the other hand, the audience post content regarding their experiences related to the museums (Villaespesa, 2013). The following two subsections introduce studies that investigated different aspects of social media usage in museums and revealed the notion that managing this tool is becoming critical and vital for museums.

### ***3.1.1 Beneficial aspects***

Padilla-Meléndez and del Águila-Obra (2013) conducted a study which included an in-depth interview with a museum professional as well as a series of content analysis of 40 world's most visited museums' websites. Through their study, it was found that more than 50% of these museums used social media as a channel for promoting their services and products (Padilla-Meléndez & del Águila-Obra,

2013). They proposed that museums should know the importance of designing and implementing strategic decisions on their management of social networking sites because this could help them to meet their social and economic development targets. The study on the British Museum made by Pett (2012) demonstrated the results that it is profitable for museums to use social media as they can gain more engagement from a broader audience. The author also claimed another reason, those museums can use social media to promote their exhibitions, activities and so on without spending money for using it. These kinds of advantages of using social media in museums can also be tracked from other studies.

Social media can let museums which are not very famous enlarge their influence online and shift this kind of influence offline. Sarzotti (2011) analysed social media platforms used by the Florentine Civic Museums which includes eight museums as an urban museum network, the outcomes of this study showed that there are two profits of using social media. First, it helps to increase the value of cultural assets which belong to museums that have lower popularity. Secondly, the presence on social media helps museums to gain increasing tourism (Sarzotti, 2011). A study of 60 European museums' Twitter accounts was carried out by Vrana, Zafiroopoulos, and Antoniadis (2016), they suggested that Twitter has the value of promoting the museums, and there was an interesting fact that some museums which owned good performance of Twitter, they did not have a high position in the museum ranking list. Thus, for museums which have low popularity, they should use social media to attract more visitors (Vrana et al., 2016).

There are other beneficial parts of social media for museums to connect with their social networks via social media. Lotina and Lapik (2015) selected two museums in Latvia and two in Estonia which are active players on Facebook, they analysed the Facebook content by applying seven models of engagement from the perspective of museums: informing; marketing; consulting; collaborating; connecting with stakeholders; connecting with participants and connecting with professionals. They suggested that the functions of messages should be taken into consideration and social media has the values of offering multilateral interaction which can make the museum and the audience come closer through relevant activities (Lotina & Lepik, 2015). Furthermore, Suzić et al. (2016) researched the Facebook performance for museums that are located in Berlin and Prague, the results showed that



the comment function in social media platforms could generate bi-directional communication, it has potentiality in building up the relationship with the audience (Suzić et al., 2016). Then, for social media users, their preferences and opinions are important as well to be taken into account when considering the values of social media. According to the interview results of tourists in Jerusalem, those interviewees showed their preference of sharing their stories in the museums via social network tools (Karagöl, 2014). The sharing experience about the museum visits has the effect of increasing one's interests in going there, meanwhile the sharing contents are also sources of information for other visitors to find easily and take as references (Karagöl, 2014).

### *3.1.2 Managerial aspects*

As mentioned above, social media can generate many benefits to museums, but some studies revealed that the management of social media in the museum context should be taken carefully. Discovering aspects that are highly relevant to social media management in museums can help them to overcome the problem of low engagement. Langa (2014) analysed data from 48 American museums Twitter accounts, Twitter has been used as the tool of increasing the interaction with the audiences by those museums (Langa, 2014). The author found that 29.2% of these museums had a low level of engagement on Twitter. Through the interviews with museum staffs and the investigation of social media platforms belong to the Museum of Natural History of Florence, such as TripAdvisor, FourSquare, YouTube, Flickr, Twitter, and Facebook. Lazzeretti, Sartori, and Innocenti (2015) found out that audience engagement with museum posts on social media was relatively low, thus they called for non-profit cultural institutions to be aware of social media as a 'miracle cure' when maintaining the relationship with their stakeholders. Badell (2015) analysed the social media presence situation of 107 Catalonia museums and argued that museums might get into trouble if they did not acknowledge the characteristics of communication and interaction functions of different social media platforms. Thus, museums should put enough considerable emphasis on utilising the values and features of social media.

Moreover, to improve the social media communication, museums should take an appropriate position in the conversation with the audiences as well as treat the

audiences' preferences, opinions and behaviours seriously. Based on an analysis of the previous three months Facebook content of nine Danish museums, Gronemann, Kritiansen, and Dronter (2015) emphasised the fact that setting up an appropriate role could determine the quality of co-creation between museums and the audience. To encourage the audience more actively engaging in the conversation, those museums should be aware that they should present themselves as supporters when communicating with their audience (Gronemann et al., 2015). By proposing two kinds of communication strategies in art museums and discovered the collected Facebook data, Camarero, Garrido, and San Jose (2018) pointed out that both content strategy and relational strategy are essential while stimulating user engagement, but the user participation condition also depends on the active level of presence in the dialogues with visitors of museums. The content strategy stands for the posts which combined information and entertainment, while the relational strategy means the posts which the museum actively encourages the conversation with users (Camarero et al., 2018).

Considering the perspective from the audience is crucial for museums. Another research on the British Museum Facebook communication conducted a content analysis and an interview with the marketing assistant in the museum proposed that the museums should generate communication strategies while considering the audience's customs and tastes (Mahony, Spiliopoulou, Routsis, & Kamposiori, 2017). Budge and Burness (2018) focused on the posts of visit experiences through the viewpoint of visitors on Instagram. Their results indicated that those posts from the visitors which contained the photographs of visitors and museum objects could be taken as references for museums professionals to further improve their communication practices (Budge & Burness, 2018). Lee, Kang, and Ahn (2017) conducted research among the online audiences of the National Museum of Modern and Contemporary Art in Korea. They sent out a survey to 1,300 people who pressed "Like" on eight art-related museum posts on the Facebook page. Finally, they collected and analysed 156 responses as feedback from the online audience and found out that people will be more willing to share the information if they trust the information provider (Lee et al., 2017).

In addition, the management of social media content also matters a lot. Social media makes them museums have the chance to cultivate and extend social net-

works internationally, but apparently those cannot be done without up-to-the-minute and trustworthy content (Özdemir & Çelebi, 2017). Caerols-Mateo (2017) observed five museums' Twitter posts on the International Museum Day and the Night of Museums. Based on the data analysis of museum performance, she found that those museums gained a low level of engagement on these two festivals, and the reasons behind were highly related to the content that the museums generated, for instance, not interesting, not interactive, and too informal (Caerols-Mateo, 2017). She suggested that these museums should focus on developing a more defined strategy to generate a higher level of participation under their posts. Kidd (2011) proposed three frames of social media usage in museums by listing a few examples, which are the marketing frame, inclusivity frame, and collaborative frame based on Goffman's frame analysis theory. The marketing frame is about promotion information, inclusivity frame is about the notions of the online community, and the collaborative frame concerns about the co-production between museums and their audience (Kidd, 2011). She claimed that the management of social media should let the audience clearly understand the frame, otherwise it might cause the audience misunderstanding the information from the museum, and frame analysis can help museum staffs to think about their social media strategies more carefully. Later in 2017, Baker (2017) adopted the findings of Kidd (2011) into her research on 27 science museums and further developed the frames by adding a new frame named educational frame which got the highest level of engagement. The results revealed that those museums should improve their usage of the marketing frame. Hence, designing messages and utilising the platforms that can help to make the connection between museums and audiences closer in social media communication.

### ***3.1.3 Synthesis***

A few key aspects were emphasised from these previous studies, social media can bring museums a lot of benefits. However, without utilising the functions and potentiality of these social media platforms, without setting up an appropriate role in the conversation with the audience, without designing clear and delicate content strategies, museums are not about to achieve good performance as well as improve their social networks. These studies presented those critical points and offered many insights into this area. Meanwhile, these studies of social media communication in

museums show some possibilities for future research. First, little research used quantitative methods, due to the fact that most of the research used qualitative methods such as studying the content or conducting interviews with museum staff. Secondly, limited research were based on the online audience's perspective. Another thing is most of these research were undertaken in western countries, only a few were in eastern countries.

### **3.2 Branding in museums**

Although some non-profit organisations take branding as a method for generating money from a narrow viewpoint, there are more and more non-profit organisations that started to be aware of the strategic role of branding from a wider viewpoint (Kylander & Stone, 2012). For example, non-profit organisations can reach broad and long-term social goals and reinforce organisational power when they take branding seriously (Kylander & Stone, 2012). As suggested by Belenioti and Vassiliadis (2017), museums can gain both financial and societal benefits from branding. Therefore, how to understand and improve the role of branding in museums should not be neglected in the overall management. Pusa and Uusitalo (2014) also emphasised the importance of a strong brand, based on the interview of several museum staffs, the authors reached the conclusion that the museum brand should be aligned with the whole organisation. In other words, a museum brand can be qualified as long as the information about it can avoid its stakeholders understand in different and unclear ways (Pusa & Uusitalo, 2014).

Moreover, brand equity is highly relevant in the museum context. It is critical to managing brand equity as part of branding which adds value on the products, for museums, the positive brand equity of museum experience is an under-utilised value that they should focus on (Scott, 2007). Through a survey to visitors in the museum, Liu et al. (2015) discovered some factors belong to brand equity such as awareness, quality, image, value and loyalty. Their arguments demonstrated that visitors will have stronger loyalty to the museum if the museum has a famous or well-established brand (Liu et al., 2015). Camerero, Garrido, and Vicente (2012) sent out a survey to the visitors in an art exhibition in order to discover how to maintain brand equity from the point of visitors. From the results, they found that brand equity in museums was composed of a few aspects, which are the image, the

recognition and quality of activities, and the connected cultural values. Moreover, the influence of brand equity was also crucial for museums, because it will impact on the decisions of visitors, whether they will visit again in the future and whether they will pay the entrance ticket for visiting the exhibitions (Camerero et al., 2012).

Brands can help organisations to cultivate a loyal relationship between organisations and target groups (Ajana, 2015). Based on the case study of the Louvre in Dubai, Ajana (2015) proposed that for museums, branding is an essential part in their development strategies because branding makes museums to take advantage of their established reputation and influential power and thus gain more publicity and legitimacy internationally. Greffe, Krebs, and Pflieger (2017) proposed three kinds of economic models of museums, which are the branding museum, the event-driven museum, and the ‘empowering local community museum’. The branding museum stands for displaying a unique brand image, and this kind of brand adds values on the products, services, and events (Greffe et al., 2017). Furthermore, besides those studies on a single case or multiple cases. Belenioti and Vassiliadis (2017) presented knowledge about branding in museums based on a broad investigation of recent academic research, they argued that too little attention was paid to the brand equity model in the museum context. And they suggested that there is a need for the empirical study of applying the brand resonance model.

### *3.2.1 Synthesis*

It can be seen that branding is prevailing among museums, not only because it is important for museums to establish their reputation and image to the public, but also because branding has the power to attract more people to pay attention to the museum, as well as enlarging the museum’s impact in the world. Compared to research on social media communication in museums, there are fewer studies that focused on branding in museums. Nevertheless, branding in museums should not be overlooked, especially the further investigation in brand management due to the fact that values and benefits of branding can let museums gain more benefits and then enable them to provide better experiences to the public. Moreover, branding also brings up intangible values, for instance, good social networks which let museums cultivate better social relationships with their audience.

### **3.3 Reflection**

Previous research on social media in museums as mentioned mainly focused on the usage and content strategies. The problem of lacking engagement was mentioned several times. Meanwhile, the characteristics of social media platforms, tastes and favours of the audience were suggested for museums to refer to elaborate their online performance. The research on branding in museums mainly analysed the importance of building up a brand and managing brand equity. Having a brand can be helpful for strengthening the relationship between museums and their audience. In addition, it is apparent that the status of social media in museums has been increasingly crucial. Both social media and brand communication can help museums to sustain their social relationships.

These studies revealed that it is vital and meaningful for implementing research by combining both social media and brand communication in the museum context. The number of research related to social media is higher than branding in the museum context. The notion of the importance of both social media and branding can be found in these previous studies, but limited studies combined both areas. In addition, most of the research studied from the museum perspective, there are limited research from the visitors' perspective, and there are limited research investigated the opinions of social media followers of the museum. Considering the fact that both social media and brand communication are necessary aspects for museums to take into account. This research pays attention to the online audience's attitude towards the museum. The following chapter illustrates related theories and links to museum communication based on the developed research model.

# Chapter 4 Theoretical framework

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This chapter demonstrates theories about the brand resonance model, which is the basic theoretical framework in this study. As a model which can be applied in social media studies, it helps to analyse the audience perceptions in a systematic way and provides insights into the area of strengthening brand relationships. An overview of the model and related brand theories are placed at the beginning. Then all the elements included in the brand resonance model are explained step by step. Lastly, the research model and hypotheses are proposed and outlined.

## **4.1 The brand resonance model**

To explore how museums should maintain brand relationships with the online audience. This research used the brand resonance model, which is also called the customer-based brand equity (CBBE) model from Keller (2013, p.108). The following theory discussion is based on the elements involved in this model. This model represents in the form of a pyramid as shown in Figure 1, according to Keller (2013, p. 107), this model explains how to cultivate intense, active loyalty relationships with customers. There are four steps in this process, which are firstly constructing the brand identity, secondly designing brand meaning, thirdly stimulating brand responses, and lastly strengthening the brand relationships with customers. The author also indicated that the pyramid could be viewed as two kinds of routes, the left side as the rational route, while the right side as the emotional route (Keller, 2016). Moreover, as stated by Keller (2016), the brand resonance model can be applied to the digital environment, it is constructed in a highly relevant way. These elements in the model can help to acknowledge the developments in social media and how those consumers get involved in interactions with brands (Keller, 2016).

## Stages of Brand Development

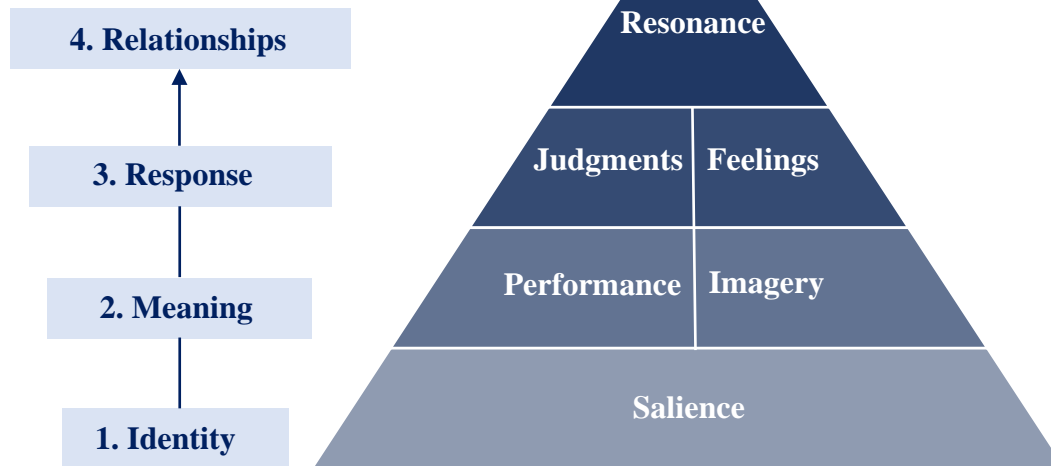


Figure 1. Brand resonance model

More brand resonance and stronger brand positioning in the customers' mind mean that brand equity can be achieved due to the fact that this only happens when it comes to the top of the pyramid (Keller, 2013). Brand equity occupies a crucial area in brand management since equity stands for the value that the brand brings up to stakeholders (Aziz & Yasin, 2010). According to Cleff and Walter (2014), building brand equity means cultivating and communicating brand values to customers. Once customers are satisfied with benefits from the brand, such benefits can make those customers take biased behaviours because they tend to choose brands which they have intimate associations compared to those they do not have (Faircloth, Cappella, & Alford, 2001). Thus, brand equity can generate much intangible benefits and potentialities to the brand once the brand assets are meant to be well managed. Positive customer-based brand equity is meant to receive a higher level of feedback and interaction from customers, while negative customer-based brand equity is meant to obtain a lower level of responses in the brand communication (Keller, 1993). To achieve a positive one, it requires the customer to be familiar with the brand and has special and bright memories about the brand (Keller, 1993). No matter whether the brand is strong or not, the brand should constantly work on the brand building process and brand equity improvement (Keller, 2001b). The needs and preferences of customers may change in a short time, but brand equity always takes



time to maintain. Meanwhile, strong brand equity can create many benefits to organisations because they can gain better competitive status on the market, reduce the risk of crises, receive fewer complaints, and so on (Keller, 2001a). Museums as a type of organisation that need to communicate with stakeholders and maintain social relationships. It is necessary for them to apply this kind of model to manage brand relationships and strengthen brand equity for further improving their brand values.

#### 4.1.1 Brand salience

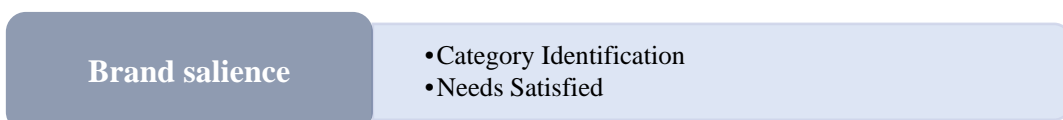


Figure 2. Brand salience components

(Keller, 2013, p. 109)

The first stage of the model is to set up brand identification and association in customers' perceptions (Keller, 2001a). Brand salience happens when it is quite easy and frequent for customers to think of the brand under different consumption conditions (Keller, 2009). When the brand is in the consideration list of customers, then it can be said as the simplest type of brand salience (Ehrenberg, Barnard, & Scriven, 1997). Thus, leaving a good impression of the brand on customers is very crucial since it decides whether the customers remember the brand and to how much extent they consider choosing it. A brand with a high level of salience means it has deep and broad brand awareness, for instance, people think about the brand very often in various conditions (Keller, 2013). The depth of brand awareness can be said to happen when customers easily recall the brand instead of recognising until they see it, while the breadth of brand awareness relies on the customers' knowledge base about the brand, and in which situations they will think about the brand (Keller, 2013). Brand salience can be cultivated via creative activities, thus it helps the brand to be known by a larger group of people, gain more attention, as well as leave long-term memory for brand associations (Ehrenberg et al., 1997). There are many similar brands on the market, but not every brand owns a high market share, this is caused by the gap of the number of customers who are feeling salient with the brand

(Ehrenberg et al., 1997). This can also be applied to the museum industry, there are so many museums, but not everyone remembers the specialities of every museum well after visiting them. It is necessary for museums to cultivate good impressions among their audience through all kinds of online and offline activities.

#### 4.1.2 Brand performance and imagery

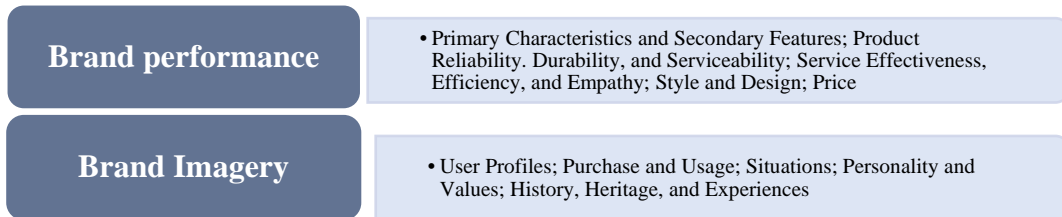


Figure 3. Brand performance and brand imagery components

(Keller, 2013, p.109)

The second stage of this model is to make sure the brand meaning becomes tight in customers' minds, in other words, to link tangible and intangible aspects well (Keller, 2001a). As addressed by Keller (2001a), both brand imagery and brand performance belong to brand meaning, brand imagery is the part which is more abstract in mind, while brand performance is the part which is more functional regarding experiences. Brand performance is something that surpasses the elements and characteristics of the products, it is the key part to make the brand a unique one (Keller, 2013). It represents the inherent brand assets, and it describes the extent of organisations to meet customers' practical demands (Keller, 2009). Brand imagery stands for the external assets of the product or services, besides the substantial form of the products, the way of promoting the products is also associated with brand imagery (Keller, 2009). Brand imagery influences the way that people think about the brand in their minds instead of the brand in reality (Keller, 2013). Different from brand performance, brand imagery is about meeting customers' psychological needs (Keller, 2009). Most museums are non-profit institutions, but offering products and services are central aspects of their daily maintenance, such as exhibitions, merchandise, public lectures, and so on. All of those produced by the museums have the power to fulfil both physical and psychological needs of their audience.

### 4.1.3 Brand judgments and feelings

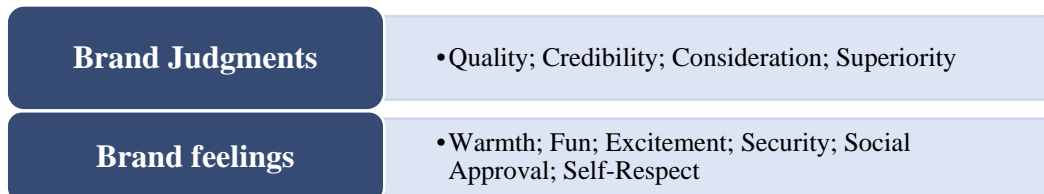


Figure 4. Brand judgments and brand feelings components

(Keller, 2013, p.109)

The third stage of this model is about evoking customer reactions to the brand (Keller, 2001a), which includes brand judgments and brand feelings. Both judgments and feelings relate to customers' perceptions of brand meanings, but they have different focuses. Brand judgments point to personal opinions about the brand (Keller, 2009). The first type of brand judgments is brand quality, which stands for the perception of the quality of products or services (Keller, 2013). The second type is brand credibility, which considers whether the customers think the brand as a credible one (Keller, 2013). The third type is brand consideration, which is important because it is related to the evaluation from the customers. However, it is not necessary for brands to consider opinions from those who do not add the brand into their consideration lists (Keller, 2013). The fourth type is brand superiority, it means when the customers think the brand is better than others, then the brand relationship will be tighter and more active (Keller, 2013). Feelings about the brand are also customers' responses to the brand, in this sense, emotions are highly concerned (Keller, 2009). Emotional bonding with customers is a crucial factor in maintaining a brand relationship while designing and implementing brand strategies (Akgün, Koçoğlu, & İmamoğlu, 2013). In the brand resonance model, Keller (2013) summarised six kinds of brand feelings, which are warmth, fun, excitement, security, social approval, and self-respect. These six feelings can be divided into two categories. Warmth, fun, and excitement are experiential and immediate, another category includes the security, social approval, and self-respect which are private and enduring (Keller, 2013). The response from the target group reveals whether the brand has strong competitiveness on the market or not. If the customers do not consider the brand and do not have any feelings about it, then it is a risk for the brand to develop relationships from a long-term perspective. Museums, which are

facing fierce competition with other museums, as well as organisations which provides leisure and entertainment services (Suzić & Stríteský, 2016). Obtaining positive responses and deep feelings from their audience is valuable for them to deliver more valuable information to society, for example, the knowledge that has educational meanings.

#### 4.1.4 Brand resonance

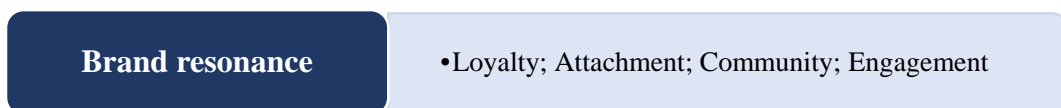


Figure 5. Brand resonance components

(Keller, 2013, p.109)

The final stage of this model, on the top of the pyramid, is to transfer the brand response in the third step into a profound, dynamic, and loyal relationship between customers and the brand (Keller, 2001). Keller (2013, p. 120) defined brand resonance as ‘brand resonance describes the nature of this relationship and the extent to which customers feel that they are “in sync” with the brand’. When customers have such a resonance sense with the brand, it means that they are more loyal and they will actively find chances and ways to interact with the brand as well as share the brand experiences with other people (Raut & Brito, 2014). In the museum industry, resonance can be reached by stimulating cultural and historical sense when viewing some art objects (Greenbalt, 1991). Then how to cultivate the brand resonance among their audience is a significant issue for museums, especially history museums since most of the collections are about human histories and also the primary materials in museum social media contents. Moreover, Keller (2013) defines brand resonance as two dimensions, which are psychological bonds and level of activity. They can be divided into four categories that compose the brand resonance, which are behavioural loyalty, attitudinal attachment, sense of community, and active engagement (Keller, 2009).

*Behavioural loyalty.* In this model, Keller (2013) interprets behavioural loyalty as the actions of repeated purchases of the brand. A loyal relationship has a few characteristics, which are long term, committed, and affective (Fournier, 1998).

Also, as suggested by Oliver (1999), loyalty can be understood as the customer treats the brand as part of his or her identity in the social system. Thus, loyalty can be seen as an advantage for the brand in an increasingly competitive market environment (Moisescu & Allen, 2010). *Attitudinal attachment*. Attachment, in terms of one kind of psychological states, is about the cognitive and affective bond between the brand and a person (Park, MacInnis, & Priester, 2008). Grisaffe and Nguyen (2011) mentioned that emotions attached to the brand represent a strong desire to protect feelings of security with the brand. They further explained the fact that this kind of attachment is usually emotionally rooted as well as stable in the relationship. Same as suggested by Park et al. (2008), attachment supports the preservation of emotional energy which can develop the relationship in a long-term direction. Preference of the audience may change rapidly and suddenly, as an institution of preserving historical objects, a loyal and attached relationship is essential for museums to build up with their audience.

*Sense of community*. A community that describes the social phenomenon of customers getting familiar with others who like the same brand (Keller, 2013). Organisations should encourage customers to interact with the brand or other members since this can foster communication and group cohesion in their brand community (Burgess and Spinks, 2014). Moreover, there are two characteristics of a brand community valuable, that is specialised and non-geographically restricted (Muniz & Guinn, 2001). This kind of community has the potentiality of addressing pressure on people to keep their loyalty on the brand (Muniz & Guinn, 2001). Nevertheless, the community is a 'bridge' that constructs customers' emotional bonds and their sense of belonging (Raut & Brito, 2014). *Active engagement*. Keller (2016) addressed that consumer engagement is a broad concept since it can be referred to the interactions related to the brand, organisation, or other consumers. As mentioned, the development of technologies made the engagement appear in the form of media practice (Keller, 2016). This also changed the meaning of engagement since the engagement does not need to be restricted to the form of interaction, reading social media content is also a form of engagement (Burgess & Spinks, 2014). Such a many-to-many communication platform helps museums to spread their information since it gathers people have the same preference together.

## 4.2 Research model and hypotheses

Based on the theoretical framework and related studies, this research applied two dependent variables, for simplifying, I call the two dependent variables as *the bottom half of building brand relationships* which is the mean value of first three blocks in the brand resonance model (brand salience, performance, and imagery) and *the top half of building brand relationships* which is the mean value of the other three blocks in the brand resonance model (brand judgments, feelings, and resonance). The independent variables are grouped into three dimensions, the first dimension is the pictorial content dimension that stands for the appearance of animate and inanimate elements in post pictures. The second dimension is the museum familiarity dimension that includes physical familiarity (visit times) and social media familiarity (frequency of tracking the social media update). The last dimension is the demographic dimension which is about age and education level. These independent variables under each dimension are crucial for investigating their influence on brand relationships between the Palace Museum and their online audience. Thus, the research model for this study is shown in Figure 6 as follows.

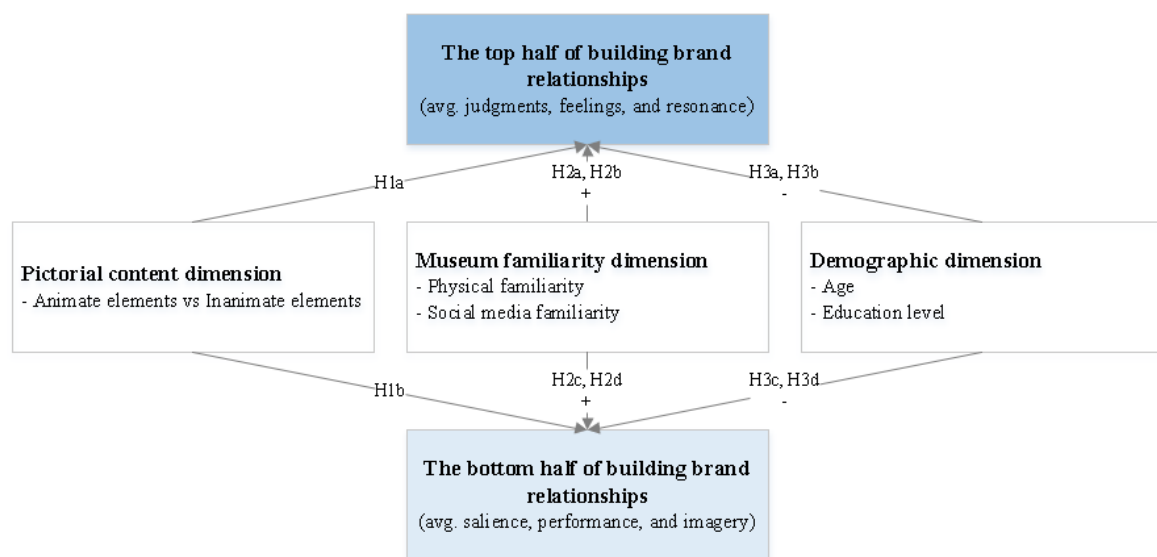


Figure 6. Research model

### *Pictorial content dimension*

One of the most remarkable features of human being is the preference of animals, which can be seen from a phenomenon today is that many people like sharing content about animals on social media (Hagan, Carpenter, Ungar, & Preotius-Pietro, 2017). When people update their social media status by posting content about an

animal, this is a way of showing their interests (Seidman, 2013). Having animal symbols can allow brands to have a stronger attachment with their target group (Lloyd & Woodside, 2013). Brand-related contents can help us to learn more about how can those impact brand relationships (Kim & Johnson, 2017). Especially photos which people use for sharing experiences can bring up more insights for museums to improve their interaction with the audience (Budge & Burness, 2018). Thus, it is essential for us to see whether post pictures contain elements of animate elements and inanimate elements will have different impacts on the brand relationship between the museum and the online audience. Thus, investigating the link between pictorial content and brand relationships can let us know the preference of the online audience better.

*H1a. Animate elements in post pictures will have a more positive impact on the bottom half of building brand relationships than inanimate elements.*

*H1b. Animate elements in post pictures will have a more positive impact on the top half of building brand relationships than inanimate elements.*

#### *Museum familiarity dimension*

The second aspect is about the influence of physical familiarity and social media familiarity on brand relationships. Physical familiarity means how many visits to the museum on site, while social media familiarity concerns how frequently people follow up and check the museum updates. Both physical and virtual familiarity are bridges between the museum and their audience, physical familiarity interprets on-site experience with the museum while social media familiarity matters experience through social media platforms, Amitrano et al. (2018) found that visitors who are active players online are willing to visit the museum more and share the museum to others. In addition, social media is a platform for brands to improve their brand image in people's perception, as well as making their attitude more positive (Coursaris, van Osch, & Balogn, 2016). A positive attitude can therefore increase the level of trust and satisfaction (Dijkmans, Kerkhof, & Beukeboom, 2015). For visits on site, services and other offerings will also create positive and satisfying impressions among visitors (Kotler & Kotler, 2000). Then it is worth paying attention to these two factors as the online audience often take actions based on their familiarity with the museum.

*H2a. Physical familiarity will have a positive effect on the bottom half of building brand relationships.*

*H2b. Physical familiarity will have a positive effect on the top half of building brand relationships.*

*H2c. Social media familiarity will have a positive effect on the bottom half of building brand relationships.*

*H2d. Social media familiarity will have a positive effect on the top half of building brand relationships.*

### *Demographic dimension*

The third aspect is the influence of age and education level on brand relationships. To make brand communication on social media more effective, brands need to know the motivation of people engaging in social media, then it can lead to positive influence on brand equity (Zailskaitė-Jakštė & Damaševičius, 2017). Audience information such as age, education is valuable to analyse since they may create differences of response to the brand and these differences can help us to learn their behaviours better (Hudson, Roth, & Mdden, 2016). Age plays an important role in online engagement (Aladwani, 2017), for instance, young people are the main users of social media and they are easier to perceive the messages from the museum. Different education levels can make people think differently as well. People of high level of education usually consider more than those of low level of education. Moreover, since engagement is a crucial element in brand resonance, to explore whether there are differences in brand perception towards the museums among people from various backgrounds will give us more ideas about cultivating brand relationships.

*H3a. Age will have a negative impact on the bottom half of building brand relationships.*

*H3b. Age will have a negative impact on the top half of building brand relationships.*

*H3c. Education level will have a negative impact on the bottom half of building brand relationships.*

*H3d. Education level will have a negative impact on the top half of building brand relationships.*



### **4.3 Reflection**

This chapter explained the theoretical framework and research model for this study. Since this study aims to discover the opinions of the online audience about the museum, this research model is highly relevant to be implemented because of three reasons. First, it shows the route of strengthening brand relationships as well as consists of elements that are essential to be considered during the process of building up the brand resonance and reaching significant brand equity. Secondly, it includes other relevant aspects such as post pictorial content, physical and virtual familiarity, as well as personal background. These can help us to get into deep about what the online audience perceive the museum through social media communication and what has an influence on their attitudes. Thirdly, this integrated model can generate more meaningful insights to museums of improving their brand communication on social media. In other words, this model is helpful to examine their brand relationships with their online audience. The following chapter introduces the methodology part, which involves the scientific perspective, research strategy and research process. Related details are presented based on four stages of carrying out this research.

# Chapter 5 Methodology

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This chapter presents the whole process of implementing this research. For answering the research questions as well as testing the hypotheses, mixed methods were applied to have a complete view of the social media communication of the Palace Museum in Beijing. To begin with, the scientific perspective of this study is introduced first. Following is the part of presenting the mixed methods process. Then four stages of the details of conducting this research are illustrated, which are post sampling, survey and post pictorial rating design, and survey data collection. Meanwhile, the ethical issues that need to be considered are included as well. Lastly, there is a reflection part based on this chapter.

## 5.1 Post-positivism

Different kinds of perspectives can generate diverse types of interpretation results, researchers should be careful and reflective while handling the empirical materials (Alvesson & Sköldbberg, 2017). Thus, we should be clear about what should be taken as knowledge about the social world and how we gain knowledge from the social world (Bryman, 2016; Leavy, 2017). This research applies post-positivism as the scientific perspective of viewing and understanding reality. It can be employed in the mixed method approach (Leavy, 2017). Post-positivists put emphasis on elaborating detailed prescriptions for the research implementation to enhance the reliability and validity of their research results (Robson, 2011). When holding a post-positivist worldview in mixed method research, it means that researchers put their personal biases and feelings aside (Leavy, 2017).

Same as positivism, post-positivism also takes objectivity and testability as its basic scientific virtues (Bergman, 2016). However, post-positivists reject the view of positivism that knowledge can be gathered through direct view and propose that we should not ignore uncertainties and doubts during this learning process (Robson, 2011). Post-positivists consider that the evidence gain from reality is not always

perfect due to some possible biases and researchers' limitations (Robson, 2011). Thus, we should guide the research by the best evidence we have at the time as always since the knowledge is hard to be said as completely justified (Robson, 2011). Since this research applies both qualitative and quantitative methods while implementing the research from a post-positivistic viewpoint. For the qualitative part, test-retest and interrater reliability strategies were applied since it helps to reduce the influence of particular personal perceptions on the results (Leavy, 2017). For the quantitative part, an online survey that is self-administrated let the participants make decisions on their own. The whole research was carried out in order to improve the objectivity of handling the materials, any personal preferences were avoided in order to increase the reliability of the results.

## **5.2 Mixed methods**

Audience research has a few advantages for museum development, for example, it can help to define targets, design planning, perform tactics, as well as inspire the museums about where their brands are different from other museum brands (Sandell & Janes, 2007; Scott, 2007). Moreover, this research was implemented based on a single case study because one case study method can help to provide an in-depth explanation (Bryman, 2016). Since this research is focusing on the group of the online audience on social media, a mixed method approach was used which means both qualitative and quantitative methods were integrated to collect and analyse the data in the study (Bryman, 2016; Leavy, 2017). The reasons to use a mixed method approach were based on a few considerations according to Bryman (2006), which are completeness (to provide a complete answer to research questions by utilising two methods), instrument development (to use the qualitative analysis on survey design), and credibility (mixed approach helps to improve the integrity of the research). Thus, based on those considerations, the combination of both methods can bring up a more conceivable and broader picture of the research.

This study was divided into four stages which can be seen in Figure 7. The first stage was to collect the posts in the past year and categorise these posts into different categories for selecting sample posts from each category. The second stage contained two parts. One was about designing a survey to the online audience who are interacting with the Palace Museum on Weibo. Seven statement questions were designed based on the brand resonance model as the rating basis of sample posts. Another part was designed for learning more about the post picture content. It was a post picture rating form for rating different elements in the post pictures. The third stage was to send out the survey and collect responses online as well as collect post picture rating responses. In the end was to analyse those data using statistical methods. Thus, it is not only about what the museum did in the past year to promote themselves but also how the audience think about these posts and most importantly, their attitude towards the museum. Employing both quantitative and qualitative methods in this research is helpful to gain reliable outcomes for the research.



Figure 7. Research process

## 5.3 Research design

### 5.3.1 Stage 1: Post data collection, categorisation, and sampling

Most communication studies about museum performance in social media applied the method of content analysis of posts. Content sharing is a quite new approach under the museum context, those content on social media is valuable to study because they display the evidence of audience participation on the social network community (Russo, 2012). And the content analysis has been applied more and more in investigating the content on the internet (Herring, 2009). In the first stage of this study, the data collection was finished during the beginning of March in 2019, the final version is based on data on March. 10<sup>th</sup> by updating the number of likes, comments, and shares according to the extracted pdf file on that day. The data

was closely checked and rechecked to avoid mistakes. Finally, 945 posts were collected which were released from 01 March 2018 to 01 March 2019 from the Palace Museum official account on Weibo. These kinds of information were collected, time of post, content, number of likes, number of shares, number of comments, number of followers, number of posts, number of followings. To be noticed, the number of followers, number of posts, and the number of followings were rechecked at 11:59 pm on March 10<sup>th</sup>.

Systematic classification helps to make the texts into a short word based on its characteristics, and it is a way of decreasing the complexity of texts (Bauer, 2000). The collected posts were classified into different categories. When allocating the posts to each category, it was based on the main theme that the museum wanted to deliver to the audience. For example, if a post is about an activity, but this activity is for promoting an exhibition, then this post was categorised to the exhibition. This kind of categorisation can reduce confusion, since many posts can have several topics at the same time. I created six categories for those posts, which are cultural and creative product, event, exhibition, history and culture, landscape, and others. The information of six categories is summarised in Table 1. Notably, cultural and creative product is a specific definition of museum merchandise. In China, they are called *wenchuang* (文创), *wen* (文) stands for ‘cultural’ and *chuang* (创) stands for ‘creative’, which means products designed based on the culture with creativity.

Category	Number of posts
Cultural and creative product	67
Event	110
Exhibition	135
History and culture	537
Landscape	81
Others	15
<b>Total</b>	<b>945</b>

Table 1. Post categorisation

The third step of posts in this stage was to apply the engagement rate formula proposed by Vadivu and Neelamalar (2015, p. 73). As checked, three values that could be applied in Weibo were total likes (TL), total comments (TC), and TS (total shares), thus, this study updated the engagement rate formula by removing the part of total user’s post (TUP) since Weibo does not support this kind of function. Then through the calculation of engagement rate, it can help to provide a clear view of engagement condition for those posts with a sharing standard.

*Formula from Vadidu & Neelamalar (2015)*

$$\text{Engagement rate} = \frac{(\text{TL} \times 1) + (\text{TC} \times 2) + (\text{TS} \times 3) + (\text{TUP} \times 4)}{10 \times \text{Total fans}}$$

*Formula for this research*

$$\text{Engagement rate} = \frac{(\text{TL} \times 1) + (\text{TC} \times 2) + (\text{TS} \times 3)}{6 \times \text{Total fans}}$$

The fourth step was to calculate and sort those posts according to the engagement rate from the largest to the smallest. Within the six categories, only the ‘others’ was not included because it is a type of information regarding museum daily maintenance issues, such as ticket price, opening hours, etc. Unlike the other five categories, this kind of posts does not have much relation with the museum identity. The posts with videos were not considered since screenshots are not able to play videos. Furthermore, posts which are reposts were excluded as well. As checked, the reason to choose original posts is that they are generated by the museum. And since the survey was going to send to the online audience, it is not suitable for the audience to perceive the posts which were forwarded from other accounts and it may cause confusions.

The last step was to select the top one and bottom one post in the five categories, in total is ten posts. Since the categorisation was done by me, for ensuring the quality of categorisation. I was aware that the reliability of categorisation should be emphasised by using test-retest reliability and interrater reliability strategies (Leavy, 2017). For the test-retest reliability, data were rechecked several times a week in March to avoid misclassification. For the interrater reliability, I invited three friends to think about the categorisation of the selected posts, and the outcomes were referred and compared before deciding the final version of sample posts categorisation.

### ***5.3.2 Stage 2: Survey and post picture rating design***

#### ***a) Survey design***

##### *Sample strategy*

This survey adopted the way of purposeful sampling to produce credible data (Patton, 2015). Due to the fact that the research target group are local young people who are the online audience of the museum on Weibo. This study spread the survey to

people who are following the Palace Museum account, especially who put comments under the posts from the museum. Since they are the research target group, unlike those who do not pay attention to the museum on social media. People who follow, especially who actively put comments under the museum social media account are mostly active users and hold a certain amount of knowledge of the museum performance on Weibo. Then they may have more interests in participating in this survey and taking this survey seriously.

#### *Attitude scale*

Besides the questions regarding general information of participants, Likert 1 to 5 scales was used for questions in this survey. Since this research aims to investigate the attitude of the online audience, how to use questions to measure their attitude is important. Likert scales is a common method for research on attitudes (Bryman, 2016). The 1 to 5 scale was developed by Rensis Likert in 1932, it can help to evaluate the feelings about different questions in the same response category (Bryman, 2016; Revilla, Saris, & Kronick, 2014). According to Revilla, et al. (2014), 1 to 5 is better than 1 to 7 scales since it has less possibility of generating lower quality (Revilla, et al., 2014). This AD scale is easy to display on both paper and online surveys (Revilla, et al., 2014).

#### *Questions and statements*

The survey contains 77 questions in total and was designed in three parts. The first part includes visit times, social media usage, and update tracking frequency. The second part is testing the online audience's attitude towards ten posts selected in the first research stage. Each post has seven statements which were developed based on the brand resonance model. The last part is content preference and basic information, such as age (participants need to be older than 18 due to the consideration of youth privacy regulation), gender, and education level. Below table 2 contains the statements based on six elements from the theoretical perspective and reference literature.

Element	Statement	References
<b>Brand salience</b>	The characteristics of the Palace Museum comes to my mind quickly.	Bianchi, Pike, & Lings, 2014; Bruhn, Schoenmueller & Schäfer, 2012; Keller, 2013; Liu et al., 2015; Schivinski & Dabrowski, 2015; Stojanovic, Andreu, & Curras-Perez, 2018
<b>Brand performance</b>	This post offers useful information.	Aladwani, 2014; Aziz & Yasin, 2010; Moura et al., 2019; Farhana & Islam, 2012; Figueiredo, Pinto, Belém, Almeida, GonçAlves, Fernandes, & Moura, 2013; Keller, 2013
<b>Brand imagery</b>	This post makes me think the Palace Museum has a different image from other museums.	Liu, Wong, Tseng, Chang, & Phau, 2017; Keller, 2013; Villarejo-Ramos & Sánchez-Franco, 2005
<b>Brand judgments</b>	This post makes me feel good about the Palace Museum overall.	Aziz & Yasin, 2010; Moura et al., 2019; Farhana & Islam, 2012; Keller, 2013; Liu et al., 2015
<b>Brand feelings</b>	This post makes me feel confident of Chinese culture.	Aziz & Yasin, 2010; Farhana & Islam, 2012; Keller, 2013
<b>Brand resonance 1</b>	This post makes me feel that the Palace Museum is the museum that I prefer.	Aziz & Yasin, 2010; Bianchi et al., 2014; Farhana & Islam, 2012; Keller, 2013
<b>Brand resonance 2</b>	This post makes me want to learn more about the Palace Museum.	Aziz & Yasin, 2010; Farhana & Islam, 2012; Keller, 2013

*Table 2. Survey statements*

Above statements were designed based on two principles, first is in accordance with the element definition and interpretation by Keller since this is the fundamental theoretical framework for this study. Second is the consideration with the survey materials because the statements are based on post contents which are in the museum context and avoid the tones of business. Brand salience is about how easily the audience think about the brand (Keller, 2013), thus the statement is about how easily they can relate to characteristics of the museum. For brand performance and imagery, performance is about physical needs while imagery concerns psychological needs (Keller, 2013). Then the statement is about whether the audience think the museum offers useful content and to what extent they feel the museum is different from other museums. Useful content is crucial in social media content management (Figueiredo et al., 2013), they determine whether the audience think the



content is relevant to their needs or not. The extent of a different image that the museum has compared to other museums can be referred as the impression that the online audience have towards the museum. If they do not think the museum has special features they prefer, then it will be hard for the audience to have a distinct picture in their mind. Thus, the statement is about whether they think the Palace Museum has a different image compared to other museums.

For brand judgments and feelings, the statement for brand judgments is whether their overall opinion about the museum is good or not since judgements stand for audience's evaluation towards the brand. Self-respect means that one feels better and pride in his/herself (Keller, 2013). It is redesigned based on the museum context, whether the online audience will have a sense of confidence in the Chinese culture regarding those post contents. In China, cultural confidence stands for the task of preserving and renewing traditional Chinese culture while reducing the conflict between modern and traditional culture (Guo, 2018). Lastly, based on two dimensions of brand resonance, this survey used two statements that ask the museum preference as well as the intention of learning more about the museum, whether they think the museum is a preferred one and to what extent they are willing to spend time on knowing more about the museum.

In addition, several issues were considered before sending it out. First, the sequence of posts in the survey was not from high engagement to low engagement, the detailed sequence was arranged based on the released time one old, one new, etc., which can be found in table 3. In table 3, it includes number (sequence in the survey), post time, category, name, and ranking. For the names, they are based on the ranking of engagement rate in each category, for example, HAC536 means the post which engagement rate ranks 536 among posts in the history and culture category. Ranking here stands for the ranking number of engagement rate among 945 posts during 01 March 2018 to 01 March 2019 from the highest to the lowest, HAC536 here shows that it ranks 925 among 945 posts in the past year. Secondly, since the participants are Chinese, this survey was written in English first then translated to Chinese by me. Thirdly, the numbers of likes, comments and shares were not shown in the screenshots in the survey. Then it can help to reduce the biases when the participants were reading the questions and making choices. Fourthly, before sending out the survey, five friends were invited as the pre-testers of the

survey to ensure quality and their suggestions were considered. Figure 8 displays the outline of the survey and the survey can be found in Appendix 1.

Number	Time	Category	Name	Ranking
Post 01	2018-03-12 10:30	History and culture	HAC536	925
Post 02	2019-02-19 18:30	Event	EVE002	009
Post 03	2018-03-17 15:58	Landscape	LDS001	010
Post 04	2019-01-06 11:04	Exhibition	EXH001	061
Post 05	2018-06-01 17:30	Event	EVE097	931
Post 06	2018-12-19 18:00	Exhibition	EXH128	673
Post 07	2018-09-30 17:00	Cultural and creative product	CCP058	506
Post 08	2018-11-22 17:00	History and culture	HAC001	007
Post 09	2018-10-08 14:47	Landscape	LDS078	197
Post 10	2018-11-09 11:00	Cultural and creative product	CCP002	003

Table 3. Survey post sequence

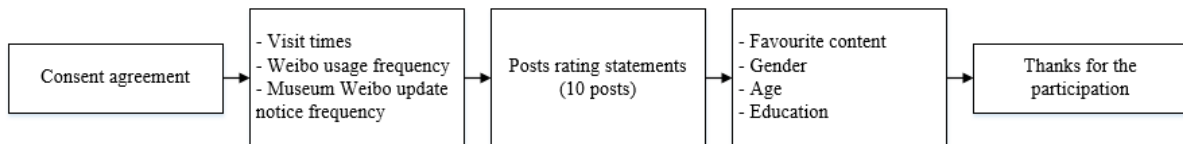


Figure 8. Survey outline

### ***b) Post picture rating design***

To investigate the relations between post picture content and brand relationships from the online audience's perception, a content rating questionnaire was developed. It can be found in Appendix 2. This content rating applied Likert 5-scale as well, from 0 absolutely absent to 4 prominently present. Besides the motivations from the theoretical perspective of studying post pictures. Another reason which was considered from the practical perspective, to choose rating pictures instead of texts or texts and pictures is that the pictures are easier to understand as well as a link to memory than words which means pictures can activate a sense of excitement higher than words (Schmitt, Tavassoli, & Millard, 1993). Pictures normally contain fewer words and easier for people who come from different cultural backgrounds to perceive and understand. Meanwhile, post texts are in Chinese, sometimes it is not convenient to be referred to other language systems.

Based on the observation of these post pictures, ten elements were created as the standards of grading, which are styles (ancient elements, modern elements, palace elements, and commercial elements) and objects (artefacts, calligraphies and paintings, animals, buildings, figures, and plants). Thus, this rating form has 100

ratings. Finally, it was decided that only to use the six elements of objects based on the consideration that objects are more objective since they are not intangible and easy to understand. Based on the interests of studying differences caused by animate and inanimate components in the pictures, The final used rating data were divided into two groups, animate (animals, human figures, and plants) and inanimate (artefacts, buildings, and calligraphies and paintings). To increase the reliability since the judgments of pictorial rating could be differed and there was no right answer to this post picture rating. I invited fourteen Chinese friends to rate those post pictures, thus, including myself this part had fifteen persons as participants. It was sent out via both Wenjuanxing (which is a local Chinese platform since it has less internet speed problems) and Google form. I also sent the participants a pdf file containing pictures in the original size which are clearer.

### *5.3.3 Stage 3: Survey data collection*

The survey data collection took from 28 March 2019 to 10 May 2019, the survey platform I used was Wenjuanxing. The method of collecting survey data was composed of two parts. The first method as well as the primary method was to post comments under the posts from the Palace Museum on Weibo every day, as soon as I could after it updated. The second was to post the survey on some museum lovers' social community, here the platform used is called Douban, which is also one of the popular internet forums in China. The posts on Douban and Weibo clearly stated that the survey was for people who are followers of the Palace Museum and contained the introduction of my thesis purpose. In the end, 718 people attended and completed this survey.

### *5.3.4 Stage 4: Survey data analysis*

The data was downloaded and exported into IBM SPSS 25 for analysis. The main statistical method is multiple linear regression. It was applied to examine the hypotheses designed for this research and see the relations between the influential factors and brand relationships building. One of the dependent variables is the bottom half of building brand relationships which is a composite variable which was created by the mean of brand salience, brand performance, and brand imagery. Another dependent variable is the top half of building brand relationships created by

the mean of brand judgments, brand feelings, brand resonance 1 and brand resonance 2. All seven variables own the same scale (1 = strongly disagree to 5 = strongly agree), and the Cronbach's alpha is 0.95 for these items.

## **5.4 Ethical considerations**

The first part of the study was to collect post data in one year, the issue of legitimisation was taken into consideration. According to an official post from the Palace Museum, it is stated that the intellectual property right of content in their account belongs to them, those contents are allowed to be used for personal but non-commercial purposes (The Palace Museum, 2016, my translation). In the introduction of the survey, it has been clarified that the materials are from the Palace Museum's official Weibo account in the consent agreement. Bryman (2016, p. 135) discussed the four areas of ethical concern in social research, which are harm to participants, lack of informed consent, invasion of privacy, and deception. For harm to participants, there is no sensitive and private question in this research, and the tone of words was kept as polite and comfortable. And there is no question regarding identifiable information, the data was stored confidentially and only stored for this research. For the consent issue, the purpose and confidentiality were introduced before the participant started the survey, and they needed to click agree to continue. Thus, the issues of invasion of privacy and deception could be avoided since the data did not contain any personal information, the purpose of the research was informed at the beginning, and the data was and would not share with others.

## **5.5 Reflection**

Investigating the relations between social media communication and brand relationships building is the focus of this study. It is important to know what the online audience are thinking about. With the combination of both qualitative and quantitative methods, the survey was designed by combining the social media content produced by the museum and the theoretical framework. This could let the audience make their choice of what associations those posts brought to them. Meanwhile, adding a post picture rating helps us to learn more about the pictorial content effects on brand relationships. Such a research design route enables us to get into a deep of

the research phenomenon and help to provide integrated results. The sampling of posts and methods of contacting participants considered the reliability and validity of the data. On the one hand, posts with both high and low engagement can reveal more of how to improve the engagement. On the other hand, people who like the Palace Museum tended to participate in the survey more seriously. The next chapter introduces the findings of this research.

# Chapter 6 Results

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This chapter is composed of data analysis results based on the collected survey responses from the museum online audience and post picture rating. Three parts show different aspects of the results in order to answer the research questions. The first part demonstrates the outcomes of each question. The second part is the post evaluation results. Two charts based on the bottom half and top half of building brand relationships show the performance of each post from the perception of the audience. The third part is multiple linear regression results of testing hypotheses based on the research model. These results can help us to get deeper into the audience's perception of the museum. Most importantly, these results enable us to explore the research questions by testing the influential factors on the relationship between the museum and their online audience.

## 6.1 Descriptive statistics

Table 4 offers descriptive information about survey questions. There were 718 people who participated in the survey and answered every question. Regarding the demographic information, the youngest group is 18 years old, the oldest is 65 years old. 63.9% participants are aged 18-25, 29.7% are aged 26-35, 4.7% are aged 36-45, 1.7% are older than 46. 20.9% are men and, 79.1% are women. About the highest level of education, 3.8% of people have secondary school or less, 6.5% have college degree, 65.7% have bachelor's degree, and 24% have postgraduate degree.

The museum familiarity is about the audience's familiarity with the museum via actual visits as well as via social media update tracking of the museum account. For the actual visits, which is called physical familiarity in this study, 30.4% of people did not visit the museum before, 31.1% visited one time, 15.3% visited two times, 4.2% visited three times, and 19.1% visited more than three times. For the social media familiarity, 22.7% of the audience follow up every day, 27.7% several

times a week, 6.1% once a week, 11.8% several times a month, and 31.6% once a month or less.

Then for social media usage and preference, about their Weibo usage, 65.2% of them use Weibo every day, 19.4% use Weibo several days a week, 1% once a week, 6% several times a month, while 8.5% use once a month or less. The options for the question of what content type they prefer is based on the categories created for this research. Among the six types, history and cultural knowledge gained the highest votes which are 32.7%, and then landscape 23.5%, exhibitions 20.9%, cultural and creative products 17.8%, events 2.9%, and others 2.1%.

Regarding the statements based on the brand resonance model. The bottom half of building brand relationships consists of brand salience (mean = 3.96), performance (mean = 4.02), and imagery (mean = 3.95). The top half of the building brand relationships consists of brand judgments (mean = 4.13), feelings (mean = 4.05), and resonance (mean of first dimension = 4.03, second dimension = 4.05).

	Valid	Missing	Mean (SD) or % (N)	Minimum	Maximum
<b>Demographic information</b>					
Age	718	0	25.20 (5.978)	18	65
Gender					
Men (%)	150	0	20.9% (150)		
Women (%)	568	0	79.1% (568)		
Education level		0	3.10 (0.668)	1 = Secondary school or less	4 = Postgraduate degree
<b>Museum familiarity</b>					
Visit times (Physical familiarity)	718	0	2.51 (1.444)	1 = 0	5 = More than 3 times
Update tracking frequency (Social media familiarity)	718	0	3.02 (1.603)	1 = Every day	5 = Once a month or less
<b>Social media usage and content preference</b>					
Weibo use frequency	718	0	1.73 (1.263)	1 = Every day	5 = Once a month or less
Content preference	718	0	3.47 (1.405)	1 = Cultural and creative products	6 = Others
<b>The bottom half of building brand relationships</b>					
Brand salience	718	0	3.96 (1.072)	1 = Strongly disagree	5 = Strongly agree
Brand performance	718	0	4.02 (0.967)	1 = Strongly disagree	5 = Strongly agree
Brand imagery	718	0	3.95 (1.043)	1 = Strongly disagree	5 = Strongly agree
<b>The top half of building brand relationships</b>					
Brand judgments	718	0	4.13 (0.931)	1 = Strongly disagree	5 = Strongly agree
Brand feelings	718	0	4.05 (1.016)	1 = Strongly disagree	5 = Strongly agree
Brand resonance 1	718	0	4.03 (1.006)	1 = Strongly disagree	5 = Strongly agree
Brand resonance 2	718	0	4.05 (1.024)	1 = Strongly disagree	5 = Strongly agree

Table 4. Descriptive statistics

## 6.2 Post evaluation

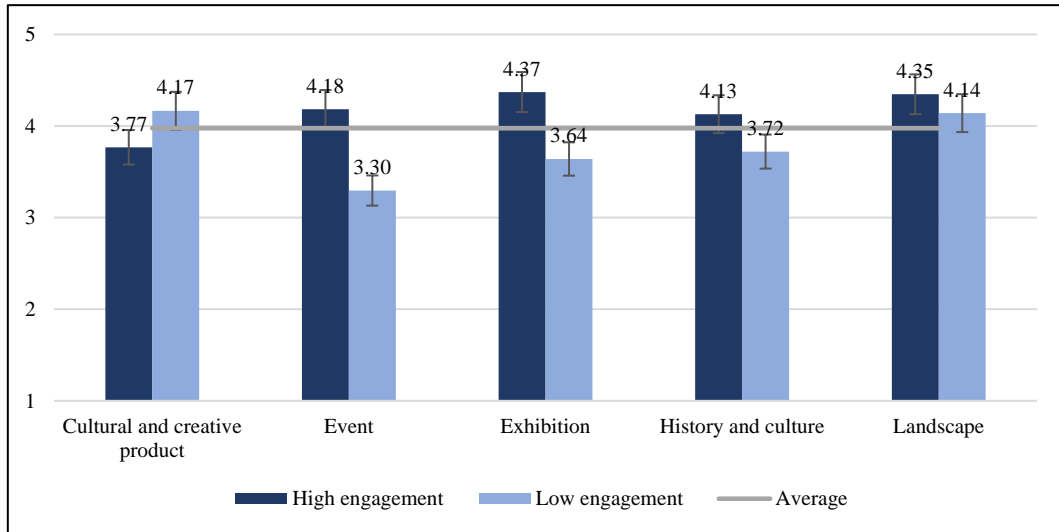
This part contains two charts which display the evaluation of the bottom half and top half of building brand relationships according to the feedback from the participants based on the ten sample posts. Table 5 includes a brief introduction to each post. This table includes the released time of the posts, the name of the posts, the ranking number, the category, and the engagement rate. The following charts summarise the results with the same order as this summary table.

Time	Name	Ranking	Category	Engagement rate
2018-11-09 11:00	CCP002	003	Cultural and creative product	0.091704
Information about launching a TV show which aims to promote cultural and creative products from the museum, it invited a few famous actors and actresses as hosts.				
2018-09-30 17:00	CCP058	506	Cultural and creative product	0.000030
Information about the new wallpapers for smart devices such as phones and laptops every month.				
2019-02-19 18:30	EVE002	009	Event	0.008679
Information about the event of the lightning show in Lantern Festival, this was the first time that the museum opened at night to the public as well as holding this kind of event.				
2018-06-01 17:30	EVE097	931	Event	0.000009
Information about an online painting competition among children on the children's day.				
2019-01-06 11:04	EXH001	061	Exhibition	0.000463
Information about the exhibition of celebrating Chinese New Year in the museum.				
2018-12-19 18:00	EXH128	673	Exhibition	0.000020
Information about the cooperation between the museum and HP, it is about the "V the Palace Museum" exhibition tours in the country.				
2018-11-22 17:00	HAC001	007	History and culture	0.021339
Pictures of antique chopsticks collections in the museum, it is a response regarding the Dolce & Gabbana racism issue.				
2018-03-12 10:30	HAC536	925	History and culture	0.000011
Information about a beast legend in an atlas book. It belongs to one of the regular posts every day with the hashtag #Let us read the calendar together#.				
2018-03-17 15:58	LDS001	010	Landscape	0.005772
Pictures of a snow scene in the museum.				
2018-10-08 14:47	LDS078	197	Landscape	0.000131
A picture about the scene in the museum for the date of cold dew (one of the 24 solar terms).				

Table 5. Sample post information



### *The bottom half of building brand relationships*



*Figure 9. Post evaluation results of the bottom half of building brand relationships*

Figure 9 is the chart of the received evaluation scores of ten sample posts in terms of the bottom half of building brand relationships. For the category of cultural and creative product, the post which had a high level of engagement gained a lower score (3.77) than the one of the low level of engagement (4.17). For the rest four categories, the posts with a high level of engagement had higher evaluation than the ones with a low level of engagement. Posts belong to the category of event had the biggest gap of 0.78 since the high engagement post gained 4.18, and low engagement post gained 3.30. For exhibition posts, the one with high engagement gained 4.37 which was highest among ten posts, the one with low engagement gained 3.64. For posts regarding history and culture. The one with high engagement gained 4.13, and the one with low engagement gained 3.72. The posts belong to the landscape have the lowest gap, and both of them are above average among ten posts. The one with high engagement got 4.35, the one with low engagement got 4.14 which is the highest among posts with a low level of engagement.

### *The top half of building brand relationships*

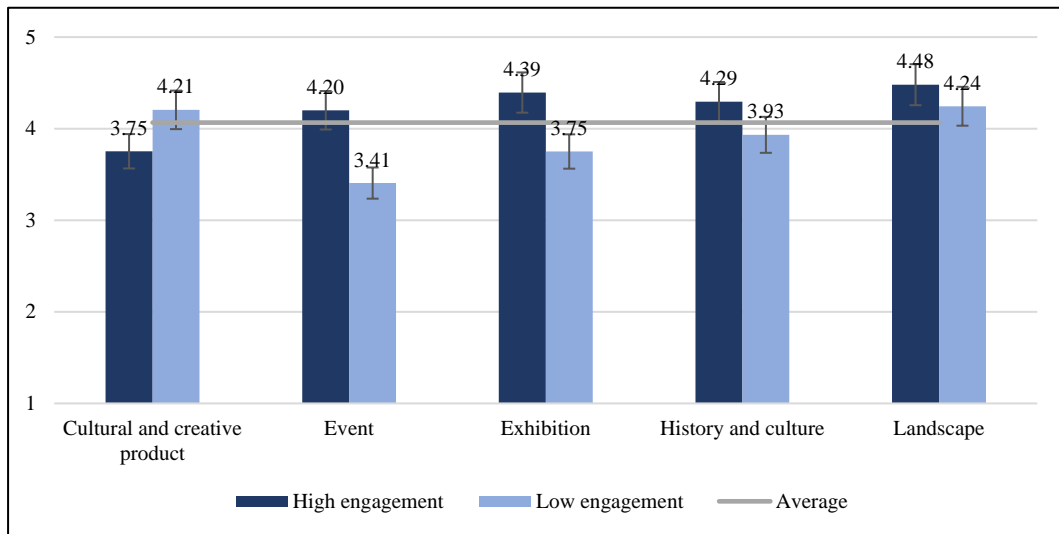


Figure 10. Post evaluation results of the top half of building brand relationships

Figure 10 is the chart of the received evaluation scores of ten sample posts related to the top half of building brand relationships. Two posts in the category of cultural and creative product, same as the outcomes in the bottom half, the post which had a high level of engagement received a lower score (3.75) than the one of a low level of engagement (4.21). This kind of situation did not show up in the rest four categories which posts with high engagement had better judgments from the online audience. The post with high engagement in the event category received 4.20 while the one with low engagement received 3.41, they have the biggest gap between high engagement post and low engagement post which is 0.79. For posts about exhibitions, the one with high engagement gained 4.39, the one with low engagement gained 3.75, they also have a big gap which was 0.64. Then for posts in the history and culture category, the one with high engagement got 4.29 while the one with low engagement gained 3.93. The category of landscape, both posts gained high evaluation due to the fact that they were again higher than the average score as in the bottom half. The one with high engagement gained 4.48 which is the highest among ten posts, and the one with low engagement gained 4.24 which ranked in the fourth among ten posts.

## 6.3 Hypotheses testing

This part contains SPSS multiple linear regression results of relations between dependent and independent variables in this relation. To begin with, a table of summarised hypotheses testing results provides an overview of research outcomes. Following are the results of influential factors on the bottom half of building brand relationships. Then are the results of influential factors on the top half of building brand relationships. Lastly, there is a comparison of the regression results on the bottom half and top half of building brand relationships.

### 6.3.1 Summary of hypotheses testing

Table 6 summarises the outcomes of hypotheses testing. There are ten hypotheses in total. It turns out that H1a, H1b, and H2b were not supported after analysing the data, while the rest hypotheses were supported.

Hypothesis	Results
H1a. Animate elements in post pictures will have a more positive impact on the bottom half of building brand relationships than inanimate elements.	Not supported
H1b. Animate elements in post pictures will have a more positive impact on the top half of building brand relationships than inanimate elements.	Not supported
H2a. Physical familiarity will have a positive effect on the bottom half of building brand relationships.	Supported
H2b. Physical familiarity will have a positive effect on the top half of building brand relationships.	Not supported
H2c. Social media familiarity will have a positive effect on the bottom half of building brand relationships.	Supported
H2d. Social media familiarity will have a positive effect on the top half of building brand relationships.	Supported
H3a. Age will have a negative impact on the bottom half of building brand relationships.	Supported
H3b. Age will have a negative impact on the top half of building brand relationships.	Supported
H3c. Education level will have a negative impact on the bottom half of building brand relationships.	Supported
H3d. Education level will have a negative impact on the top half of building brand relationships.	Supported

Table 6. Summary of hypotheses testing

### 6.3.2 Multiple linear regression results of the bottom half of building brand relationships

The bottom half of building brand relationships				
	B	Std. Error	t	Sig.
<b>(Constant)</b>	4.804	0.068	70.365	0.000
<b><i>Pictorial content dimension</i></b>				
<i>Animate</i>				
Animals	-0.230***	0.021	-10.876	0.000
Human figures	-0.248***	0.013	-19.765	0.000
Plants	-0.221***	0.029	-7.559	0.000
<i>Inanimate</i>				
Artefacts	0.063***	0.012	5.125	0.000
Buildings	0.179***	0.007	24.319	0.000
Calligraphies and paintings	0.234***	0.018	12.955	0.000
<b><i>Museum familiarity dimension</i></b>				
Physical familiarity	0.021**	0.007	3.024	0.003
Social media familiarity	-0.106***	0.006	-17.154	0.000
<b><i>Demographic dimension</i></b>				
Age	-0.011***	0.002	-6.448	0.000
Education level	-0.129***	0.015	-8.538	0.000

\* p < .05, \*\* p < .01, \*\*\* p < .001

Table 7. Relation of the bottom half of building brand relationships with pictorial content dimension, museum familiarity dimension and demographic dimension

Table 7 displays the results of multiple linear regression results when the bottom half of building brand relationships is the dependent variable. First, hypothesis 1a predicts that post pictures contain animate elements have a more positive impact on the bottom half of building brand relationships than inanimate elements. The B values for animate elements were negatively correlated with the bottom half of building brand relationships. For animals B was -0.230 (t = 10.876, p < 0.001), for human figures B value was -0.248 (t = -19.765, p < 0.001), for plants B value was -0.221 (t = -7.559, p < 0.001). While variables regarding inanimate elements were positively correlated. For artefacts B value was 0.063 (t = 12.955, p < 0.001), for buildings B value was 0.179 (t = 24.319, p < 0.001), for calligraphies and paintings B value was 0.234 (t = 12.955, p < 0.001). Thus, hypothesis 1a was not supported because animate elements had negative impacts, but inanimate elements had positive impacts on the bottom half of building brand relationships.

Secondly, hypothesis 2a predicts that museum physical familiarity has a positive impact on the bottom half of building brand relationships. The B value for physical familiarity which is also called the visit times on site was 0.021 (t = 3.024, p < 0.01). Therefore, hypothesis 2a was supported.

Thirdly, hypothesis 2c predicts that museum social media familiarity has a positive impact on the bottom half of building brand relationships. The B value for social media familiarity which stands for how frequently the audience check updates from the museum on social media was -0.106 ( $t = -17.154$ ,  $p < 0.001$ ). Due to the fact that the response scales were opposite when comparing the frequency of social media update notice (1 = every day, 5 = less than one month) and brand resonance statements (1 = Strongly disagree, 5 = Strongly agree), the hypothesis 2c was supported.

Fourthly, hypothesis 3a predicts that age has a negative impact on the bottom half of building brand relationships. The B value for age was -0.011 ( $t = -6.448$ ,  $p < 0.001$ ). Thus, this hypothesis was supported.

Fifthly, hypothesis 3c predicts that education level has a negative impact on the bottom half of building brand relationships. The B value for education level was -0.129 ( $t = -8.538$ ,  $p < 0.001$ ). Hence this hypothesis was supported.

### 6.3.3 Multiple linear regression results of the top half of building brand relationships

The top half of building brand relationships				
	B	Std. Error	t	Sig
(Constant)	5.193	0.070	74.129	0.000
<b>Content dimension</b>				
<i>Animate</i>				
Animals	-0.195***	0.022	-8.991	0.000
Human figures	-0.274***	0.013	-21.265	0.000
Plants	-0.289***	0.030	-9.618	0.000
<i>Inanimate</i>				
Artefacts	0.074***	0.013	5.877	0.000
Buildings	0.153***	0.008	20.277	0.000
Calligraphies and paintings	0.239***	0.019	12.898	0.000
<b>Museum familiarity dimension</b>				
Physical familiarity	0.012	0.007	1.597	0.110
Social media familiarity	-0.104***	0.006	-16.381	0.000
<b>Demographic dimension</b>				
Age	-0.016***	0.002	-9.533	0.000
Education level	-0.151***	0.016	-9.728	0.000

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 8. Relation of the top half of building brand relationships with pictorial content dimension, museum familiarity dimension and demographic dimension

Table 8 illustrates the results of multiple linear regression results when the top half of building brand relationships is the dependent variable. First, hypothesis 1b predicts that post pictures contain animate elements have a more positive impact on the top half of building brand relationships than inanimate elements. The B values for animate elements were negatively correlated as shown in the regression results. For animals, B value was -0.195 ( $t = -8.991$ ,  $p < 0.001$ ), for human figures, B value was -0.274 ( $t = -21.265$ ,  $p < 0.001$ ), and for plants B was -0.289 ( $t = -9.618$ ,  $p < 0.001$ ). The inanimate elements were positively correlated with the dependent variable. For artefact, B value was 0.074 ( $t = 5.877$ ,  $p < 0.001$ ), for buildings, B value was 0.153 ( $t = 20.277$ ,  $p < 0.001$ ), and for calligraphies and paintings, B value was 0.239 ( $t = 12.898$ ,  $p < 0.001$ ). Thus, the hypothesis 1b was not supported because animate elements all have negative impacts on the top half of brand building.

Secondly, hypothesis 2b predicts that museum physical familiarity has a positive impact on the top half of building brand relationships. The B value was 0.012 ( $t = 1.597$ ,  $p > 0.05$ ), which means the relationship is not statistically significant, and hypothesis 2b was not supported.

Thirdly, hypothesis 2d predicts that museum social media familiarity has a positive impact on the top half of building brand relationships. The B value was -0.104 ( $t = -16.381$ ,  $p < 0.001$ ). Thus, this hypothesis was supported due to the fact that scale measurement in the question of how frequently participants check updates is opposite to the brand resonance statements scales.

Fourthly, hypothesis 3b predicts that age has a negative impact on the top half of building brand relationships. The B value for age was -0.016 ( $t = -9.533$ ,  $p < 0.001$ ). Therefore, this hypothesis was supported.

Fifthly, hypothesis 3d predicts that education level has a negative impact on the top half of building brand relationships. The B value was -0.151 ( $t = -9.728$ ,  $p < 0.001$ ). Thus, this hypothesis was supported.

#### *6.3.4 A comparison of the bottom half and the top half of building brand relationships*

The potential effect of each independent variable changed to some extent in the top half of building brand relationships compared to the bottom half. In the pictorial content dimension, for the animate elements, B value was -0.230 (animals), -0.248 (human figures), and -0.221 (plants), the sum was -0.699. In the model of the top half,  $p < 0.001$ , B value was -0.195 (animals), -0.274 (human figures), and -0.289 (plants), the sum was -0.757. Thus, the animate elements had a higher level of negative effects on the top half of building brand relationships. For the inanimate elements, B value was 0.063 (artefacts), 0.179 (buildings), and 0.234 (calligraphies and paintings), the sum was 0.476. In the model of the top half,  $p < 0.001$ , B value changed to 0.074 (artefacts), 0.153 (buildings), and 0.239 (calligraphies and paintings), the sum was 0.466, the positive effect decreased. Then for inanimate elements, the positive influence on the top half is lower than on the bottom half of building brand relationships.

In the museum familiarity dimension, physical familiarity did not have a significant relation to the top half of building brand relationships anymore because  $p > 0.05$ . For social media familiarity, the p-value was smaller than 0.001 in both models, B was -0.106, it changed to -0.104 in the top half model. Since this variable measurement scale is opposite to the brand resonance element measurement scale, it should be understood as the positive effect of this variable decreased.

In the demographic dimension, for age, the p-value was smaller than 0.001 in both models, B value was -0.011, then B was -0.016 in the top half model. For the education level, the p-value was smaller than 0.001 in both models, B value was -0.129 in the bottom half, and B value was -0.151 in the top half. Which could be understood as older people and people with higher education background, it is more difficult to cultivate an intense relationship with them compared to younger people and people with lower education level.

This chapter summarised the results of data analysis in three parts, descriptive statistics, post evaluation results, and hypotheses testing results. The next chapter discusses those findings regarding knowledge from previous research and theories.

# Chapter 7 Discussion

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This chapter reviews the outcomes of data analysis and has a discussion about them. Perceptions of sample posts from the online audience let us know what kind of posts the online audience preferred and made them generate a sense of resonance. The influential factors on building brand relationships are illustrated afterwards, including pictorial content factors, museum familiarity factors, and demographic factors. Then these discussions can initiate reflection about what kinds of factors should be noticed during the process of cultivating brand relationships in social media communication for museums.

## **7.1 Perceptions of sample posts from the online audience**

Posts in the same category with different engagement performance can help us to understand more about the effects that they brought to the audience. Notably, when investigating the posts in the same category, four kinds of categories had the same rule, which was the post with higher engagement gained more positive feedback from the audience than the one with lower engagement. Only one category showed different results, which is the cultural and creative product category. The post with high engagement got lower scores than the one with low engagement. Since it is a promotional post regarding the TV show, it involved other elements such as commercials and stars. As found in the comments under this post, many commenters were the supporters of the actors and actresses, this means that for these people, their motivation to interact with the museum was not mainly for the museum but the stars. Moreover, if the audience did not watch this TV show before, then they could not link it very well to the museum. However, for the one with low engagement, it is a post regarding the monthly update of free wallpapers for smart devices. These wallpapers contain pure classical and historical elements which are designed based on art collections and cultural relics. Even though it did not gain many likes,



shares and comments, the ancient style outputs could make people feel connected to history and culture related to the museum explicitly.

The posts in the event category had the biggest gap in the two stages of building brand relationships. The one with a low level of engagement is about an online competition of children's drawing of the Palace Museum. As mentioned, most of the participants aged younger than 25, then people at this age mostly do not have much interest in this kind of event. Thus, compared to the one of high popularity—about the lightning show and with no restriction of attendance, this post did not generate much sense of resonance because it aimed to a small group of the museum online audience.

In addition, posts in the exhibition category showed the second biggest gap after the event category. The one with a low level of engagement is an announcement of the cooperation with HP Company for an upcoming exhibition tour in the country. Compare to the one with a high level of engagement—about the celebrating Chinese New Year exhibition that full of classical and traditional culture attractions, this post offered information that is primarily about business cooperation. Again, this result also revealed that the audience's preference for historical content from the museum.

Regarding the category of history and culture, this is the category that is posted the most by the museum. Two posts gained different evaluations from the online audience. The one with a low level of engagement belongs to the posts which are posted every day and about read the calendar together with simple history and culture knowledge. On the contrary, the one with a high level of engagement which was about an incident concerned the racism issue of Dolce & Gabbana gained high scores. This post gained high evaluation which means it made people generate resonance feelings as well as a good impression on the museum when they saw the antique chopsticks. To a certain extent, this post provided people with culture confidence while against discrimination.

Another finding that is worth noticing is two posts about the landscape all had scores above the average of ten posts in both bottom and top half of building brand relationships. The buildings in the Palace Museum are also precious treasures to the public as they have a long history and are preserved well during these years. This can be seen that most participants liked the pictures about the landscape in the museum and they were reminded a lot about the museum when they saw these pictures.

## **7.2 Influential factors on building brand relationships**

There are no shortcuts in building a brand (Keller, 2013, p.125). The brand resonance model can help us to interpret what the online audience have acknowledged, felt, seen, and heard about the brand which is about the sense in the audience's minds (Keller, 2001). Brand building efforts should be taken step by step in order to cultivate brand resonance carefully among the online audience towards the museum (Keller, 2001). The brand resonance model provides six blocks that show the path of reaching significant brand equity from the bottom to the top (Keller, 2013). Brand salience, brand performance, and brand imagery mean to what extent the online audience associate the brand identity and brand meaning in their minds through their experiences of tangible and intangible offerings from the brand (Keller, 2009). Brand judgments, brand feelings, and brand resonance then enable us to explore what kind of response that the online audience gave to the museum, and how intense their relationship with the museum is (Keller, 2009).

Factors which were found to have an impact on the brand building process are keys to answer the research questions in this study. To learn how they influence the online audience's attitude towards the brand is crucial for us. Then the reflections gained from the results can be useful for museums to think further about improving their online communication as well as brand relationships management. The following are discussions about the relationship between factors under three dimensions and building brand relationships.

### ***7.2.1 Pictorial content factors***

Museums should take the online audience's tastes while designing communication strategies (Mahony et al., 2017). The results of animate elements and inanimate elements revealed an opposite influence on brand relationships management. Three animate elements (animals, human figures, and plants) had negative impacts on the bottom and top half of building brand relationships. Three inanimate elements (artefacts, buildings, and calligraphies and paintings) had positive impacts on the bottom and top half of building brand relationships. Artefacts, calligraphies and paintings are the historical collections, and buildings are the museum itself. All of them are invaluable to society and they have educational values, and they can stimulate

the audience to have feelings of resonance regarding culture. Thus, it can be understood as those inanimate elements in post pictures can help to improve the museum image in the online audience's mind, but too many animate elements in pictures make the link between the online audience and the museum weak. Notably, social media can help museums to spread the knowledge of their collections by setting up and sustaining the cultural dialogue with their audiences (Russo, 2012). Considering the fact that posts about history and culture gained the highest votes among the participants. These results suggest that social media content regarding history and culture is helpful for museums to build relationships with online audiences. Especially the historical elements regarding the museum itself.

Moreover, a comparison of the animate elements and inanimate elements revealed their varied impacts on the bottom half and the top half of building brand relationships. For animate elements, their negative impact became bigger which meant more animate elements, less top half of building brand relationships developed. For inanimate elements, the positive impact became smaller on the top part than its impact on the bottom part. The top half of building brand relationships is harder to improve by adding inanimate elements in post pictures than the bottom half of building brand relationships. In fact, the top half as the higher level of reaching significant brand equity stands for cultivating responses and resonance with the audience. This part differs from the bottom one since it requires the audience to take reactions voluntarily to the brand based on their personal opinions and emotional bonding. While the bottom part stands for connecting the brand identity and meaning with the museum (Keller, 2013). When it comes to the question of choosing the judgments, feelings, and resonance, for those who are not in a close relationship with the museum, their choice will not be the same as those who feel close to the museum. Then the influence of elements in post pictures became less relevant to their choice of taking further actions.

### ***7.2.2 Museum familiarity factors***

To increase the attention from the audience, museums should be creative both virtually and physically, however, this cannot leave out the information that they gain through the conversation and interaction with their audience (Camarero et al., 2016). The results of museum familiarity showed that both physical and virtual familiarity

had a positive impact on the bottom half of building brand relationships. People who actively check the museum updates on social media, more often they pay attention to the museum, more positive attitude they have with the museum. Regarding the physical familiarity, people who visited the museum more tend to have a better connection with the museum brand identity and meaning. Yet when it came to the results in the top building brand relationships, the physical familiarity turned out to be irrelevant, while social media familiarity still had a positive impact.

Features of social media require museums to offer more personalised and interactive communication content during the process of maintaining relationships with their online audiences (Fletcher et al., 2012). In other words, designing appropriate communication strategies becomes the key to keep the audiences active in the relationship, otherwise they may not follow up anymore. Especially when the questions are about the audience evaluation of their feelings and opinions about the museum based on those posts. The positive impact on brand relationships became bigger when the audience check the updates more often. If the social media content is not appealing to them, they might check the updates less often. This would not be helpful to cultivate their emotional bonding with the museum.

The potential of social media should not be overlooked since it can help to enhance the brand image, and it can also make people more positive towards the brand because it is a platform which let brands to offer values and experience to their target group (Coursaris et al., 2016). Especially for museums, social media can help them to increase engagement, reach more audiences, and make the relationship closer (Lotina & Lepik, 2015; Pett, 2012). Comparing the impact of social media familiarity in the bottom half and the top half of building brand relationships, the positive effect size became a bit smaller in the top half than the bottom half. Again, to reach the top half of building brand relationships is harder than the bottom one as this part required more intense feelings in the audience's mind. Nevertheless, it is apparent that social media familiarity had a positive influence on the relationship building overall due to the fact that physical familiarity is no longer influential when it came to a higher level of building brand relationships.

### *7.2.3 Demographic factors*

According to the results, age had a negative influence on the bottom half and top half of building brand relationships. Thus, it could be understood that younger people had a more positive attitude towards the museum, while older people had a less positive attitude. In other words, people of different ages have different thoughts and opinions. In addition, education level also had a negative impact on the bottom half and top half of building brand relationships. This told us that people who had a lower level of education had a more positive attitude towards the museum, while those with a higher education background had a less positive attitude. In the survey, the lowest education level is secondary school or less, while the highest is postgraduate degree. Moreover, these two levels had a gap in their knowledge as well as the age. People who had higher degree usually are older than those with a secondary education. Still, it is valuable to notice the fact that education level had a negative effect on building brand relationships.

Delivering their intangible and tangible heritage values to the society is one of the key missions of museums (ICOM, 2007). When analysing the effect size in the bottom half and top half of building brand relationships, it was clear that both age and education level had a higher negative effect size on the top half part than the bottom half part. Same as the other two dimensions, the demographic dimension revealed that it became more difficult for museums to stimulate active responses and reactions from the audience. Therefore, in order to achieve an active and loyal relationship with the online audience with various demographic background, investigation on the preferences of people of different ages and education levels is crucial for museums. On the one hand, they should consider older peoples' opinions. On the other hand, they should also consider higher education groups' opinions.

This chapter discussed the results and pinpointed some important aspects which should be taken into consideration during the process of building up and maintaining the brand relationships between the museum and their online audience. Next chapter concludes and illustrates the contributions, limitations, as well as suggestions for future research.

# Chapter 8 Conclusion

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This chapter focuses on the contribution of this research to the field of communication, primarily about the knowledge of museum branding on social media. In addition, the limitations and suggestions for future research are included.

## 8.1 Contributions

Cultivating brand relationships with the online audience on social media in the museum context is the major topic of this research. As addressed, the problem of receiving a low level of engagement from the online audience could not help to develop the relationships. To offer a deep understanding of how social media communication influences the perceptions of the museum from the online audience. Also for reaching the aim of this study which is to find out the influential factors on building brand relationships between the online audience and museum, especially with local young people. The Palace Museum in Beijing was taken as the case study in this research. Based on the qualitative analysis of posts in the past year from the Palace Museum on Weibo, as well as quantitative analysis which concerned about an online survey to people who were followers of the Palace Museum and a post picture rating. This research found several important points that can be useful for other history museums to apply to their communication practices.

To communicate the memories of humanity collections to the online audience. The issues of how to improve brand relationships with the online audience by utilising the values and functions of social media are crucial for museums. First, museums should be careful about posts that contain too many non-museum elements. A high engagement level on social media does not ensure brand relationships will be enhanced. People who are museum lovers prefer posts which let them know more about history and culture. Secondly, museums are a special type of organisation. Animate elements in the post pictures do not help to make the perception of the audience toward the museum better compared to inanimate elements, on the

contrary, the animate elements had negative impacts. This is also correlated with the first point that people like historical objects such as artefacts, buildings, calligraphies and paintings which had positive impacts on the relationship building. Thirdly, from a long-term perspective, it is problematic to lose attention from the audience on social media. People who checked the update less had a lower connection to the museum than who actively paid attention to the museum. Thus, museums should focus more on improving the dynamics of their conversation with the online audience. However, it does not mean physical familiarity is no longer significant since it had a positive impact on the stage of establishing branding identity and meanings. Both physical and virtual experience offered to the audience is important to elaborate. Fourthly, the demographic information of the target audience should also be taken into consideration. Especially for people of different ages and education levels since their attitudes were not the same. This implies that museums should consider personal background when designing communication strategies in order to improve their social sustainability and recognition. Fifthly, the increased negative impact and the decreased positive impact from those influential factors revealed that it is harder to reach the top of the brand resonance pyramid. This requires museums to be creative and considerate more aspects to cultivate stronger brand relationships as well as achieve a high level of brand equity. Then the audience are more motivated to learn more about the museum and actively seek chances to interact with the museum.

We gain insights when we learn about the past. For history museums, designing communication strategies based on the consideration of the audience perspective is crucial for them to develop their social network in the virtual world. These findings in this study not only have meaningful contributions to museum communication but also to the field of strategic communication. On the one hand, both brand communication and social media communication are key aspects of strategic communication. On the other hand, these results provide us with a complete picture of fulfilling the research aim defined by the research questions which concerned about the investigation of improving the brand relationships on social media in the museum context.

## **8.2 Limitations and future research**

The limitations and suggestions for future study have six points. First, influential factors in this research included three dimensions. More possibilities can be examined whether other factors may influence the process of building brand relationships. Secondly, this study focused on a big museum and local young people, future research can implement research in smaller museums as well as target people of different age and also investigate the perceptions from the international visitors. Thirdly, a single case study was applied in this research. Future research can involve multiple museums and make comparisons between them. Fourthly, this research focuses on the type of history museums. Future research can emphasise other types of museums, such as museums of science and technology. Fifthly, this research took ten sample posts in the study, future research may consider involving more kinds of posts to bring up other insights into the content evaluation. Lastly, this study did not test each element in the brand resonance model separately. Thus, future research can examine the impact of the six elements separately in this area.

## **8.3 Concluding remarks**

During the research process, learning how the online audience think about the museum posts brought the importance of a few factors. Promoting knowledge of human history and culture is the most significant value that history museums contribute to the society. To make people have interests in those “memories” and be active in the relationship with the museum are the keys to the branding in the museum context. These cannot be achieved without thoughtful considerations of the post content design, the online audience’s customs, preference, and demographic backgrounds. These are essential aspects to be combined into practical implications in the virtual world.



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# Appendix

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## Appendix 1 Thesis survey

### The Palace Museum social media communication survey

Hi, thank you very much for participating. We are interested in learning your attitudes about the posts (both pictures and texts) from the Palace Museum, so the goal of this survey is to collect your opinions about a few related posts (ten posts in total, from @The Palace Museum). It should take around 5 minutes to complete.

The data is collected only for Lund University Strategic Communication thesis purpose. Participation in this survey is completely voluntary and it does not include any personally identifiable information. All the answers you provided are anonymous and will be kept in strict confidentiality.

\*Required

1. **By clicking "Agree" below you consent to participate in this research, and you confirm that you are more than 18 years old.**

*Tick all that apply.*

Agree

2. **Have many times have you visited the Palace Museum? \***

*Mark only one oval.*

- 0  
 1  
 2  
 3  
 More than 3 times

3. **How often do you use Weibo?**

*Mark only one oval.*

- Everyday  
 Several times a week  
 Once a week  
 Several times a month  
 Once a month or less

4. **How often do you pay attention to the updates of the Palace Museum on Weibo?**

*Mark only one oval.*

- Everyday  
 Several times a week  
 Once a week  
 Several times a month  
 Once a month or less

5. Please describe your opinions about the following post 01/10 \*

HAC536 #Let us read calendar together# The reign of Emperor Qianlong in Qing Dynasty, the page of Jiao in the <Beast Atlas> produced by Sheng Yu and Weibang Zhang. It is said that Jiao comes from Mountain Yu, where the residence of West Queen. It represents lucky, in which country it appears, it will make the country produce good harvests. The <Beast Atlas> describes it as "body and voice as dogs but owns leopard print, horns as the herd, if see it then the country will gain bumper harvest".



故宫博物院



2018-3-12 10:30 来自 微博 weibo.com

#让我们一起来读日历#清乾隆，余省、张为邦，兽谱图册之狡页。传说狡来自于玉山，即西王母所居地，是吉祥兽，它在哪个国家出现就会使该国家五谷丰登。《兽谱》记它“形与声皆如犬而豹文（纹），角如牛，见则其国大穰”。



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Please describe your opinions about the following post 02/10 \*

EVE002 "My name is the Forbidden City, I am turning into 600 years old (in 2020). I am always losing myself in the night of Lantern Festival in such a long time. The moonlight on the multiple eaves, it used to shine the Palace of the ancients; the stretching lights on the city wall reflects the magnificence of the turret. Tonight, a group of museum people will light me up. I am in the centre of Beijing. I will devote the view of a spectacular city to you, your family and friends."



故宫博物院

2月19日 18:30 来自 微博 weibo.com

“我的名字叫紫禁城，快要600岁了，这上元的夜啊，总是让我沉醉，这么久了却从未停止。重檐之上的月光，曾照进古人的宫殿；城墙上绵延的灯彩，映出了角楼的瑰丽。今夜，一群博物馆人将我点亮，我在北京的中央，献给团圆的你们，一座壮观的城。”



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Please describe your opinions about the following post 03/10 \*

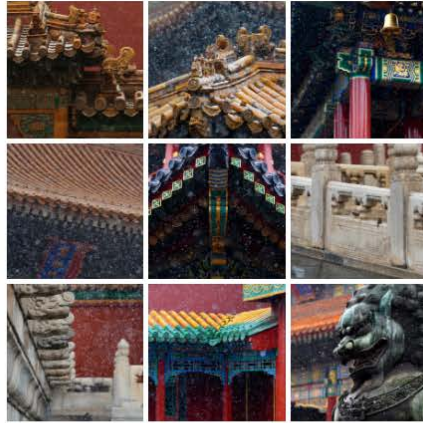
LDS001 #The first snow in the Forbidden City# Spring snow dropping throughout the sky.



故宫博物院

2018-3-17 15:58

#紫禁城的初雪# 春雪满空来



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



8. Please describe your opinions about the following post 04/10 \*

EXH001 On January 6th, 2019 (the first day of the first lunar month), "Celebrating the Spring Festival in the Forbidden City" exhibition opened in the galleries atop the Meridian Gate. This exhibition is divided into two parts: the cultural relics exhibition and situational experience. To present a Forbidden city full of feelings of New Year, with record-breaking collection of nearly 1,000 pieces of cultural relics, and also restoring the decoration of New Year celebration which were used in the former days in the palace, such as longevity lanterns, heavenly lanterns, images of guardian gods, auspicious poetic couplets and so on. Afterwards, a few other exhibitions are coming soon, for instance, "Celebrating New Year in the palace" digital immersion experience exhibition, "China's time-honoured New Year celebration exhibition", etc. These exhibitions will be not charged separately, and it is free to visit with the admission ticket of the museum. The exhibition will last until April 7th (the third day of the third lunar month).



故宫博物院

1月6日 11:04 来自 微博 weibo.com 已编辑

2019年1月6日（腊月初一），“贺岁迎祥——#紫禁城里过大年#”展览在故宫博物院午门展厅开幕。展览分为文物展览和实景体验两部分，以破纪录的近千件文物，恢复万寿灯、天灯、门神、对联等多种昔日皇宫过年的装饰、活动，为观众呈现一个充满年味的紫禁城。随后，还将有“宫里过大年”数字沉浸体验展、“中华老字号故宫过大年”展等分展区陆续开放，敬请期待！本展览不单独收费，凭故宫博物院门票免费参观，展期将持续至4月7日（三月初三）。



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Please describe your opinions about the following post 05/10 \*

EVE097 Today is Children's day, wish every child a happy festival! The second "Forbidden City in my heart" online painting competition started today! No matter it is architecture, treasures, people, or... a big monster hidden in a parallel world, give the best play of your imagination, pick up your paintbrush and contribute your painting to us! For the details of this competition, please click this web page → Link



故宫博物院

2018-6-1 17:30 来自 微博 weibo.com

今天是六一儿童节，祝小朋友们节日快乐！第二届“我心中的紫禁城”网络绘画大赛今天也开赛啦！不管是建筑、珍宝、人物或者.....藏在平行世界中的大怪兽，尽情挥洒你的想象力，拿起画笔给我们投稿吧！大赛详情戳→ [网页链接](#)



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Please describe your opinions about the following post 06/10 \*

EXH128 The Palace Museum and China Hewlett-Packard Co., Ltd. @HP Computer reached cooperation, both sides signed the < "V the Palace Museum" exhibition cooperation framework agreement>, and it will open the "V the Palace Museum" exhibition tours in the country. Many virtual reality works from the Palace Museum will be combined with HP's VR hardware device solution plans to go nationwide and bring exciting immersive digital palace museum experience to more audience!



故宫博物院

2018-12-19 18:00 来自 微博 weibo.com

故宫博物院和中国惠普有限公司@惠普电脑 达成合作，双方签署《“V故宫”巡展合作框架协议》，并将在2019年开启全国范围内的“#V故宫#”巡展活动。来自故宫的诸多虚拟现实作品将与惠普提供的VR硬件设备解决方案结合，走向全国，为更多观众带来精彩的沉浸式数字故宫体验!



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Please describe your opinions about the following post 07/10 \*

CCP058 #The Forbidden City elegant collection# The wallpaper of October 2018 is coming~ No watermark, various size for different types of devices, please go to the official website of the Palace Museum to download them~ → Link



故宫博物院

2018-9-30 17:00 来自 微博 weibo.com

#紫禁雅集#2018年10月份的壁纸来啦~无水印, 各种尺寸, 适合各种终端, 快去故宫官网下载吧~ [网页链接](#)



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Aagree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

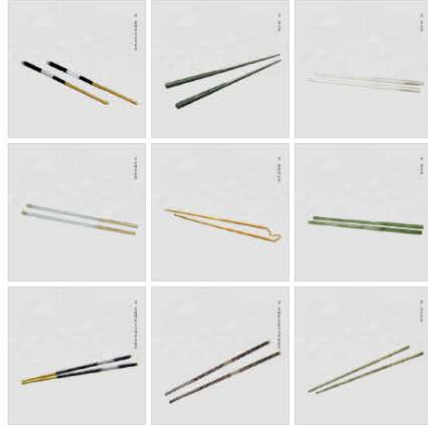
12. Please describe your opinions about the following post 08/10 \*  
 HAC001 #Chopsticks in China# Every pair of chopsticks is not simple.



故宫博物院

2018-11-22 17:00 来自 微博 weibo.com

#中国的筷子#, 每一双, 都不简单。



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Please describe your opinions about the following post 09/10 \*

LDS078 #Fall in love with this city# October 8th, cold dew. "The condensed light fell like cold dew, and I stood at the highest point of the mountain at the moment." The autumn is getting stronger, come to the Palace Museum to climb the city wall and enjoy the autumn days.



故宫博物院

2018-10-8 14:47

爱上这座城 十月八日，寒露。“凝光悠悠寒露坠，此时立在最高山。”秋意渐浓，来故宫登城墙，赏秋色吧！



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Please describe your opinions about the following post 10/10 \*

CCP002 The cultural seasonal TV show produced by the Palace Museum, Beijing TV station, and Hwachain culture #New Arrival, the Palace Museum# will begin the broadcasting tonight at 9:15 pm in Beijing Satellite TV and iQIYI which owns online exclusive right of broadcasting. The Palace Museum cultural and creative product developers @Lun Deng @Yiwei Zhou and @Shaofen Cai will unlock the fascinating history of the Forbidden City through going between the past and present. What kind of inspiration will they collide with the museum? Please also looking forward to the first show of the palace cat Luban as well!



故宫博物院

2018-11-9 11:00 来自 微博 weibo.com 已编辑

由故宫博物院和北京电视台出品、华传文化联合出品的大型文化季播节目#上新了故宫#将在 今晚21点05分北京卫视盛大首播，爱奇艺网络独播。故宫文创新品开发员@邓伦 @周一围 携手@蔡少芬 穿梭古今，解锁令人神往的紫禁城历史。他们会与故宫碰撞出怎样的灵感涟漪？也期待宫猫鲁班的@上新了故宫 节目首秀！



Mark only one oval per row.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
The characteristics of the Palace Museum comes to my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post offers useful information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think the Palace Museum has a different image from other museums.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel good about the Palace Museum overall.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me feel confident about Chinese culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me think that the Palace Museum is the museum that I prefer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This post makes me want to learn more about the Palace Museum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. What post content do you prefer the most?

Mark only one oval.

- Cultural and creative products
- Events
- Exhibitions
- History and culture knowledge
- Landscape
- Others

16. **Gender\***

*Mark only one oval.*

Male

Female

17. Age \*

Mark only one oval.

- 2001
- 2000
- 1999
- 1998
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- 1921
- 1920
- 1919

18. **Highest level of education \***

*Mark only one oval.*

- Secondary school or less
- College degree
- Bachelor degree
- Postgraduate degree

**Thank you for your participation!**

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 Google Forms

## Appendix 2 Post picture rating

### The Palace Museum post picture rating

\*Required

1. 01/10 consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURES? \*

CCP002 The cultural seasonal TV show produced by the Palace Museum, Beijing TV station, and Hwachain culture #New Amival, the Palace Museum# will begin the broadcasting tonight at 9:15 pm in Beijing Satellite TV and iQIYI which owns online exclusive right of broadcasting. The Palace Museum cultural and creative product developers @Lun Deng @Yiwei Zhou and @Shaofen Cai will unlock the fascinating history of the Forbidden City through going between the past and present. What kind of inspiration will they collide with the museum? Please also looking forward to the first show of the palace cat Luban as well!



故宫博物院

2018-11-9 11:00 来自 微博 weibo.com 已编辑

由故宫博物院和北京电视台出品、华传文化联合出品的大型文化季播节目#上新了故宫#将在 今晚21点05分北京卫视盛大首播，爱奇艺网络独播。故宫文创新品开发员@邓伦 @周一围 携手@蔡少芬 穿梭古今，解锁令人神往的紫禁城历史。他们会与故宫碰撞出怎样的灵感涟漪？也期待宫猫鲁班的@上新了故宫 节目首秀！



Mark only one oval per row.

	0: Completely absent	1	2	3	4: Prominently present
Ancient elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palace elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. 02/10 consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURES? \*

CCP058 #The Forbidden City elegant collection# The wallpaper of October 2018 is coming~ No watermark, various size for different types of devices, please go to the official website of the Palace Museum to download them~ → Link



故宫博物院

2018-9-30 17:00 来自 微博 weibo.com

#紫禁雅集#2018年10月份的壁纸来啦~无水印, 各种尺寸, 适合各种终端, 快去故宫官网下载吧~ [网页链接](#)



Mark only one oval per row.

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Ancient elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palace elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. 03/10 consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURES? \*

EVE002 "My name is the Forbidden City, I am turning into 600 years old (in 2020). I am always losing myself in the night of Lantern Festival in such a long time. The moonlight on the multiple eaves, it used to shine the Palace of the ancients; the stretching lights on the city wall reflects the magnificence of the turret. Tonight, a group of museum people will light me up. I am in the centre of Beijing. I will devote the view of a spectacular city to you, your family and friends."



故宫博物院

2月19日 18:30 来自 微博 weibo.com

“我的名字叫紫禁城，快要600岁了，这上元的夜啊，总是让我沉醉，这么久了却从未停止。重檐之上的月光，曾照进古人的宫殿；城墙上绵延的灯彩，映出了角楼的瑰丽。今夜，一群博物馆人将我点亮，我在北京的中央，献给团圆的你们，一座壮观的城。”



Mark only one oval per row.

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Ancient elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palace elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. 04/10 consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURE? \*

EVE097 Today is Children's day, wish every child a happy festival! The second "Forbidden City in my heart" online painting competition started today! No matter it is architecture, treasures, people, or...a big monster hidden in a parallel world, give the best play of your imagination, pick up your paintbrush and contribute your painting to us! For the details of this competition, please click this web page → Link



故宫博物院

2018-6-1 17:30 来自 微博 weibo.com

今天是六一儿童节，祝小朋友们节日快乐！第二届“我心中的紫禁城”网络绘画大赛今天也开赛啦！不管是建筑、珍宝、人物或者.....藏在平行世界中的大怪兽，尽情挥洒你的想象力，拿起画笔给我们投稿吧！大赛详情戳→ [网页链接](#)



Mark *only one oval per row*.

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Ancient elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palace elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. 05/10 consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURES? \*

EXH001 On January 6th, 2019 (the first day of the first lunar month), "Celebrating the Spring Festival in the Forbidden City" exhibition opened in the galleries atop the Meridian Gate. This exhibition is divided into two parts: the cultural relics exhibition and situational experience. To present a Forbidden city full of feelings of New Year, with record-breaking collection of nearly 1,000 pieces of cultural relics, and also restoring the decoration of New Year celebration which were used in the former days in the palace, such as longevity lanterns, heavenly lanterns, images of guardian gods, auspicious poetic couplets and so on. Afterwards, a few other exhibitions are coming soon, for instance, "Celebrating New Year in the palace" digital immersion experience exhibition, "China's time-honoured New Year celebration exhibition", etc. These exhibitions will be not charged separately, and it is free to visit with the admission ticket of the museum. The exhibition will last until April 7th (the third day of the third lunar month).



故宫博物院

1月6日 11:04 来自 微博 weibo.com 已编辑

2019年1月6日（腊月初一），“贺岁迎祥——#紫禁城里过大年#”展览在故宫博物院午门展厅开幕。展览分为文物展览和实景体验两部分，以破纪录的近千件文物，恢复万寿灯、天灯、门神、对联等多种昔日皇官过年的装饰、活动，为观众呈现一个充满年味的紫禁城。随后，还将有“宫里过大年”数字沉浸体验展、“中华老字号故宫过大年”展等分展区陆续开放，敬请期待！本展览不单独收费，凭故宫博物院门票免费参观，展期将持续至4月7日（三月初三）。



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Ancient elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palace elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



6. **06/10** consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURE? \*

EXH128 The Palace Museum and China Hewlett-Packard Co., Ltd. @HP Computer reached cooperation, both sides signed the < "V the Palace Museum" exhibition cooperation framework agreement>, and it will open the "V the Palace Museum" exhibition tours in the country. Many virtual reality works from the Palace Museum will be combined with HP's VR hardware device solution plans to go nationwide and bring exciting immersive digital palace museum experience to more audience!



故宫博物院

2018-12-19 18:00 来自 微博 weibo.com

故宫博物院和中国惠普有限公司@惠普电脑 达成合作, 双方签署《“V故宫”巡展合作框架协议》, 并将在2019年开启全国范围内的“#V故宫#”巡展活动。来自故宫的诸多虚拟现实作品将与惠普提供的VR硬件设备解决方案结合, 走向全国, 为更多观众带来精彩的沉浸式数字故宫体验!



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Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palace elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



7. 07/10 consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURES? \*

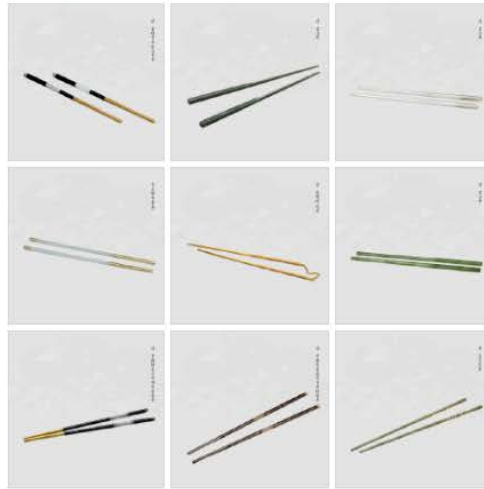
HAC001 #Chopsticks in China# Every pair of chopsticks is not simple.



故宫博物院

2018-11-22 17:00 来自 微博 weibo.com

#中国的筷子#, 每一双, 都不简单。



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Ancient elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palace elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. 08/10 consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURE? \*

HAC536 #Let us read calendar together# The reign of Emperor Qianlong in Qing Dynasty, the page of Jiao in the <Beast Atlas> produced by Sheng Yu and Weibang Zhang. It is said that Jiao comes from Mountain Yu, where the residence of West Queen. It represents lucky, in which country it appears, it will make the country produce good harvests. The <Beast Atlas> describes it as "body and voice as dogs but owns leopard print, horns as the herd, if see it then the country will gain bumper harvest".



故宫博物院



2018-3-12 10:30 来自 微博 weibo.com

#让我们一起来读日历#清乾隆，余省、张为邦，兽谱图册之狡页。传说狡来自于玉山，即西王母所居地，是吉祥兽，它在哪个国家出现就会使该国家五谷丰登。《兽谱》记它“形与声皆如犬而豹文（纹），角如牛，见则其国大穰”。






Mark only one oval per row

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Ancient elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Palace elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

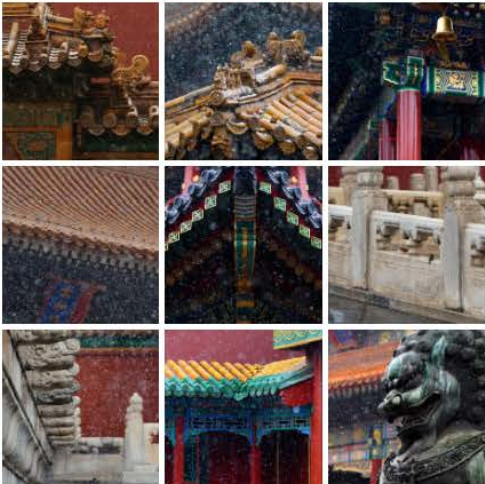
9. 09/10 consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURES? \*

LDS001 #The first snow in the Forbidden City# Spring snow dropping throughout the sky.


**故宫博物院**  


2018-3-17 15:58

#紫禁城的初雪# 春雪满空来 ❄️❄️❄️



Mark only one oval per row.

	0: Completely absent	1	2	3	4: Prominently present
Ancient elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. 10/10 consider the PICTORIAL content of the post below, to what extent are the following content categories present in the post PICTURE? \*

LDS078 #Fall in love with this city# October 8th, cold dew. "The condensed light fell like cold dew, and I stood at the highest point of the mountain at the moment." The autumn is getting stronger, come to the Palace Museum to climb the city wall and enjoy the autumn days.



故宫博物院

2018-10-8 14:47

爱上这座城 十月八日，寒露。“凝光悠悠寒露坠，此时立在最高山。”秋意渐浓，来故宫登城墙，赏秋色吧！



Mark only one oval per row.

	0: Completely absent	1	2	3	4: Prominently present
Ancient elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modern elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Artefacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calligraphies and paintings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human figures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Thank you for your participation!**

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