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Assessing Public Opinion at the White Tower



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Abstract

The Royal Armouries at HM Tower of London recently redesigned its displays within the White Tower. They wished for an assessment of public opinion regarding the new exhibits. Visitors and staff were surveyed in order to assess whether the Royal Armouries was creating the ultimate visitor experience at the White Tower. The assessment of visitor opinion was successfully completed and areas for possible future enhancement were identified.

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1.0 Executive Summary

As part of their objective to enhance the White Tower for the visiting public, the Royal Armouries wished for us to assess the public's opinion of the White Tower. Our primary goal was to assess the opinion of the visitors to the White Tower in order to offer the Royal Armouries possible areas for continued enhancement. After carefully reviewing the policies of the Royal Armouries and Historic Royal Palaces, investigating museum techniques, visitor satisfaction, and survey techniques, we conducted a survey of the White Tower visitors.

From the four hundred forty-nine people we attempted to survey, we obtained three hundred and two surveys from which we were able to draw data and assess the public's opinion. Of the remaining one hundred forty-nine people, two individuals being surveyed took the clipboard from us to fill out the survey themselves. This survey technique was inconsistent with the other surveys and therefore these two became invalid. The one hundred forty-seven refusals we obtained were mostly due to a language barrier and visitors who did not have enough time to answer our questions. Although these individual represent less than one fifth of our total sample, the questions raised by this language barrier became an important aspect of our project.

Most visitors come to the Tower of London because it is a famous and historic site and to see the Crown Jewels. We also found that many came because they had a general interest in history and architecture or were at the Tower for their children. Many visitors took some form of tour at the Tower and we found that more visitors tended to be planning on taking a tour if they were interviewed in the morning whereas if they were interviewed in the afternoon they had already been on a tour. More than half of our visitors were from the United States, the United Kingdom, and the European Union. We had a higher number of people with English as their first language than we had originally expected, but we also had a

high number of refusals due to our language barrier. The majority of our visitors were also between the ages of twenty-five and forty-four years old.

We found that the majority of the visitors had not previously been to the White Tower and rarely spent more than one hour viewing the exhibits within the White Tower. Some of them would have wished to see more information, possibly in a visitor information centre, about the history and the uses of the building, arms and armour, and the monarchs and royalty; however, there were some differences in preferences for these topics which appeared to be gender related.

Most visitors greatly enjoyed their visits and would certainly recommend the White Tower to a friend. For the topics that we had visitors rank, there was very positive feedback. All but one of the topics were ranked above “good” (3.0) and the only topic to be ranked less than “good” was the way in which the Royal Armouries met the need for multiple languages. This question had a score well above an okay (2.0) but was not quite good at a total average score of 2.883. We found that this need for languages causes a reduced amount of enjoyment and understanding for those who do not consider English their first language, even though they did require a working knowledge of the English language in order to complete our survey.

Those people who also spent a great deal of time (sixty minutes or more) seemed more likely to notice a larger language barrier than those who spent less than one hour in the White Tower. The amount of time spent in the White Tower did not seem to consistently affect any other main topic areas. However, we were not able to assess the number of people who took the “shorter route” through the exhibits versus the number of people who chose to take the regular route. Therefore we cannot judge the length of time visitors spent viewing all of the exhibits because we do not know which route they took. The route taken might also affect the question mentioned earlier about wanting to see more information on a topic. If a

person took the short route and missed the exhibit about the history of the White Tower, yet wished to see more information – we have no way of judging this from our values because we were unaware of the short route prior to the creation of our survey.

The most commonly enjoyed aspect of the White Tower was the armour though many visitors liked absolutely “everything.” Visitors who had been to the Tower before were also very complimentary on the re-display of the White Tower. There were some very common suggestions though. The most common was that there should be more audio-visual aides to facilitate people’s understanding of the objects in the exhibits. Many people also found that there was a need for more directional assistance throughout the White Tower in both the areas of assisting a visitor on which route to take and where to go once on the route. The other very common suggestion was that the Royal Armouries needed more material in foreign languages. They need more support literature in different languages and possibly more signage in those languages in order to improve the enjoyment, understanding, and experiences of those who do not have a strong knowledge of the English language.

Another point that visitors noted was that if groups came through with small children, then it was very difficult to keep their attention on the exhibits through all of the White Tower. Along with the creation of literature in other languages, it was suggested that literature be provided for children in order to provide them with a fun and memorable learning experience. Such material has existed in the past and the recreation of a children’s pamphlet or guidebook would not only enhance the museum experience of the child, but also that of the parent who brought the child to HM Tower of London.

The re-display of the White Tower is a great success. Our suggestions are in areas that the Royal Armouries could investigate if it wished to further increase the already wonderful experience that is the White Tower. The vast majority of visitors are very pleased with their visit to the White Tower and are coming to it from the far reaches of the globe. We

can clearly see that the Royal Armouries is successfully achieving their goal of promoting the education of arms and armour in both the United Kingdom and world-wide by the vast demographic characteristic of its visitors. To continue on its path of excellence, the Royal Armouries need only look to itself for the resources and desire to further enhance the visitor experience at the White Tower.

2.0 Introduction

The level of effort and constant work required to exhibit historically accurate displays is extensive. In England, the Royal Armouries have been the main body to make and store weaponry and equipment since the 11th Century. Although it no longer makes weaponry and was not officially named the “Royal Armouries” until 1985, the armouries have occupied the various buildings of HM Tower of London and have been on display since the late 15th Century (HM Tower of London 7). The Tower of London itself has in effect been a museum open to the paying public since the restoration of King Charles II in 1660. For the public’s viewing, the Tower has housed the Crown Jewels and numerous other collections including the Line of Kings and the Spanish Armoury (Royal Armouries 4). As the British Empire grew, so did its collection of items, and the efforts to maintain and preserve these items had to grow as well (Royal Armouries 4).

All weaponry was designed, tested, made, and usually stored at the Tower only to become part of the Royal Armouries collection once the technology of the weaponry was out of date. Unfortunately many of these items, including the infamous “rack,” were lost in the Great Fire of 1841 which thoroughly gutted the Grand Storehouse. By the late 19th Century, HM Tower of London had essentially become the national museum of arms and armour and the museum of the Tower of London (Royal Armouries 4).

As its responsibilities as a national museum grow, so must the Royal Armouries’ efforts to present historically accurate displays rather than exhibitions of curiosities (Royal Armouries 4). It is also a very difficult task to present displays that are pleasing to all members of the public. In 1990, the Royal Armouries began an eight-year development programme to enhance its displays for the visiting public. As a part of this programme, the Royal Armouries recently redesigned and opened the White Tower with the new displays. The Royal Armouries, in conjunction with Historic Royal Palaces (HRP), is in the process of

assessing the public opinion of to the White Tower in order to determine if they are reaching all of their goals for visitor satisfaction and understanding.

The difficulty in enhancing the displays was not in determining the level of visitor satisfaction currently experienced by the museum's visitors, but rather how to ensure that the level of visitor satisfaction was meeting or exceeding the goals set forth by the Royal Armouries and HRP. Even within a single museum staff, there may be different attitudes, goals, and orientations and it therefore may be difficult to reach an internal consensus and clearly defined objectives for the museum (Karp 11). For this reason, we were careful that our survey of the museum staff took into account these diverse variables so that we remained close to the professional goals and objectives of the staff. Among the Royal Armouries staff we did find an emphasis on maintaining the integrity of the museum and its displays rather than diluting or sensationalising historically inaccurate pieces.

Our main objectives were to determine the level of visitor satisfaction and understanding at the White Tower and pinpoint opportunities for enhancement by surveying visitors and staff. Once we determined which areas had possibilities for enhancement, we recommended methods for increasing the level of visitor understanding based on the knowledge we gained in researching the museum display, visitor satisfaction, marketing, and other museums. We wished to assist the Royal Armouries in the preservation and perpetuation of the history and traditions of the White Tower by obtaining the information or resources they might need in preparing a plan to further improve the visitor experience.

3.0 Background

3.1 London

As a city, London has existed and prospered since the invasion of the Romans in 43 AD. It has seen very rough and tumultuous times such as the Great Fire in 1666, when a great portion of London was burned to the ground, and the bombing raids of World War II. Today London is a vast, varied, and beautiful city with close to eight million residents in the London and Greater London area. As the capital of the empire on which the sun never set, London has remained the seat of both the British government and the British monarchy (French 49-58 and Porter 388).

The history of any nation is the basis of its culture. The effect that the city of London has had on the British culture is rather extensive. Prior to the reign of Queen Victoria, Percy Bysshe Shelley in his work "Peter Bell the Third" (1819) said, "Hell is a city much like London – A populous and smoky city" (Porter 257). The deplorable environmental and social conditions in this heavily populated city prompted a large part of the efforts towards the social improvements that were seen during the Victorian era. London has been thought of as one of the main starting points for change in Great Britain - and the bigger London has grown and the faster it has changed - "the more it [has] astonished" (Porter 279). The continuities in social texture and governmental structures has allowed London to change without disaster or mayhem, and to this day still "radiate [a] deeply liveable quality" that greatly surpasses most North American cities (Porter 387).

3.2 The Importance of the White Tower

When William the Conqueror won the Battle of Hastings in 1066, he and the Normans brought to Saxon England a "new nobility, a new culture, and a new language" (Hibbert 11). To protect his conquest, William built a series of fortresses on the banks of the

River Thames – the largest and most imposing of which was the White Tower. Up until the 17th Century, the control of this complex was considered crucial to the control of London and, therefore, the control of all of England, for every road led to and from London. The fortress was a secure command post for the defence of the city and against the city, a place of refuge for sovereigns escaping a hostile London, or the defence of the sovereign's right to the crown (HM Tower of London 15). A sovereign has not lived in the Tower for nearly four hundred years, yet it has lodged a variety of guests (Royal Armouries 4). The Tower of London complex has been known as everything from a medieval palace, to an impregnable fortress, a dreaded prison, the location for an armoury, offices, a mint, and now a collection of museums and displays within a historic site - including the White Tower, which displays the collections of the Royal Armouries (Hibbert 11).

3.3 The Importance of Preserving History and Culture

The preservation of a nation's culture is very important to its cohesiveness as a society. Not only must the nation's history be preserved, but the public must also be able to enjoy it and take pride in it. The level of visitor satisfaction is proportional to the success of museums and the preservation of their contents. Without common origins or a pride in a nation's history through an institution or site such as HM Tower of London, some of the great rallying strength that the British are especially known for is lost. An important indicator to use when determining the success of the preservation of the British culture through institutions such as HM Tower of London is to determine the level of satisfaction and understanding of the visitors.

The openness of markets, the mass production of goods, and the globalisation of institutions have also caused an increase in the loss of cultural definitions and identities. The numerous small cultures that work to create a larger and more comprehensive cultural

identity are being lost in the creation of an easily understandable stereotype. This stereotype lacks the depth and complexity of the original cultural components of the accurate comprehensive cultural identity. Such “massive destruction” of cultures in the 20th Century has placed an even greater importance on a museum’s strategy (Kurin 317). Most museum professionals define the challenge of a museum as “how to understand and represent the whole by the part” (Kurin 316). The mode of installation of an exhibit can greatly alter the appreciation and understanding of the “visual, cultural, social, and political interest of the objects and stories” exhibited (Karp 14). If experimenting with exhibition design can allow museums to offer multiple perspectives and, thus, to achieve greater levels of visitor appreciation and understanding, then it should also improve levels of visitor satisfaction (Lavine and Karp 6).

3.4 The Relationship between Museums and Education

3.4.1 Educating with Museums

The United Kingdom at one time frowned upon the usage of skill training or “hands on learning” and emphasised traditional book learning. The ability to conduct an aptitude or learned practice was less important than the knowledge of the act. It was felt that the classical fields of mathematics, science, and literature should have been the main focus of students’ studies. Unfortunately, due to this decision and changes in the business world, the country’s standards of living began to slowly decline because students were lacking skill training and the use of primary resources in their education. The decline forced the educational system of Great Britain to be revised greatly into a system that placed a greater emphasis on the use of primary resources in education (Cleveland 97).

In the early 1980s the nation began a long series of revisions and restructured most of the nation’s educational system. In 1988 the National Curriculum was implemented in all

state schools in both England and Wales. The National Curriculum emphasises the use of primary resources in all levels of education and has created a demand for such resources. A great way to meet this demand for most educators is by the use of museums as educational tools. There are also areas in which the curriculum specifically suggests the use of museums or artefacts that only a museum would be able to provide (Hooper-Greenhill 14). Such changes in the curriculum have provided new areas of responsibility for museums along with many new challenges.

In the past decade museums have taken on a greater role in the area of education. Rather than being a storehouse of information and artefacts, museums are becoming “active learning environments” for people of all ages (Hooper-Greenhill 1). Due to the emphasis on the use of primary resources in the educational system of the United Kingdom, museum collections are much too valuable a resource to be left under-utilised. The goal of the modern museum is to be an establishment for both learning and enjoyment. The greatest challenge of any museum is, therefore, to achieve the highest levels of both through satisfying its visitors in these areas (Hooper-Greenhill 2).

3.4.2 The Use of Museums as Educational Tools

It is well known that the act of learning new information does not occur until the individual is able to integrate the new with the old. The form of exposure to any new information will also determine whether the new information will be learned, how it will be learned, and if it will mean anything to the individual. The mode of learning also determines how much we are able to recall after first encountering the information. For true understanding and knowledge, the learning must take place through activity and involvement (Hooper-Greenhill 144). Learning is also the most effective when it is provoked through

“active enjoyment followed up by reflection and analysis” and is, therefore, best achieved in circumstances of enjoyment (Hooper-Greenhill 141).

There are different views as to whether visitors really learn anything useful or are able to recall very much from a visit to a museum. Although there is little concept recall or memorisation from a museum experience, the visit contributes greatly to an individual’s growth in personal, social and physical contexts, and a museum is an excellent informal setting for non-traditional learning (Falk 98). However, the “reinforcement, consolidation, and reshaping of knowledge are critical aspects of the learning process.” If museums are used as a primary resource that does help reinforce, consolidate, and reshape knowledge that has been previously encountered, then they are useful learning tools (Falk 120). The key, therefore, in using museums as a successful education tool, is to use a museum that is conducive to the learning process.

Professor Eileen Hooper-Greenhill of the University of Leicester strongly believes that the character of a museum or a gallery is essentially educational because it offers visitors opportunities to increase their knowledge and experience (Hooper-Greenhill 140). Regardless of the intelligence, learning style, or any demographic factor, the process and issue of learning something by visiting a museum rests on the visitor. However, the ease with which a visitor is able to appreciate the museum and, therefore, enjoy his or her visit, rests with the museum and the methods of display. If a museum creates an environment in which the visitor is part of a “seamless array of mutually reinforcing contexts which separately and collectively” support the goals of the museum, then it will be successful in providing a memorable learning experience for the visitor and also achieving a high level of visitor satisfaction and understanding (Falk 130).

3.5 Museum Displays

Due to the new emphasis of hands-on training in the educational system, the use of museums and their displays as a method of learning has become increasingly popular in Britain. Museums teach everyone about history and many other aspects of education in a relaxing and enjoyable environment. Almost all historical institutions have a variety of educational programmes and displays that are specially designed for visitors of all ages. “Many, if not most, visitors to a museum hardly distinguish between learning and recreation” which also plays a large role in the level of satisfaction a visitor will experience (Wittlin 2). Most people find that they enjoy learning much more if they do not realise that they have actually learned something until after their visit. This greatly increases the visitor’s satisfaction and willingness to come back to the museum.

Museums are said to have “inspirational values and be an encyclopaedic approach to learning and inquiry” (Wittlin 1). However, author and museum expert Svetlana Alpers worries that “museums turn cultural materials into art objects.” Museums and their exhibits may be fairly easy ways to learn about one’s culture, but the design of the exhibit must appeal to the viewer and be in such a context that the viewer can understand the material being presented (Karp and Lavine 31). Therefore, in all cases, it is very difficult to present any type of material in a display without having art influence the design of the display and turn the cultural materials into an intrinsic and central part of an artistically arranged display.

The central element of a museum exhibit is the object on the wall, on a stand, or in a case. All exhibits are accompanied by supporting information in the forms of labels, pamphlets, guidebooks, or other forms that are used to inform and intrigue the visitor. The object or artefact is offered to visitors for inspection and, hopefully, educational purposes. To the visitor, the exhibit is an instrument for education and a treasure to be admired (Karp and Lavine 33).

The supporting information of a museum exhibit offers important data. The label should not cover the visual qualities of the object, but should offer more of an explanation. The label includes the name of the piece, its artist, the materials used for production, and an explanation of its cultural background. Different viewers will interpret the information in various ways and if the label is not provided in a language that the viewer is able to understand, then the display may not be understood at all. The education, knowledge of the exhibit, and many other characteristics of a visitor can most certainly influence his or her interpretation and enjoyment of the exhibit. Michael Baxandall, an authority on visual displays in museums, explains that the exhibitor can only try to stimulate museum visitors without adding any misleading information. He goes on to state that an “exhibitor cannot represent a culture” and, therefore, the information provided with the exhibit cannot make generalisations either (Karp and Lavine 41).

However, many museums, especially those for art, are receiving criticism for the way in which they are arranging their displays. In a recent article in the *Wall Street Journal*, columnist Nancy Keate strongly criticises the actions of museums.

They do not label their collections well. They do not put works in context. They do not tell you the stories behind the pieces. And they certainly do not explain why the art was deemed important enough to be out on display. In short, art museums are making a lot of would-be art lovers feel stupid. Even as historic places from Colonial Williamsburg to the Empire State Building get high-tech and user-friendly, art museums look remarkably like they did thirty years ago.

It is more important than ever that, regardless of their content, museum displays leave visitors feeling good, not confused and certainly not feeling incompetent with regard to what they have viewed. This is especially important for an historical museum because people go to an historical museum, such as HM Tower of London, the Museum of London, or Higgins Armory, to learn about the past and have an enjoyable experience while doing so.

The focus of the Science Museum, located in London, England, is naturally to display the different aspects of science whereas the Royal Armouries uses the White Tower to display arms, armour, and the history of the White Tower. A survey conducted by the National Audit Office in 1989 about the Science Museum showed that more than one fifth of the visitors came for fun. More than a quarter of the visitors came to learn about science, and a fifth had a general interest in science (McManus 59). With these results for the Science Museum, we can clearly see that visitors go to a museum because they wish to have fun, would like to learn something, or just have a general interest in the topic or study of the museum. In the same survey, results also showed that the main motivation for visits to the Science Museum were for recreation (20%) or for a family visit with the children (20%). Other reasons, such as the reputation of the Museum (18%) and an interest in science (17%), did motivate people to visit the Museum; however, we can still see a significant trend towards visitors who go to museums with recreation and learning as their top priorities (McManus 59).

Hooper-Greenhill also feels that museums “rely too much” on text for providing information about exhibitions to visitors and that the other means of learning are not fully explored (Hooper-Greenhill 146). This causes lower levels of satisfaction and understanding for the visitor because he or she has not viewed the exhibit to his or her maximum capacity - especially if there is a language barrier between the information provided and the visitor. However, if there are many different forms of learning that are offered it is more likely that they will all be used. In museums and galleries with numerous possibilities of involvement, new kinds of displays such as “discovery rooms, hands-on exhibits, film, interactive video, and drama” are finding great success with the different modes of learning (Hooper-Greenhill 146). Such museums are also finding very high visitor satisfaction and understanding rates, which can be, in part, attributed to the methods, used in the exhibits and displays.

According to Linda Downs, the head of education at the National Gallery in Washington, D.C., a careful balance of informative text and art or artefacts must be maintained. When there is too much text, “your eye is drawn away from the art” (Keate). When interviewing the Marketing Department of Higgins Armory, we asked if visitor satisfaction had yet to affect the displays of the museum. Interestingly, there has been no criticism of the Higgins Armory’s displays. As visitors, we found the displays to be eye-catching, thoroughly fascinating, and well labelled. The staff on hand is very friendly and informative, so the lack of criticism is not surprising. Also, almost all of the visitors to the Higgins Armory speak English and, therefore, would also experience a language barrier. This is helpful because, as visitors, we could find no indication of visitor information in any language other than English.

3.6 Marketing

Most museums, like businesses or organisations, have a marketing department that specialises in the marketing and visitor satisfaction areas of the museum’s activities. The strategic planning of any organisation begins with the environment that the company finds itself in – especially in terms of the number of competitors the company faces and the nature of the company’s product. This information is then used to create the organisational mission, which drives the objectives, and then the strategies that will be used to reach those objectives (Peter and Donnelly 1). The true mission of any company, however, is to provide value for three key constituencies: customers, employees, and investors (Peter and Donnelly 4). In the case of HM Tower of London, the people of Britain are both the customers and the investors and, in some cases, also the employees, all of whom have a very vested interest in the continued success of the White Tower.

3.6.1 Royal Armouries and Historic Royal Palaces at HM Tower of London

The Memorandum of Understanding (MOU) establishes and describes the unique relationship between the Board of Trustees of the Royal Armouries and the Board of Trustees of Historic Royal Palaces in regards to their simultaneous occupation of HM Tower of London and, specifically the White Tower. The MOU is a commitment in good faith by both parties in order to maximise the public benefit of their many common objectives. The reasoning for this document is because of the history of the Tower of London, the duties of HRP, and the official creation of the Royal Armouries (MOU).

The White Tower has been used as a site for making and storing weapons since the 11th century and has been used to display parts of the collection since the 16th century. Although the Board of Trustees of the Armouries was not established until the National Heritage Act of 1983, they and their forerunners have been acting as the caretakers of the royal collection of weapons at the White Tower for its entirety. Today, the White Tower is considered a national museum operated by the Royal Armouries. At this museum, the Royal Armouries' duties include caring for, preserving, and exhibiting to the public the objects in the National Collection of Arms and Armour. However, HM Tower of London is owned by the Sovereign in right of the crown and, therefore, falls under the care of Historic Royal Palaces whose responsibilities were established by the Royal Charter from the sixth of March 1989. The objectives of HRP are to “administer, conserve, renovate, repair, and improve the Palaces to a high standard” and undertake some commercial activities at the Tower such as the gift shops (MOU).

Due to these very specialised objectives and responsibilities, it is clear that the Royal Armouries has the exclusive responsibility for the “provision, care, cleaning, maintenance of the displays and re-displays” of the parts of the National Collection that are exhibited in the White Tower. Any decisions regarding the display are the primary responsibility of the

Royal Armouries, though the Royal Armouries does give notice to HRP in regards to any changes in the exhibits to maintain the integrity of the Tower of London visitor experience. The safety, security, maintenance, and care of the White Tower, “including its cleaning, internal and external structural maintenance, repair, and decoration,” is the responsibility of HRP.

The Royal Armouries and Historic Royal Palaces (HRP) work in conjunction to produce the marketing plan for HM Tower of London. Although the objectives and mission statement of the Royal Armouries are established tri-annually by its board of trustees, it is HRP that conducts visitor studies to determine the demographics of the visitors to the Tower and the levels of visitor satisfaction being achieved at HM Tower of London. The education department within the Royal Armouries also conducts surveys to assess its programmes and, therefore, finds methods for improvement.

As mentioned earlier, our project was part of a special assessment of the public opinion regarding the Tower of London and its re-display of the White Tower. Our project was not only to assess the public satisfaction and understanding of visitors to the White Tower, but also to determine if the objectives of the Royal Armouries have been achieved. However, simultaneous to our work, surveys directed toward the general public were conducted in schools, at businesses, and in communities in order to determine the overall public opinion of the re-display. This particular information will later be compiled and compared with our results to determine if the objectives of the Royal Armouries – that of enhancing the Tower as a visitor attraction and re-displaying the White Tower to the highest standards - have been successfully accomplished.

3.6.2 Museum of London

Prior to our arrival in London, we also investigated other museums to obtain information about their organisation and visitor satisfaction policies. One of those museums we contacted and received a great deal of assistance from was the Museum of London. The Museum of London has a very competent marketing department with a clear mission for the museum, which is to “inspire a passion for London” (Appendix C). Not only does this mission provide a reason for many of the Museum’s strategic aims, but it also gives the staff a goal and a vision toward which to strive. The Museum of London has professional standards and specific guidelines for meeting those standards. For example, in its goal to provide an informative and valuable experience to its visitors, the Museum’s standards indicate that ninety percent of the public responses will be “favourable” towards the Museum. For that remaining ten percent, the Museum’s standard is a “good specific reaction” from the visitor and, overall, that “favourable comments” should exceed any criticism by one hundred percent. There are also specific measurements taken to ensure that the Museum is reaching that target goal (Appendix C).

Visitor surveys are one of the methods used to measure the success of the Museum. These surveys are conducted by the Museum of London’s marketing staff as visitors are exiting the Museum. The staff politely inquires if the visitor would mind answering a few questions regarding his or her visit, and the responses are then recorded. If a visitor declines for a specified reason, then this information is also recorded in order to provide more insight into those surveyed and those who declined comment. These surveys are completed very regularly and are specific to the visitor being interviewed. For instance, if a visitor is a resident of London, a resident of Great Britain, or a tourist, then he or she is asked a series of questions designed only for the person with that particular resident status. The survey is also conducted with the assistance of a translator in order to ensure that the results are not limited

only to those English-speaking visitors. Another benefit of interviewing non-English-speaking visitors is that the mission of the Museum of London certainly applies to the entire world and many visitors to London do not speak the national language. Improving the level of visitor satisfaction for such tourists will in turn improve the “passion for London” world-wide (Appendix C).

3.6.3 Higgins Armory Museum

The Higgins Armory was another museum that we investigated prior to our departure. Its location in Worcester, Massachusetts and excellent collection of arms and armour made Higgins Armory Museum an interesting prelude to the White Tower. Higgins Armory achieves its mission by “preserving, researching, exhibiting, and interpreting its collections” in a manner that benefits the general public and specialised audiences (Appendix D). Higgins Armory is a fantastic museum, but it is still fairly small and its collection is not known world-wide. Higgins Armory also deals in the exhibition of armour, whereas the Museum of London has numerous types of exhibition material and HM Tower of London is really multiple museums housed in one historic site. Therefore, the environment and the issues Higgins Armory must face are less complex than those of HM Tower of London and the Museum of London. However, basic concepts such as mission statements, standards, and measurement tools do have a role at Higgins Armory. Higgins Armory did not have any specific set of standards for satisfaction nor did it have particular ways of measuring its successes with the overall general public, but that does not necessarily mean that high standards and meeting visitor satisfaction are not important to Higgins Armory. In fact, the recent efforts to improve the quality of visitor satisfaction and the comments made by the marketing director of Higgins Armory clearly indicate that visitor satisfaction is of paramount importance to Higgins Armory.

In order to test the success of their strategy and whether or not they are successfully obtaining their goals, the Armory has recently begun to issue a visitor survey to the general public. Although this survey is a very good idea, it has not proven to be very informative for the marketing department other than providing demographic data about the Armory's visitors. The initial strategy used in planning the survey was faulty in its survey design and disbursement. The survey is an eye-catching orange colour, but the lettering that titles the sheet is not clear. The survey is located with a number of other pamphlets about the Armory and visitors are encouraged to pick it up, fill it out, and hand it in. However, we found this method for dispersing the survey to be very ineffective. On our visit to the Armory, we carefully looked for such a survey, but did not see the bright orange piece of paper that was directly in front of us. We concluded that the choice of font and the placement of the survey are responsible for us not noticing it during our first visit to the Armory (Appendix D).

The surveys completed by the education department of Higgins Armory were more helpful to the Armory. The department has a very comprehensive survey that is given to teachers who have brought their classes in for an educational programme. The teachers are asked to fill out the survey and return it along with any other comments they feel would be valuable in improving such educational programmes. The responses from the teachers are typically very informative and have been used to improve the Armory's educational programmes (Appendix D). However, the teachers have a vested interest in the programmes and this interest is most likely a reason for the higher rate of return for educational programme surveys.

3.7 Satisfaction

Visitors to a museum cannot be categorised or stereotyped into any one class. Often, as time passes, the demographics of museum visitors change greatly. Typical of any museum

though are those visitors who are children, students, families, tourists, and older visitors. Most visitors arrive at a museum with varied expectations and different preconceptions about the museum and what they are about to experience. Some visitors may already have knowledge about the museum collection and for others it could be an entirely new experience (Falk 25). Understanding the visitors to a museum can greatly improve the success of the museum as an educational tool and, therefore, reaching a higher level of visitor satisfaction and understanding (Hooper-Greenhill).

3.7.1 Satisfaction in the Consumer World

In the consumer world, satisfaction is a “soft” measurement of quality. A soft measurement of anything is often rather difficult to assess because it focuses on perceptions and attitudes rather than hard, and thus objective, criteria. For instance, a company can establish numerical goals for the amount of sales it wishes to achieve throughout the year and then determine if it achieved its goals by looking at its final sales records. However, there is no way of determining how many customers were satisfied by those products during that time period unless someone made an attempt to determine the customer’s perceptions and attitudes during that time (Hayes 2). Nonetheless, the level of satisfaction experienced by a consumer is very important to a company. Regardless of the product or service, a company’s opportunities to make better business decisions are increased because this information provides an understanding of the way the customer defines the quality of the services or products.

If a company is knowledgeable of the consumer’s attitudes and perceptions, then the company will be able to make decisions that will increase that level of customer satisfaction and, in turn, increase the sales of the company. Once the customer’s expectations and

requirements have been determined, the company may create a questionnaire to be used in the measurement of its ability to obtain high levels of customer satisfaction (Hayes 2).

The differences between a company's success and failure can often times be its ability to correctly measure its current levels of customer satisfaction. With this information, the company should then correctly implement programmes that increase or better the quality of that satisfaction (Peter and Donnelly 206). Many areas that often cause difficulty in satisfying a customer involve differences the company and the customer have in regards to expectations, perceptions, and experiences. These differences can cause much more difficulty if they have to do with encounters between the customer and the individual providing the service (Peter and Donnelly 205).

3.7.2 Satisfaction in the Context of a Historical Museum

The Museum of London does not have a defined meaning for the term "visitor satisfaction" in the context of a historical museum, but they do use a very broad working definition for the term. If the percentage of visitors to the Museum of London who "rate their visit as positive in surveys and the percentage of positive comments in the comments box" are typically high, then the Museum is achieving good levels of visitor satisfaction (Appendix A). Higgins Armory on the other hand stated, "that if visitors were pleased with their visit and were either willing to come back or would suggest visiting the Armory to someone else", then this was achieving visitor satisfaction (Appendix B). HRP uses specific target regions in rated topic areas that it assesses in its regular surveys to determine its success in achieving and hopefully exceeding those target zones (HRP Annual Report).

3.8 Survey

The primary objective of this project was to gauge the opinion of visitors to the White Tower. Consequently, a central portion of the project was conducting surveys to gauge the level of satisfaction and understanding being experienced by the visitors. There are several key concepts that are central to the proper administration of a survey. These concepts include the sample, the survey type, the questionnaire, data analysis concepts, and data presentation.

To assist us in the creation of our survey, our liaison from the Royal Armouries suggested that we meet with Dr. Paulette McManus, a marketing consultant. We met with Dr. McManus during our second week at the Tower and we found her to be an invaluable resource in the refinement of our survey. Although we had a very good understanding of the basic concepts involved in survey creation, Dr. McManus assisted us in creating a more “user-friendly” form of our survey for not only the administration of the survey, but also the data collection and analysis.

3.8.1 The Sample

The sample is the foundation of any survey. The sample is the subset of the population, from which, all information is gathered. The sample is selected through one of any number of methods. The idea behind a sample is to select a small group that is representative of the population as a whole. By doing so, one can generate statistics and draw conclusions about the whole population without having to survey the entire population (Gilbert, Fiske and Lindzey 144). When creating a sample for a museum or any institution that is “visited,” one must take into account both those who visit and those who do not (Merriman 44). For our purposes, HRP is responsible for the survey of “non-visitors” and we focused on those who do visit the White Tower. We also recorded those who were not willing to participate in our survey and their reason for declining.

Several other factors must also be considered when selecting a sample. First, one must consider the feasibility of using a probability sample. Then one must decide whether or not to use a stratified sample, which is a sample that is separated into distinct groups. A stratified sample is best suited for a survey in which there exist two or more groups that are to be studied for the same conditions and then comparisons are to be made between them (Fink and Kosecoff 34). Once one has decided to stratify the sample, one must actually choose the sample.

Both stratified and non-stratified samples can be created with a probability sample drawn from the population. A probability sample is a sample drawn at random, but using a specific method in order to ensure that the population is properly represented. This has the advantage of often being a good representation of the whole population since everyone has the same chance of being selected into the sample. The most common form of probability is a simple random sample. This consists of taking random members of the population, with each having an equal probability of selection, in the belief that a large enough subset will provide us with an accurate representation of the population (Petruccelli, Nandram and Chen 88).

3.8.2 Survey Types

There are numerous types of surveys. Each type has its strengths and weaknesses and is suited for a specific task. When conducting a survey, it is very important to make sure that the survey is very carefully designed for the specific group on which it is going to be used. If the survey method is inappropriate or not specific to the sample, the data and conclusions drawn from the data will be incomplete and possibly incorrect. An example of this would be asking questions about a specific subject or category of a group with which the individual

being surveyed has no experience, such as asking children questions about health care providers.

3.8.2.1 Questionnaires

The two primary types of surveys are the questionnaire and the interview. The questionnaire is useful because it can be used to survey a large sample relatively quickly. Questionnaires, however, need to be constructed with more care because once it is issued there is no way to obtain follow-up information or clarify what is meant by a question. When devising a questionnaire, one must also take into account how it is structured in order to encourage people to complete the entire survey.

Other considerations that must be taken into account are the following: the wording of the questions, the arrangement of the questions, and the types of questions being used. The wording must be considered because if a person is unable to understand or is offended by a question, they will not answer it. Also, the questions should be made simple so that they do not require a large amount of consideration to answer in a sure manner. Most surveys are written at an eighth grade reading level simply to ensure that the questions are explicitly clear. The question placement must be considered because there is the potential for one question to be suggestive of certain responses on other questions or when observed in combination with other questions it may reveal extra data. Personal questions or other questions of a delicate nature are often placed at the end of the survey when the individual being surveyed feels more relaxed and is comfortable with the survey and its purpose.

Questions can be closed or open-ended. Each provides numerous different possibilities for the results of the questionnaire. Closed-ended questions are useful because they provide the person taking the survey with a limited number of choices so that the surveyor can gather information on a specific group of choices. They are used when the

surveyor wants the subject to respond to a certain set of categories. Open-ended questions are useful because they allow the person taking the survey to provide a response that may not have been considered beforehand by the surveyor or to explain things in their own words (Gilbert, Fiske and Lindzey 159).

3.8.2.2 Interviews

Interviews, on the other hand, offer a very different potential set of advantages and disadvantages. Interviews, while more time consuming than questionnaires, have the advantage of being much more diverse and adaptable. Primary among the advantages of the interview is the ability of the surveyor to adapt during the interview and to probe. This adaptation could be asking a follow-up question to clarify a vague response or clarifying a question that the person being interviewed does not understand. The interview also allows the surveyor to gauge more abstract factors and collect additional information, such as a person's body language when answering certain questions. Similar to the questionnaire, wording and order must be considered in an interview. Fortunately, due to the adaptability of the interviewer, the problems that may arise from poorly designed questions can be handled on the spot so as not to affect the overall outcome of the interview (Berg 57-99).

3.8.3 Data Analysis

The analysis of the data is an important portion of any survey because it is where the final results are compiled. There are several types of information that can be gathered through surveys. The first of these is causal information. A causal relationship is one in which it can be shown that one variable is directly linked to the behaviour of the other variable and that change in one results in change in the other. Causal relationships are often best proved in an experimental setting using a stratified sample (Petruccelli, Nandram and Chen 93). When

analysing these experiments one must be careful to make sure that there are no outside factors, which are not being considered, that influence the outcome of the experiment. These are either completely independent variables or spurious variables. Similar to a survey one must also make sure that a sample is selected which is representative of the total population.

Another form of information that can be gathered is quantitative or numerical data. These data are useful because they can be used to show trends and display correlations between variables (Fink and Kosecoff 72). Among the different statistics that can be observed and displayed are the median, mode, and quartiles. These measures are desired because they are resistant measures and can be used to give generalisations about the overall population with a large degree of certainty. They also give us information concerning central tendencies. Outlying data members are those with extremely high or low values and are usually caused by non-typical results. The median, mode, and quartiles are successful because they are not affected by, and therefore resist, the outlying data members. They are desirable because one or two anomalies in the population would cause little or no change in the findings if the anomalies were added to the analysis (Petrucci, Nandram and Chen 64).

The final type of information is qualitative data. Qualitative data are those that represent some information or observation about a sample unit. These data are usually subjective and descriptive in some way. This could be an opinion, description, or some other non-numerical form of data (Fink and Kosecoff 89). Often these data are used to provide deeper understanding and explanation of other questions. An example would be a question about whether a person enjoyed an experience. This would be quantitative because it would have two choices, either yes or no, and these could be tracked numerically. However, a qualitative follow-up question might be an open-ended question inquiring what the person enjoyed the most. These data can be useful because they provide information that can be illuminating when attempting to locate a cause or solution to a problem.

3.8.4 Presenting the Data

Once the collected data have been analysed they can be put into several forms, which include charts, tables, and graphs, as well as written explanations. Graphs are especially useful because they can visually display stationary trends, which would allow for future estimations based upon the gathered data (Petruccelli, Nandram and Chen 7). Charts are useful for presenting how several variables compare across a specific stratum. Such a comparison is very important when calculating the certainty of a trend with a correlation coefficient. A correlation coefficient is a measurement between 'zero' and 'one' that presents an indication of how accurate a representation of a trend is. A 'one' would be a definite correlation and a 'zero' would be definitely no correlation (Petruccelli, Nandram and Chen 362). This is very significant because it allows the surveyor to determine the validity of his or her data before presenting it.

3.8.5 Other Concerns

There are a few concerns to be considered when conducting a survey. The most notable of these is the idea of the trustworthiness of the data. One should test a questionnaire on a small test group first to see how people react and answer the questions that are presented (Gilbert, Fiske and Lindzey 165). When conducting a survey one should also consider the problem of getting a high response rate. If too small a portion of the total population respond to the survey, then it is less likely that the survey will be a reliable portrayal of the population as a whole (Gilbert, Fiske and Lindzey 146-147). The value we chose for our total number of completed surveys was very carefully reviewed by the consultants we worked with and was chosen to be a value that we would physically be able to obtain and examine during the time allotted for our project. Another factor that should be considered when analysing the

relationship between two variables is whether variables are confounded. If two variables are confounded then the results of the correlation between the variables is dependent on more than one factor. This other factor can not be distinguished without nullifying the validity of the survey (Petruccelli, Nandram and Chen 97).

4.0 Methodology

4.1 Plan of Action

Determining the public opinion among the visitors to the White Tower required the completion of a number of steps. This section provides an explanation of the steps involved as well as background information about each step. Also included in this section are any thoughts that we had pertaining to specific concepts as they related to our project and the completion of our assessment of the public opinion of the White Tower.

Our initial step in completing our project was the project planning and background research. This portion of the overall task was undertaken before our departure for London. This phase included researching information that assisted us in conducting both the project and interacting with people while we were working on our project. Among the topics researched in this phase were the history of the Tower of London, visitor satisfaction, visitor understanding, public opinion, and survey design and implementation methods. This phase also included the preparation of our project material in the form of our project proposal, which was completed prior to our departure. This material consisted chiefly of a rudimentary questionnaire and a trip to Higgins Armory Museum in Worcester, Massachusetts in order to gain a real world understanding of museums and visitor opinion practices.

The second step began with our departure for London. Upon our arrival, we learned the layout of the Tower facilities and met the Royal Armouries staff with whom we worked. This step was mainly to orient ourselves and to gain a basic understanding of the operating procedures we used during the time that we were in London. We also shadowed Ms. Davies and other members of the Royal Armouries' staff to gain a better understanding of their responsibilities and to learn about the Tower of London. We also spent this time creating a more detailed version of our questionnaire that we reviewed with the Tower's marketing staff from Historic Royal Palaces, and an independent consultant, Dr. P. McManus.

During our first week at the Tower, we met with Julie Emig, the Marketing and Development Manager for HRP, and discussed many of the demographic characteristics of visitors to the White Tower and the Tower of London as a whole. During our meeting we learned more about the nature of the relationship between the Royal Armouries and HRP – specifically the duties of each and their particular responsibilities at HM Tower of London. We also met with Dorothy Lawson, the Visitor Information Representative from HRP, and learned more about visitor support services, the Visitor Information Centre, and some of the reasoning behind our project. Essentially HRP, with Royal Armouries co-operation, will be creating a Visitor Information Centre and some of the information we gathered in our report will be used in the design of this centre. Specifically, data regarding whether or not visitors wanted to see more information about certain topics or even specific suggestions will be used to make the Visitor Information Centre better suited to the needs of visitors to HM Tower of London and the White Tower.

The third part of our project involved consultation and completing final refinements to our survey questionnaire. At the end of the first week and beginning of the second week, we met with the marketing research analyst and the business development manager for Historic Royal Palaces. We obtained valuable information about the specifics of performing surveys and gathering data, as well as specific information pertaining to the exact information and statistics that we needed to gather. Both during and after our meetings with these experts, we completed the refinement of our survey questionnaire and survey procedure. We were able to make the questions more specific and cover areas that were overlooked or that we were not aware of before leaving for London. We also had the opportunity to obtain professional advice on the construction of our survey questionnaire. We used the input from these professionals to adjust our choice of sample and construct our survey so that it better served

the needs of the Royal Armouries. This part of our project required the remainder of our first week in London and carried over into the second week.

For the fourth step in our project, we administered the questionnaire to the visitor sample. The sample that was decided upon, and recommended to us by experts such as Dr. McManus, was to contain about three hundred respondents. Some factors came to our attention in regards to selecting the proper survey method and type that could alter our survey results and greatly affect our analysis. Primary among these was the possibility of a high number of foreign visitors who did not speak English. Of the ten thousand daily visitors to the Tower, roughly eighty percent are tourists and the number of these tourists who speak English can vary depending on the time of the year. This could have been a problem for us because the Royal Armouries did not have the resources to construct a survey or the ability to conduct a survey in multiple languages. After meeting with the marketing consultants from Historic Royal Palaces, we were informed that at least sixty percent of the visitors have a working knowledge of the English language and that we need only administer our survey in English.

Therefore, we administered the survey over the remainder of the second and third weeks to get a high enough response. We gathered data over several days to get a wide range of input conditions and to get a sufficiently large sample from which we could draw reliable conclusions. This was also useful because it assisted us in tracking a number of influences that could affect the opinion's of visitors.

The fifth step of the project was to analyse the data and compile statistical information about public opinion, in an attempt to pinpoint areas that may contain opportunities for enhancement. We gathered and compiled information by using both quantitative and qualitative data. The majority of the survey consisted of quantitative data. This was done to observe trends or generalisations, but we also used qualitative data in order to specify and

clarify areas that people felt could use further exploration. The majority of meaningful findings arose in the fourth and fifth weeks, once the initial responses were entered and some basic analysis had been completed. The later portion of the analysis involved arranging the data into a presentable form. It was also useful during this portion of the project to question the members of the White Tower Warding staff for information that might help explain any findings we might make, or at least provide a more thorough view of the situation within the Tower. We also analysed our data to find out how it compared to the information that we were given by Historic Royal Palaces.

The final portion our project consisted of creating a final presentable form of our findings. This step required the better portion of our final weeks in London, and involved the arrangement of our data and conclusions into an informative presentation. It included the construction of our slides, charts and graphs, as well as the writing of our final report. This week culminated in a presentation to our sponsoring organisation, the Royal Armouries, to our on-site WPI advisor, Professor James Demetry, the London Centre Director for WPI, Professor Paul W. Davis, and the London Project Centre Co-ordinator for WPI, Ms. Jennie Hawks.

4.2 Survey

For this project our primary focus was gathering information and determining the opinions and views of visitors through surveys, in order to pinpoint areas for enhancement. A cross-sectional survey, one that presents a snap shot view of the population at the time it is taken, was best for this project for several reasons. The primary reason for the selection of a cross sectional survey was the time constraint of the project. We were able to conduct and analyse our survey relatively thoroughly during the seven weeks we were in London. Had we been given an ample amount of time, it would have been ideal to complete the cross-sectional

survey and then conduct a long-term analysis to determine the reasons for or effects of certain measures. To complete the survey we had to deal with several specific areas, including the selection of the sample and the construction of the questionnaire.

4.2.1 Sample

Sample selection was a primary factor in completing our survey; therefore, we decided to place careful consideration on the sampling technique we used. To select the best sample for obtaining the information desired by the Royal Armouries, we used the consultation period during the second week to gather specific information on the best method for selecting our sample. We consulted with a research analyst, already employed by Historic Royal Palaces to obtain information about which portion of the population would yield the most reliable survey results. We also spoke with members of the staff to gain information about specific areas of visitor opinion that are of concern to the Royal Armouries. In constructing our sample it was decided to use one language, English, to administer the survey. Due to funding constraints and other factors, the Royal Armouries print and supply the majority of its informative material only in the English language. However, besides the English speaking visitors, the Royal Armouries and our IQP team are concerned about the opinion of non-English speaking visitors as well. However, to construct and administer a questionnaire in seven different languages, and then provide all of the White Tower's information in those multiple languages is and was out of the realm of feasibility.

The sample consisted of a random selection of visitors with a working knowledge of English, not necessarily British, who entered the White Tower. We did not specifically set out with the intent to stratify our survey by gender. However, we noted the person's gender in our survey questionnaire in order to draw a correlation between our data and the data found in Historic Royal Palaces' reports. We later used gender to see if it was, in any way, linked

to the results we gathered. To obtain a sufficient number of people to make the survey representative of the population, there were several possibilities for issuing the survey. The two primary options were to either insert the questionnaire into brochures as visitors entered the White Tower or to present the questionnaire to people as they left. Each of these had advantages and disadvantages. The option to place the questionnaires into the brochures had the advantage of presenting a true probability sample to a larger number of people. However, it did not guarantee that we would receive a thorough response or a response group that matched our desired sample. This method also had the problem that people who had a working knowledge of English did not always get the English language brochure. Presenting them at the exit had the advantage of allowing us to decide exactly the number of people that were surveyed and, thus, staying close to the lines of the decided sample. Unfortunately, it suffered from not being a true probability sample. Once we began researching the different possible methods for administering the survey, several items came to our attention, including the nature of the information we were to gather and the logistics of touring the White Tower.

It came to our attention that there is not yet an official information pamphlet to place surveys in, as this was one of the last things to be done as part of the re-display of the White Tower. Consequently, that method for administering the survey was not applicable. This meant that we would need to rely on handing out questionnaires. It was decided however, after our first meeting with our consultant, to fall back on a previous method of collecting our surveys. The method that was eventually decided upon was to use a single questionnaire and to administer it verbally at the exit of the White Tower exhibits. The use of more than one survey would be too bothersome to the visitors and to ask visitors to answer more than one survey would be an inconvenience and much too time consuming for our report.

4.2.2 Questionnaire

The other factor that we considered heavily in preparing for our survey was the construction of our questionnaire. As mentioned earlier we used the consultation period immediately after arriving in London to refine and prepare the final copy of our questionnaire. Among the concerns that needed to be considered were concepts related to the formation of our questionnaire. The primary concerns were those dealing with the phrasing of our questions and their placement within the survey. We had to be careful not to use terms and concepts that the average English-speaker does not understand or know. We had to pay attention to concerns regarding the privacy of the individuals we surveyed. It has been shown that if a person feels threatened or insulted by a questionnaire then he or she is much less likely to answer questions. Therefore, asking questions about a person's income, social standing, or education was not only unnecessary for our purposes in evaluating public opinion, but could have also offended people. We also gathered information from our interviews with Royal Armouries' staff construct questions that addressed all areas of interest. Once we gathered information from all of these sources, we constructed the final version of our questionnaire.

Numerous areas of interest were covered in the questionnaire. The primary concern was to assess the basic opinion of visitors with respect to which parts of the White Tower people did and did not like, as well as any areas that had opportunities for enhancement. At this time, we also gathered information about why people did or did not enjoy their visit. This second focus was broken into several areas of exploration. The two most significant separations were public opinion and the effectiveness of the White Tower displays. Public opinion dealt with the view of the visiting public as a whole towards the White Tower exhibits. This portion dealt with identifying concerns that people may have had dealing with their visit, such as an exhibit description in multiple languages. The other area of primary

portion dealt with determining the effectiveness of the new displays in the White Tower. We knew from a survey conducted by Historic Royal Palaces that sometimes people are disappointed by their visit to the White Tower and we tried to pinpoint reasons for their disappointment by determining why they might be dissatisfied. We also gathered information from open-ended questions for any areas of possible enhancement. All of these areas were analysed and considered before the final questionnaire was printed and issued.

4.3 Data Analysis

A large fraction of our project time in London was spent compiling and analysing all of the data and information gathered from the survey. The primary task in analysing this information was to determine the overall opinion of visitors to the White Tower. To assess this, several factors were explored, including clarity of understanding, enjoyment of their experience, and the retention of knowledge. The primary factor investigated dealt with the knowledge people had about the White Tower. This involved both the knowledge and/or misconceptions people may have had before visiting, as well as what they learned while visiting the exhibits within the White Tower. The purpose of this was to determine how effective the displays in the White Tower were at dispelling misconceptions and presenting new information to visitors and to therefore place a quantitative value on this effectiveness. There was also a series of more specific follow-up questions designed to determine exactly what it was about the experience each visitor found satisfying or dissatisfying. This allowed for insight into which areas were targets for possible enhancement, as well as being a more specific indicator of what groups of people or which factors most affected a person's opinion.

The secondary task of the analysis was to assess the independent variables and how reliable those variables were as indicators of visitor satisfaction, understanding, and opinion. This was achieved using several methods. The primary method was to differentiate the data

down into charts comparing responses to a question with breakdowns in the survey population or responses to other questions. Then we took this relationship and created a correlation coefficient. If a correlation coefficient between 0.6 and 1.0 was calculated, then it was at least a good indicator that there was some kind of significant relationship between those variables. Most often, this number falls between 0.3 and 0.7. This is the kind of relationship that a long-term study would attempt to observe given the time and resources.

The second option for determining the reliability of the data was to use it to construct plots and analyse those plots for information. Among the statistics we calculated were the median and the percentages. These were useful because they were used as indicators for the whole population. For example, whatever the median for the sample data is can be assumed to be the median for the general population. Thus, it is a useful tool in making decisions effecting the whole visitor experience. Percentages of total responses for different factors, especially those of responses and demographics, were also useful in assessing our sample and demographic characteristics of our sample.

4.4 Conclusion of Methodology

A few items came to our attention as we were conducting our project. We were very lucky to have these items come up early enough that we were able to address them in time to make the results from their related inquiries as useful as possible to our project. Among these were the numbers of visitors who choose to take the short route through the White Tower rather than the full route. We also realised that we needed to ask the Warding staff for their thoughts on the visitors to the White Tower. We were also very lucky that we received such wonderful assistance with the creation of our survey and warm responses from those whom we surveyed.

5.0 Data, Analysis, and Conclusions

Upon arriving at HM Tower of London, we were given information from the Royal Armouries and Historic Royal Palaces regarding their working relationship, visitor demographics, and other statistics about the White Tower and HM Tower of London. We used these data to assist us in constructing our survey questionnaire and the planning of our survey. We also used these data to gather other information about special topics that we felt may be related to our visitor survey. Most importantly, we used these data and compared it with our own findings after we conducted our survey and compiled our results to better assess the public opinion of the White Tower and to draw more reliable conclusions.

5.1 Marketing Efforts by the Royal Armouries and HRP

As mentioned in our background, HRP is responsible for the marketing and publicity of HM Tower of London, including the White Tower. HRP conducts regular surveys to obtain demographic information and to determine if the objectives of the Royal Armouries and HRP are being met. The reports of the surveys describe the methods used in the process along with all of the numerical data used in creating the sample sizes and randomness. Essentially, HRP contracts out to a market research company, and it is these contractors who conduct an exit survey in the English language only. The surveys contracted by HRP are specially designed to rate the performance of HM Tower of London, the Royal Armouries, and HRP in all possible aspects. HRP has specific “visitor satisfaction ratings” which it lists in its most recent annual report for 1997 and 1998. The report also shows its success of surpassing its satisfaction goals in the areas of “Enjoyment of Visit” and “Helpfulness/Friendliness of Staff,” which are areas that we also examined ([HRP Annual Report 5](#), see Appendix B).

In HRP's Tower of London and Hampton Court Palace Visitor Surveys, Summer and Autumn 1998, we learned a great deal about visitors' expectations when they come to the Tower of London. Particularly, we found that although many visitors look forward to and enjoy the White Tower, it also had one of the highest "disappointment" rates. HRP's study found no one disappointed with the suits of armour or the weapons. Therefore, we can presume that a great source of disappointment is due to visitors' expectations regarding torture instruments, as shown in the visitor data.

The Warding staff of the White Tower see many things that go on in the White Tower and have numerous thoughts that almost went unheard by our project. We felt that it was important to hear their opinions about the new displays in the White Tower and how people seem to be reacting to them. The staff was given sheets of paper to fill out with any suggestions, comments, or ideas they have pertaining to the White Tower and two sheets with comments were returned after a week and a half. Though the information on them was quite useful the suggestions on both comment sheets were not new to us. They included people getting "lost due to inadequate signage" and a lack of information about the shorter route or how much time the regular route takes. They also mentioned that occasionally the labels are unclear and visitors can be confused. Coincidentally, these comments seemed to be quite similar to the suggestions from our completed surveys.

5.2 Royal Armouries Triennial Report

After reviewing the Royal Armouries Triennial Report, for 1993 to 1996, we found many interesting facts and information. Somewhat similar to that of the Museum of London, the mission of the Royal Armouries is "to promote in the United Kingdom and world-wide the knowledge and appreciation of arms and armour and of' HM Tower of London (Triennial 5). Among the objectives set forth by the Board of Trustees for the Royal Armouries at the

beginning of the 1993-1996 triennium was that there must be an improvement of the White Tower displays. This was accomplished by a re-display of the White Tower, which began in 1994 and is to be completed in autumn of 1999. Of the visitors we surveyed who had been to the White Tower prior to the re-display, many said they really loved what the Royal Armouries had done to the exhibits and the arrangement of them. Although some missed the previous amount of arms and armour, they knew that they simply had to visit the new Royal Armouries museum in Leeds to see those exhibits.

In the appendix of the Triennial Report, we found a visitor survey that was conducted from January of 1994 until March of 1995. Visitors were given a self-completing questionnaire by the Warding staff. Three hundred and ninety-six visitors chose to respond over this period. The results of this survey showed that, in all of the categories (Routing, Helpfulness of Staff, Presentation of Exhibits, and Information about the Exhibits), the items were at least “quite easy/helpful/(or) good” (Triennial 46). This will be interesting to compare with our own findings for these categories, which we do later in our analysis (see Appendices A and B).

We also found that a suggestion book was left from October of 1993 until March of 1995. Visitors were encouraged to record their suggestions or comments about the White Tower by completing a short answer form upon their exit from the White Tower. There was a small response rate to the survey question in which visitors were asked for their suggestions for improving what the Royal Armouries offers visitors. However, some of the most frequent responses were similar to the responses of our own survey. Many of those surveyed suggested improving the routing (better signs, more options, more seating) and providing more information in foreign languages (Appendix B). There were also numerous suggestions for reducing the overall number of displays and using other forms of interpretation such as

“audio/visuals, interactive items, demonstrations, talks, guided tours, (and) hands-on (activities)” (Triennial 46).

Some of the suggestions and results from both of these surveys were taken into account in the re-display of the White Tower. There are more audio/visual displays, including an explanation of the architecture and development of the White Tower, and the Royal Armouries did drastically reduce the number of the displays within the White Tower. An “Information Point” was also carefully designed at the entrance of the White Tower and a “shorter route” was provided, for those with limited mobility and, therefore, limited physical access within the White Tower. Even now that the re-display is almost completed, there are still some suggestions that have not been addressed to the satisfaction of the visitors that we surveyed (Triennial 46). However, we discuss these results later in our analysis as well.

5.3 Audio Tour Rental and Language Breakdown

Many visitors felt that they were not in a position to determine if the Royal Armouries had met the need for multiple languages. In all of our surveys, the visitor spoke only English or had at least a working knowledge of English and, therefore, did not much difficulty understanding the material presented in the White Tower exhibits. However, in many cases visitors felt that if someone did not have a clear grasp of the English language then visitors would have a very difficult time understanding the material being presented to them. Unfortunately, our survey was conducted only in English and the majority of our survey refusals were due to a language barrier.

HRP translates the majority of its materials into seven different languages (English, French, German, Italian, Japanese, Russian, and Spanish) and there is an audio tour provided in these seven languages. However, the audio tour only covers the information about the former prisoners of the Tower of London. It does provide some general information, but

does not include very detailed explanations about the Tower complex or specifically about the history of the White Tower.

We obtained the breakdown of the rental of these audio units (“Prisoners of the Tower Tour”) in the various languages from April first until May second of this year. We first found that less than five percent of the visitors to HM Tower of London rent the audio tour and of those who did rent the tour, there was an interesting language breakdown. Slightly more than half (52.61%) of the visitors rent the audio tour in English. For the time period of the data we were given, few visitors rented the audio tour in Italian (5.45%), Japanese (4.12%), or Russian (1.54%); however, this could be due to the time of year or any other factors that influence changes in visitor demographics. Other than English, the largest users of the audio tour were those who rented it in German (15.31%), Spanish (12.96%), and French (11.21%).

HRP did not collect data on the first language of those surveyed in either its Tower of London Profile Survey, 1998-1999 or its Tower of London and Hampton Court Palace Visitor Surveys, Summer and Autumn 1998. Therefore, it was impossible for us to accurately determine the languages spoken by visitors to HM Tower of London and the exact number of visitors who speak each language before our survey was completed. Our survey data later showed that fewer than one quarter (18.9%) of the visitors we were able to survey did not consider English their first language. However, with a 32.4% refusal rate we found that nearly half of our refusals (46.2%) were due to a language barrier. Overall, this was 14.9% of the total number of people we attempted to survey who lacked a working knowledge of English. Of the individuals we surveyed, we do know that those who consider English their first language generally rated the sufficiency with which the need for multiple languages was met by the Royal Armouries as “good” (average of 3.0). Those who do not consider English their first language generally ranked the language use as better than okay (average of 2.46). Therefore, we can only surmise that visitors who do not have a strong

working knowledge of English may be more likely choose an audio tour in a familiar language in order to enhance the quality of their visit. Yet because we do not know the satisfaction levels of those visitors to the Tower of London who do not have English as their first language, then we can only suggest that this area possibly be explored as a possibility for enhancing the visitor experience.

5.4 White Tower Visitor Routes

The White Tower is designed with only one entrance and only one exit in order to maintain control of visitor traffic as it flows through the building. Visitors have the option of taking the full route, which takes them through all the displays, or the shorter route, which only takes them through the Small Armoury, Spanish Armoury, Line of Kings, Artillery Room, the Victorian Restorations, and the Shop. The option of the shorter route is a great relief to those who have limited mobility. Some visitors even mentioned the shorter route as one of the things they liked best about the White Tower. However, some visitors may think that it is also the solution to the limited amount of time that they have to spend in the Tower and, therefore, opt to take this route.

We neither have, nor can we offer, accurate values for the number of visitors who choose to take the shorter route versus the full route. Unfortunately, we were unable to consider the analysis of this trend when we created our survey because we were unaware of it. During our attempt to determine an average percentage of visitors who choose to take the shorter route, we found that there are numerous factors that determine the route a visitor takes. Unfortunately, we did not have the time or the resources to fully explore these incidents. However, it is possible that a visitor's satisfaction with the White Tower could be related to which route the person took (i.e. if a visitor wished to have more information about the history and uses of the White Tower, but missed the display of the Royal Castle and St.

John's Chapel because he or she took the shorter route). Nevertheless, we can only hypothesise such possibilities and suggest that these questions be further explored.

5.5 Misconceptions

HRP data shows that of the different aspects of the Tower of London, the largest contributor to visitor disappointment is the collection of "torture implements" and that the White Tower is also a source of disappointment. The time period in which HRP conducted this survey was during the time when the Royal Armouries were in the middle of doing the re-display and the limited access to the exhibits within the White Tower could be the reason for the high disappointment. However, the torture implements are most likely the largest contributor to visitor's disappointment with their visit to the White Tower and the Tower of London. Much of this disappointment can be attributed to visitor misconceptions about torture implements such as a "rack" and torture chambers that they think can be seen at the Tower, but in reality these items no longer or never did exist.

Some visitors to the White Tower have certain misconceptions before entering. They have either heard stories or read information somewhere that gives them an altered opinion of the Tower of London and the White Tower. Visitors with misconceptions were a rare occurrence during the administration of our survey. We found that many times they were simply either misinformed or not very knowledgeable about the topic, and are the minority of the visitors to the White Tower. However, their misconceptions cannot be dismissed and a valiant effort is provided to inform these individuals of the true nature of the White Tower.

On one of our first days of surveying, we had the random opportunity to observe a young girl, possibly age ten at the oldest, demanding of her parents that she wanted to see the "torture chambers." Although her parents told her that these chambers did not exist and there were plenty of other things to see at the Tower, the child assured her parents very confidently

that the Tower had been used as a prison and, therefore, it had to have dungeons and a torture chamber. If it did not have these things, then she wanted to leave.

We had another experience in which Michael was asked where the Tower of London dungeons were. Michael informed the little boy, who was about ten years old, that there were no real dungeons in the Tower, but that the sub-crypt (basement floor) of the White Tower might have been used as a dungeon. The little boy was adamant because he had read somewhere about the torture that was conducted at the Tower and had seen a sign saying he could pay two pounds to “take the Dungeon tour.” Unfortunately, he had misunderstood the sign advertising the “Prisoners of the Tower” audio tour. Needless to say, Michael pointed the boy in the direction of a White Tower Warden who set the record straight for him.

Each of us had varied experiences with people who were very disappointed with their visit to the White Tower. In the process of conducting our surveys, we explained many times that the Crown Jewels are not kept in the White Tower and constructing a lift in the White Tower would also destroy the character of the site. It is very unfortunate that there are many misconceptions about the White Tower and HM Tower of London as a whole. These misguided notions of visitors of all ages cause many unsatisfactory visits for people expecting to see such things as a “rack” or an actual torture chamber, when in actuality these items either burned down over one hundred years ago or never existed. Due to the legends surrounding the infamous Tower of London, there is no sure way to eliminate these misconceptions nor is there any historical integrity or accuracy in offering displays that feed these misconceptions simply to improve visitor “satisfaction.” The best course of action is to supply the accurate data in an informative and pleasant manner to enlighten the misinformed and educate all.

5.6 Basic Statistics

5.6.1 Surveys Gathered

We were successful in our goal, which was to gather at least three hundred surveys in less than two weeks. We had a total of one hundred forty-five refusals, which gave us a total response rate of 67.6% for our four hundred forty-nine attempts to survey. Two surveys were invalid because the individual being surveyed took the questionnaire from us to fill out, thus making the survey method inconsistent and the survey invalid. HM Tower of London visitor demographics change slightly throughout the year. Historic Royal Palaces has documented fluctuations in visitor numbers and characteristics. During the time that we were surveying the visitors to the White Tower, we found that the majority of our visitors were tourists. A larger number of residents from Great Britain visited the White Tower than we had expected. However, one of the weeks of our survey was “half term” for the students of Britain and some of our sample was families with their children. We learned that HRP was conducting surveys at the same time we were to assess the visitor demographics at the Tower. When they are finished compiling their data, the comparisons of the two sets of data may turn out to be very interesting.

5.6.2 Simple Findings

In the preliminary analysis of our data, we found that the majority of the visitors to the White Tower were first time visitors (79.8%) and that very few visitors (22.5%) spend more than one hour in the White Tower in any one visit. There were varying comments about the displays with regard to the arrangement of the displays, visual quality of the displays, the ease of understanding the exhibits, and the depth of the information presented in the displays. However, the majority of the comments about the displays were favourable achieving an average ranking of at least “good.” This information can be compared with the

Royal Armouries survey mentioned earlier. Their results show the helpfulness of staff (our Question 12), presentation of exhibits (our Question 7), and information pertaining to the exhibits all to be “good.” Routing was also considered “good” in their survey. This disagrees with the data we collected from our surveys. Our results state that people were not overly pleased with the directional assistance and routing of the visitors in the White Tower, as shown by the number of suggestions we received about the lack of directional assistance in the White Tower.

5.6.3 Question 11: The Need for Multiple Languages

The comments about the Warding staff were either very favourable (average of 3.323) or the visitors had not had an experience with any of them (35.1% of those surveyed). In addition, many visitors felt that they were not in a position to determine if the need for multiple languages had been met by the Royal Armouries (40.7% of those surveyed). For each of our surveys, the visitor spoke only English or had a working knowledge of English and, therefore, did not have any difficulty understanding the material presented in the White Tower exhibits. However, in many cases, visitors felt that if someone did not have a clear understanding of the English language then the visitors would have a very difficult time understanding the material being presented to them. Unfortunately, our survey was conducted only in English and the majority of our survey refusals were due to a language barrier. The average overall ranking for the use of languages was well above “okay” and given an average score of 2.883 by the visitors we surveyed. However, while this seems high, it was the lowest average score and the only score below 3.0, which is “good.”

It appears that the language barrier is a continuous challenge for the Royal Armouries. Many of the comments listed in their suggestion book were in regards to the need for multiple languages. It appears that the need is still there. Though there are no definite solutions to

any situations involving language barriers, the communication difficulty can and should be further investigated and addressed to enhance the visitors' satisfaction, understanding, and overall experience.

5.6.4 Percentage Response Rates and Open-ended Questions

There were some questions that went unanswered when the surveys were given. Some visitors felt they could not give an opinion on whether multiple languages were acceptable throughout the White Tower because they spoke English. Others did not come into contact with the staff in the White Tower so they were unable to rate their helpfulness. Sometimes if a person did not speak English very well, they could not answer a question because they did not understand the meanings of the words. This occurred once when a Portuguese man could not understand what the word "depth" meant. Questions that did not get answered because they did not apply to that particular visitor or other reasons were recorded and are listed in our data as Percentage Response.

Visitor suggestions and what visitors liked best were the two open-ended questions. They also went unanswered due to reasons including people who may have felt pressured to answer within a certain time constraint or visitors who simply had nothing to say on those matters. The suggestions that were given were quite helpful though. There were numerous miscellaneous suggestions (i.e. a pub in the sub-crypt), but the most common suggestion was that there be more audio/visual exhibits and aides. Another very common suggestion was that there was not enough directional assistance for the visitors. Not only were visitors unsure of which route to take and what they would or would not see on each route, but once on the route they were unclear of which direction they should go to continue on their exploration of the White Tower. The suggestion that seemed very important to many of the people we surveyed was that there was not enough material provided in foreign languages

and that it would be very difficult to view the White Tower if one did not have a working knowledge of English.

Other questions, such as overall enjoyment, whether the visitor was at the White Tower for the first time or not, and gender were completed by everyone surveyed. They were questions that the person being surveyed did not really have to think about; therefore, it was easy for them to answer. This helped to make our data more complete and useful by providing numerous sources of information, which can be assumed to accurately represent the population.

5.7 Advanced Findings

We have seen some correlations between multiple variables from our surveys and the completed data. These correlations are useful because they pinpoint possible areas for enhancement. The areas for enhancement are also more personalised for the visitors to the White Tower and show specific trends that will be useful for the Royal Armouries to study and determine the proper course of action. We have found that visitors who did not speak English as their first language generally did not achieve as much depth (2.909 vs. 3.160) or enjoyment (3.211 vs. 3.433) out of the White Tower as those visitors who did consider English their first language. For every one of the seven areas questioned about satisfaction, the mean score was lower for the visitors who did not speak English as their first language (see Figure 13).

We also found correlations between a visitor's gender and the topics he or she might be more interested in viewing, perhaps in a guidebook or visitor centre. We noticed that generally more women than men wanted additional information on the monarchs and royalty (58.1% vs. 45.0%). Men more often than women wanted additional information on the arms and armour (28.6% vs. 22.6%) within the White Tower. We also saw that women wanted

more information than the men on the history and uses of the White Tower as a building, though these values were not as significantly different as those for the other two topics (43.8% vs. 39.3%).

As a result of using a sample of three hundred two, as opposed to questioning every visitor to the White Tower, there is a certain degree of uncertainty that arose in relation to our statistics. This uncertainty was dealt with by constructing 95% confidence intervals for our mean values. These intervals represent a range in which there is a 95% probability that the actual mean value, for the entire population, will fall within. Put simply, we created a range with a maximum and a minimum, with the observed mean being exactly half way between the two. Therefore, the actual mean for the entire population is 95% likely to also lie in the constructed range. This was useful because it allowed us to make more accurate and reliable assumptions about the characteristics of the entire population. These intervals became especially useful once we began comparing variables. For example, take two different populations which have different mean values 2 and 2.5 and both have a confidence interval of ± 0.75 . We can conclude that the two intervals overlap from 1.75 to 2.75 and, thus, there is a no way to be certain that the two separate groups do not actually have the same mean in the entire population.

Some of the more distinct variations were between first and second time visitors and visitors who spoke languages other than English. As the number of people who answered the question decreased, the accuracy of the resulting answer decreased because the possible range became much larger. Examples of these intervals in use are between first and repeat visitors and their opinion of the visual quality of the displays. There is no overlap between the intervals for these two groups on the same question. This suggests that there is a very high probability that the same is true in the entire population. For most of our questions there was at least a small amount of overlap, but this also can be useful. The amount of overlap can be

used as a comparison between questions. For example, two groups which overlap by only 0.005 are more likely to be distinct from each other than two variables that overlap by 0.1 or more.

5.8 Comparisons between Our Data and that of HRP

There were many similar findings between our data and that of HRP. Our only demographic that was very similar to HRP's was the ages of individuals surveyed. We had hoped to use similar proportions of male to female visitors, but HRP did not report these data in their findings even though they asked for gender in their questionnaire. We can conclude that these similar findings are due to visitor trends and typical characteristics. In our survey of the public's opinion of the White Tower, we learned that the White Tower is not a major reason for visits to the Tower of London. We found that the majority (75.5%) of the visitors come to the Tower simply because it is a "famous and historic site," but more than half (59.3%) of the visitors come to see the Crown Jewels. This is similar to HRP's finding that 40% of the visitors come because it is a "must-see" attraction (Visitor Surveys 12). HRP also concluded that the "Crown Jewels and, to a much lesser extent, the Tower's icons" appeal to visitors and are strong reasons for visitors at the Tower of London (Visitor Surveys 6).

When we examined the demographics of the visitors to the White Tower we found differences between our data and that of HRP. In their data they showed that less than 40% of the visitors are from the "New World" - including the United States (Visitor Surveys 10). Our demographic data shows that almost half (48.3%) of the visitors to the White Tower are from the United States. HRP noted that the number of European visitors has been declining and we did find that there was little strength in visitors from the European continent. There has also been an increase in visitors who have never been to the Tower, before which means that most visitors would not have a prior "plan" for visiting the different sites within the

Tower. HRP's data showed that 37% of their surveyed visitors had been to the Tower before, but our data showed that only 20.2% of the visitors to the White Tower had been to the Tower before. This does confirm the HRP statement that there had been an increase in New World visitors. However, these changes could be due to many different reasons and visitor demographics are affected by numerous variables (Visitor Surveys 11).

In other visitor characteristics, we found that the Tower is primarily an adult attraction. The largest groups (42.3%) of our visitors were between the ages of twenty-five and forty-four. HRP reported the same finding, but did note that 32% of the visitors did have children in their party (Visitor Surveys 12). This large portion of "family" visits is important when designing literature to facilitate visitors' progression through the Tower of London and satisfaction with their visit. Of the visitors who purchase guidebooks, those who had children were more likely to purchase a guidebook than a visitor not accompanied by a youngster (Visitor Surveys 44).

5.9 Data Analysis

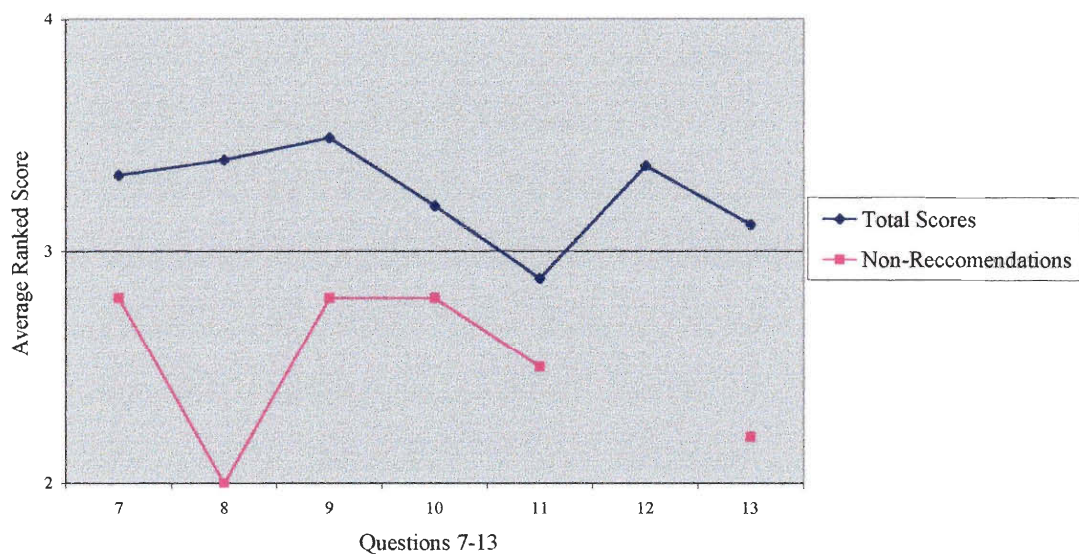
To analyse our data better we decided to construct a series of charts and graphs to visually represent our findings. These graphics consist of pie charts, line graphs, and histograms. Each of these graphs was used to represent a different form of relationship. To better analyse and compare our data we constructed confidence intervals for all of our questions with a numerical response (questions 7-13). These intervals, as mentioned earlier, provide the ability to observe the relationship between the responses of two separate groups. The primary groups that we decided to observe the differences between were 'Gender' (Male vs. Female), 'Time Spent in the Tower' (0-30 minutes, 30-60 minutes, 60+ minutes), and the 'First Language' (English vs. non-English), and 'Repeat Visits' (First vs. Repeat). We also compared the responses of people who said they would not recommend visiting the White

Tower to a friend, but because there were only five responses we can not be certain how representative these responses are of the population as a whole.

5.9.1 Non-Recommendations

Of the five people who told us that they would not recommend the White Tower to a friend, we could find no significant correlations among any of their responses. Their rankings for questions 7-12 were significantly lower (except for question twelve because none of them had spoken to a member of the Warding staff (Figure 9). Their enjoyment levels were very low (Question 8) as were their feelings about the depth of the information (Question 13). They were all first time visitors, but there were no obvious correlations between age, gender, tours taken, or any other factor that we were able to observe. It is important to note that these five represent a minute portion of our visitor sample and most people were very pleased with their visit.

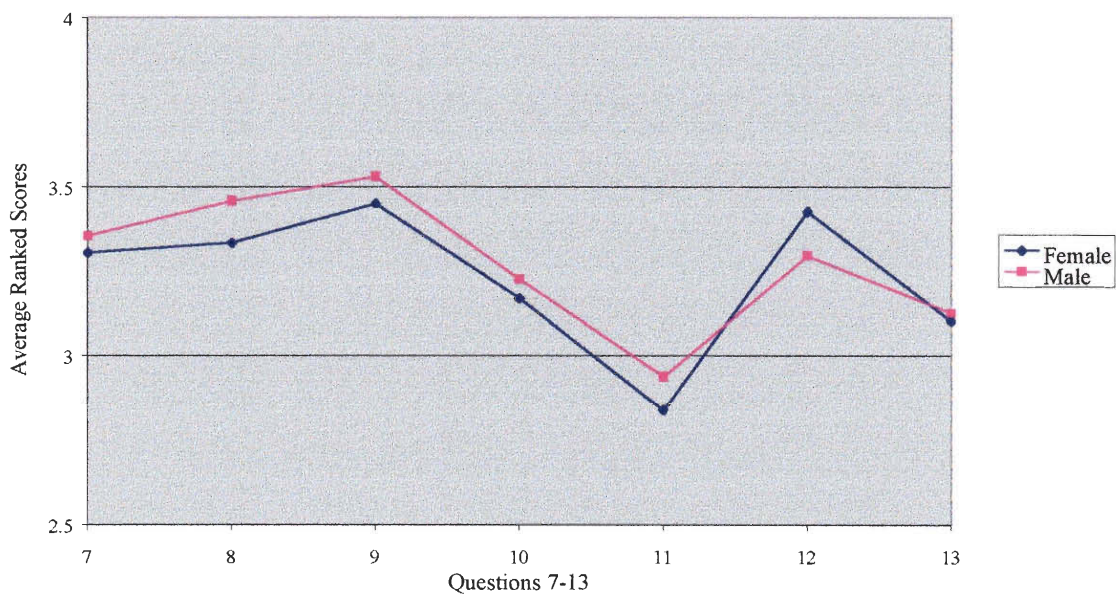
**Figure 9. Comparison of Rankings for Questions 7-13:
Total vs. Non-Reccomendation Averages**



5.9.2 Gender

Initially we chose to analyse by gender to find a correlation between our results and those of HRP's survey. However, we ended up not being able to locate any information in the data gathered from HRP dealing with gender. Since we had information related to gender, we decided to analyse this factor to see if it had any result on the responses to certain questions. As mentioned earlier, it was observed that the males and females had interests in different areas of information, but there was little difference between genders on the responses to the questions pertaining to the museum experience. The scores for the females were lower on all questions by generally the same amount, except question twelve, which was about staff helpfulness (Figure 10). However, the scores for the two genders were very close in all cases, and there was always a large overlap in the confidence intervals. This is an indication that the gender is not a factor in the response to these questions.

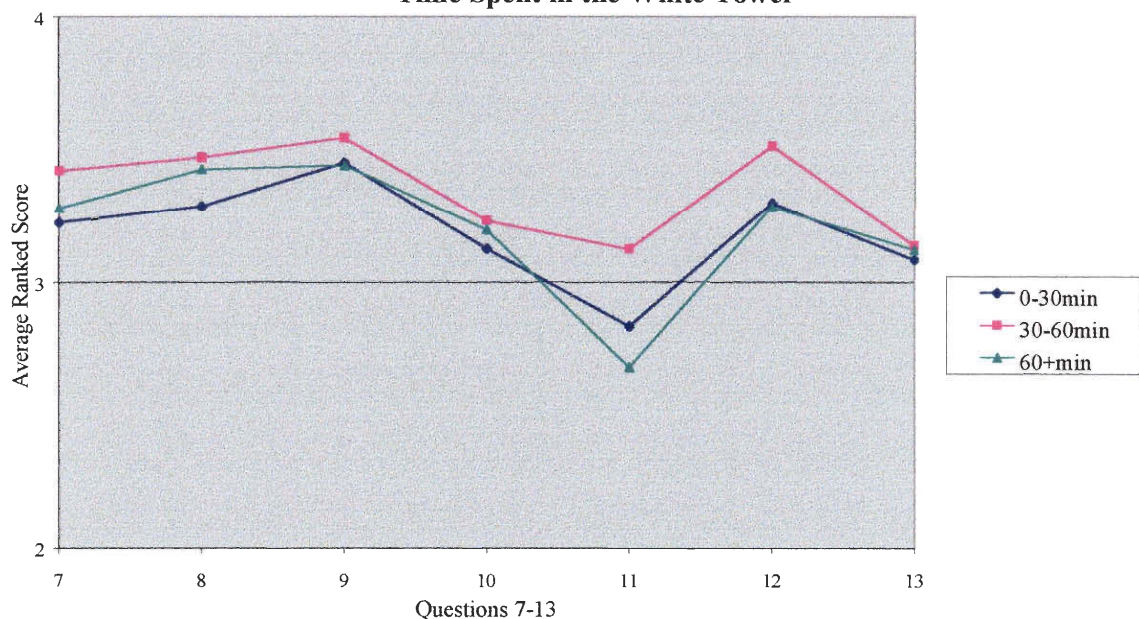
**Figure 10. Comparison of Rankings for Questions 7-13:
Female vs. Male Averages**



5.9.3 Time Spent in the Tower

The second factor that we thought might have an effect on a person's visit was the amount of time spent inside the White Tower. This question grew out of an initial concern for the routes that visitors took. It was our feeling that time would be important because a person who travels through quickly may not see certain aspects or might not truly understand the exhibits. The only significant factor on questions 7-13 is that those people who spent 30-60 minutes rate Questions 11 (Language) and Question 12 (Staff Helpfulness) higher than the other two groups (Figure 11). These scores could be an indication that people who had problems with language or the museum staff may have spent more time in the White Tower. This could be the result of misunderstood directions or the need for more time to read all the exhibit information. It is also interesting to note that for all three of the questions pertaining to information (Questions 4,5,6), the group of people who spent 60+ minutes in the White Tower, on average, wanted more information than people in the other two groups. This may be because the people spending long periods in the Tower have a genuine desire to learn as much as they can about the topics covered.

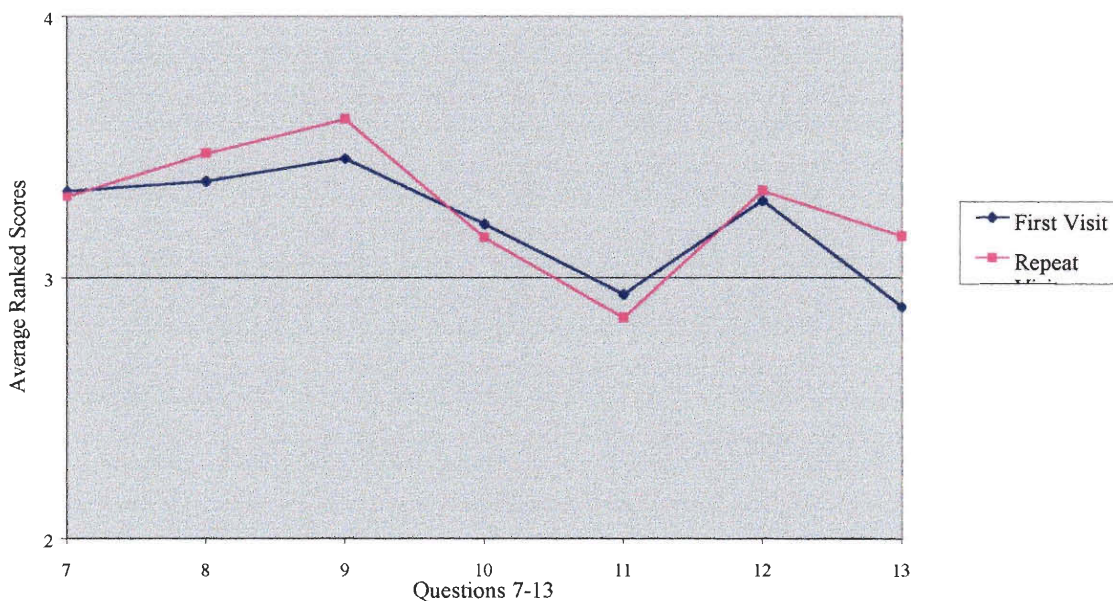
Figure 11. Comparison of Rankings for Questions 7-13 Based on Time Spent in the White Tower



5.9.4 First Visit or Repeat Visit

The third area that we analysed for influence on the overall scores was whether or not the person had visited the White Tower previously. In general, there was little difference between these two groups, except for the rating on the depth of information presented (Figure 12). The ranking of the first-time visitors was distinctively below that of the repeat visitors. This could be the result of people having previously visited and retaining information or having visited during the process of re-displaying when many exhibits were not complete.

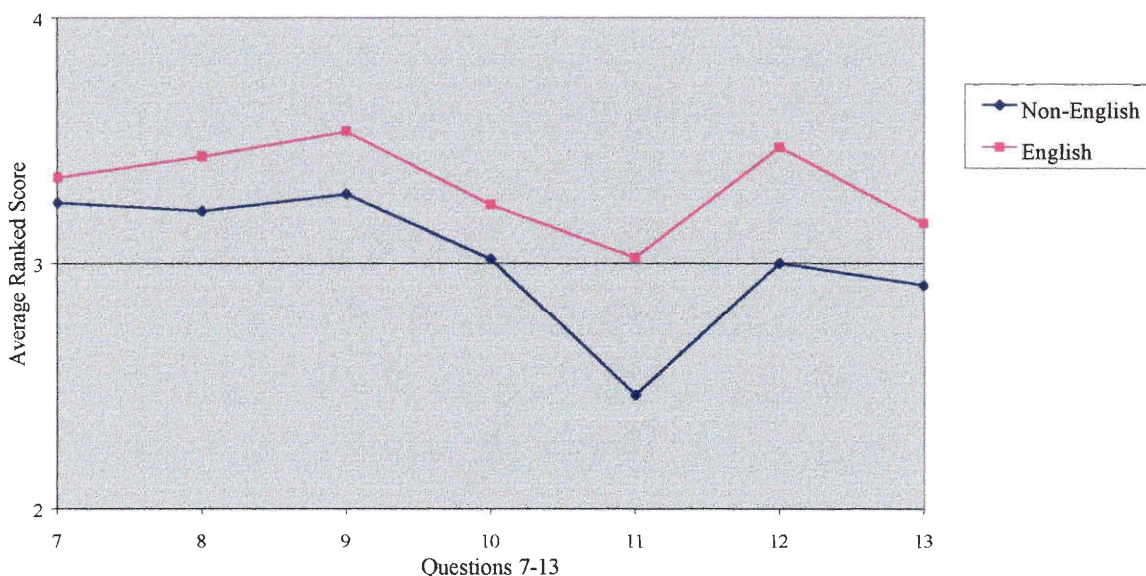
**Figure 12. Comparison of Rankings for Questions 7-13:
First Visit vs. Repeat Visit Averages**



5.9.5 First Language: English vs. Non-English

The fourth, and by far the most revealing, comparison was between those people who spoke English as a first language and those who did not. Across all seven questions, the rankings given by the non-English speakers were always lower than those given by English speakers were (Figure 13). The largest differences were on questions eleven and twelve. The lowest average ranking on any question from any group was on question eleven for the non-English speaking visitors. The reasoning behind this difference, particularly on question eleven, is most likely related to the inability to understand exhibits or directions with the same ease as someone who has English as a first language. It is very important to note that the individuals we surveyed who did not consider English their first language, but did have a working knowledge of the language, had lower rankings for all seven of the questions. We can only surmise as to what the rankings would be for someone who has little or no knowledge of English and how he or she would reflect on their visit to the White Tower.

Figure 13. Comparison of Rankings for Questions 7-13 Based on First Language: English vs. Non-English



5.10 Conclusions

Essentially, our conclusion is that the re-display in the White Tower is a great success according to our survey results. The visitors truly enjoy the unique displays, the authenticity of the items in the exhibits, and the “old” quality the building possesses. Many visitors stated that they loved the feeling of “walking through history.” The Royal Armouries must be praised for their successful re-display, and there is no doubt that the level of visitor satisfaction and understanding has improved due to the re-display.

We cannot offer specific suggestions for enhancing the White Tower or improving levels of visitor satisfaction. This is the result of the unique aspects of the Tower’s operation. We are not fully aware of all of these facets, nor are we confident in our understanding of the relationship between the Royal Armouries and HRP. Most importantly, we are not experts in presenting historical artefacts or fully versed in creating museum exhibits. As a result, we are not in a position to take into account all the factors that would be involved in considering such suggestions and offering them to the real experts.

There are, however, several areas for potential enhancement, which the Royal Armouries can investigate further, taking into account all relevant factors and using their considerable expertise. The first of these suggestions is that there are some misconceptions about the White Tower and the Tower of London that may be causing some disappointment. If these misconstrued thoughts and ideas can be explained, visitors may become more satisfied than they already are. The easiest way to help eliminate some of these misconceptions is simply by educating the visitors to the White Tower and doing it in such a way that they appreciate and enjoy the experience.

We also found that there was some confusion about directions and routing throughout the White Tower. Signs need to be clearly defined for visitors and directions are necessary for the flow and safety of the visitors and staff of the White Tower. The routes must be clearer

and more articulated so visitors know what they are missing by taking the shorter route. The exit signs and “route” signs must also be investigated to determine if they could be made more obvious, understandable, and correct for the visitor without detracting from the visit itself. The placement of a map in the guidebook or visually displayed at the entrance of the White Tower might clarify the route a visitor should take to reach his or her desired level of satisfaction.

Due to the large number of foreign tourists, the Royal Armouries may not be reaching their optimum potential in the promotion of “knowledge and appreciation of arms and armour” to its global audience. Language barriers are a consistent problem at the Tower of London and are found acutely within the White Tower. These language barriers may deter those who do not have a working knowledge of English and may limit exhibit understanding and visitor enjoyment.

These three areas may be fixed with one or two very simple solutions, which we would like to encourage the Royal Armouries to review. These are suggestions that were given to us in the surveys and are possible ways to enhance visitor understanding and satisfaction. They are the use of either an audio guide or supplemental literature in the forms of guidebooks and pamphlets for the White Tower.

An audio guide can be a hand-held device especially for use in the White Tower. It could be available in the seven different languages like the audio tour for the Tower of London. Visitors may replay something they missed or want to hear about again, or play the explanations at their own leisure. It may also give some sort of directions or advice about routing, and could clear up any misconceptions right at the beginning of the museum experience. Devices, such as those used at Stonehenge and Bath, are excellent examples of user-friendly interfaces that are easy and almost fun to use. They are lightweight and look like a large cellular phone, which can be held up to the ear or shared by two people. Also, if

the person had the regular “Prisoners” CD audio tour, they would not have to deal with multiple CDs or extra headsets. Another of the suggestions we often came across was the expansion of the audio tour to cover the White Tower and other aspects of the Tower complex. However, these might be rather expensive solutions and difficult to obtain at this time. Nonetheless, the visitors would like more audio/visual interaction.

The most feasible and inexpensive solution would most likely be the creation of supplemental literature for the White Tower. A guidebook was the second major suggestion and is in the process of being constructed by the Royal Armouries. The guidebook could cover the same topics as the audio tour would, but it could be written in the different languages as well. The printing of the guidebook in multiple languages would make many visitors who do not understand English, or even those who have only a limited knowledge of English, more comfortable and more pleased with their visit. The guidebook design currently does not contain a map of the White Tower or a description of the exhibits on the short route and regular route. With the insertion of a map clearly outlining the contents in each gallery, on each floor, and in each route the guide book would enable visitors of the White Tower to plan more carefully and understand their experience.

HRP data did report that children accompanied nearly one third of the visitors to the Tower and these visitors are more likely to purchase a guidebook than is a visitor who is not accompanied by a child. Therefore, it might also enhance the typical family visit to carefully consider the needs of families with children when designing the guidebook and additional literature that will accompany the re-display. A map in the guidebook will enable families to plan their passage through the White Tower and give children a clearer understanding of what they will and will not see. The creation of a specially designed pamphlet or guidebook for children, which could include activities and other child orientated material, could also possibly enhance a child’s experience within the White Tower. Many families did mention

that they had wished there was “something more” to keep their children interested in the White Tower – either in the form of displays that could be examined by touch or additional material about the White Tower in the “Children’s Trails” packets. Children’s activity books have existed in the past. With the education material already in use by the Royal Armouries educational staff, the creation of a White Tower Children’s Guidebook would probably vastly enhance a child’s visit to the White Tower, and in turn enhance the visit of their parent (s) or other adult companion(s).

Literature designed with these factors in mind would allow visitors to the Tower to move along through the armoury at their own pace, reading the information in their first language. Children and adults could enjoy learning about the exhibits even if it is too crowded to examine them closely or are short of time. The literature can also serve as a keepsake from their experience at the White Tower and as an excellent learning tool for clearing up any misconceptions the visitor may have about the White Tower.

If the Royal Armouries wishes to continue to enhance the visitor experience in the White Tower by improving satisfaction and understanding, there are a few areas which can be investigated by their experts for possible opportunities for enhancement. The vast majority of visitors are very pleased with their visit to the White Tower and are coming in droves from the far reaches of the globe. We can clearly see that the Royal Armouries is successfully achieving their goal of promoting the education of arms and armour in both the United Kingdom and world-wide by the vast demographic characteristic of its visitors. To continue on its path of excellence, the Royal Armouries need only look to itself for the resources and desire to further enhance the visitor experience at the White Tower.

6.0 Sources

Berg, Bruce L. Qualitative Research Methods of Social Sciences Third Edition.

Allyn and Bacon. Needham Heights, MA. 1989.

Bergetta, Edgar F. Encyclopaedia of Sociology Volume IV. Macmillan Publishing. NY, NY
1992.

Cleveland, Sarah H. "Something Borrowed, Something Learned?" USA and UK
Government Policy in Youth Training for the New International Economy: Lessons
from Abroad. The Brookings Institution, Washington, D.C. 1993.

Encyclopaedia Britannica Volume VIII. William Benton, Publisher. Chicago, Illinois. 1973.
Pages 419-436.

Falk, John Howard. The Museum Experience. Whalesback Books. Washington, DC. 1992.

Fink and Kosecoff. How to Conduct a Survey. Sage Publications. Beverly Hills, CA 1985.

French, Ylva. Blue Guide to London. A&C Black Publishers Limited. London, 1986.

Gilbert and Fiske and Lindzey. The Handbook of Social Psychology Volume I. McGraw-
Hill Ryerson. New York, 1998.

Hooper-Greenhill, Eilean. Museums and their Visitors. Routledge. London, England. 1996.

HM Tower of London: A Brief History and Guide for Teachers. Royal Armouries Education
Service. June, 1997.

Hibbert, Christopher. "Tower of London." *Newsweek*. New York, 1971.

Historic Royal Palaces Annual Report and Accounts, 1997-1998. July 23, 1998.

Keate, Nancy. "Why Are Museums So Clueless?" *Wall Street Journal*. April 6, 1999. W1,
W12.

Kurin, Richard. Exhibiting Cultures: The Poetics and Politics of Museum Display. Edited by
Ivan Karp and Steven D. Lavine. Smithsonian Institution Press, London. 1991.

McManus, Paulette. Visitors: Their Expectations and Social Behaviour in Developing Museum Exhibitions for Lifelong Learning. Science Museum, 1989.

Memorandum of Understanding. Unpublished Document. 28 May 1998.

Merriman, Nick. Beyond the Glass Case: The Past, the Heritage, and the Public in Britain. Leicester University Press. Leicester, England. 1991.

Petruccelli and Nandram and Chen. Applied Statistics for Engineers and Scientists. Prentice Hall. Upper Saddle River, NJ. 1999.

Porter, Roy. London: A Social History. Harvard University Press, Cambridge, Massachusetts. 1994.

Wittlin, Alma S. Museums: In Search of a Usable Future. The MIT Press. Cambridge, Massachusetts. 1970.

Royal Armouries at HM Tower of London: The Re-Display of the White Tower. The Trustees of the Armouries, 1998.

Royal Armouries Triennial Report, 1993-1996. March 1996.

Shapiro, Stanley J. Basic Marketing: A Global Managerial Approach. Irwin McGraw-Hill Ryerson. Toronto, 1999.

“The Tower’s Strategic Role in London.” HM Tower of London: A Brief History and Guide for Teachers. Royal Armouries Education Service. June 1997.

Tower of London and Hampton Court Palace: Visitor Surveys Commentary Report for Summer and Autumn 1998. Mew Research. January 1999.

Tower of London Profile Survey, 1998-1999: Autumn 1998 Computer Tabulations and Topline Summary. Mew Research. November 1998.

7.0 Appendices

7.1 Appendix A: Public Opinion Survey at HM Tower of London

7.1.1 Visitor Survey

Hello. I'm working with the Royal Armouries identify areas of enhancement for their displays within the White Tower. I was wondering if you could help me by answering a few questions – it won't take very long. This is completely anonymous and for informational purposes only.

The Royal Armouries logo was placed here when the surveys were photocopied

Thinking about this building, the White Tower...

1. Is this your first visit to the White Tower?

A) YES	
B) NO	

2. How long do you think you visited here today?

A) 0-30 minutes	
B) 30-60 minutes	
C) 60+ minutes	

3. What did you like best about your visit to the White Tower?

Thinking about the displays in the White Tower...

Do you think that you would like more information, perhaps elsewhere on site, on

	YES	NO	
4.			A) The history and uses of this building
5.			B) Arms and Armour
6.			C) Monarchs and Royalty

Could you give us your opinion on the following topics. I would like for you to give a ranking of 1- poor 2- okay 3-good 4- very good (please circle one for each topic)

7.	A) How much did the arrangement of the displays complement your visit	1	2	3	4
8.	B) The overall enjoyment of your visit	1	2	3	4
9.	C) Visual quality of our exhibits	1	2	3	4
10.	D) Ease of understanding the exhibits	1	2	3	4
11.	E) How well was the need for multiple languages met	1	2	3	4
12.	F) Helpfulness of the museum staff	1	2	3	4
13.	G) The depth of the information presented to you	1	2	3	4

14. Do you have any suggestions for improvement to the White Tower displays which would help your satisfaction and understanding of the displays?

15. Would you recommend to friends that they visit the White Tower?

1) YES	
2) NO	

Now thinking about the Tower of London itself...

16. Did you participate in any of the following tours?

	<i>A) Yeoman Warder tour</i>
	<i>B) Audio tour</i>
	<i>C) Self-guided tour</i>
	<i>D) Other</i>
	<i>E) None at all</i>

Thinking about your day out...

17. What prompted your visit to the Tower of London today? I'll show you the card and as I read out some possible reasons you can tell me the ones you agree with. You can choose as many as you like as they apply.

	<i>A) It is a famous and historic site</i>
	<i>B) To see the Crown Jewels</i>
	<i>C) To see the White Tower and the exhibits within the White Tower</i>
	<i>D) A day out with family and friends</i>
	<i>E) To show someone visiting me</i>
	<i>F) For the children</i>
	<i>G) For a school project</i>
	<i>H) I have a general interest in history or architecture</i>

Now for a bit about yourself if you please...

18. First language: _____

19. Are you a permanent resident in:

	<i>London or Greater London</i>
	<i>Great Britain</i>
	<i>European Union</i>
	<i>Other- Please specify: _____</i>

20. Gender

<i>MALE</i>	
<i>FEMALE</i>	

21. Age: circle one

- A) 15 and under* *B) 16-17* *C) 18-24* *D) 25-34*
E) 35-44 *F) 45-54* *G) 55-64* *H) 65+*

Date: _____ Time: _____ Surveyor: _____ Survey#: _____

7.1.2 Basic Statistical Results

Question 1: *Is this your first visit to the White Tower?*

% Response	YES	NO
100%	79.8% (241/302)	20.2% (61/302)

Question 2: *How much time did you spend in the White Tower?*

% Response	0-30 Minutes	30-60 Minutes	60+ Minutes
100 %	38.1% (115/302)	39.4% (119/302)	22.5% (68/302)

Question 3: *What did you like best about the White Tower?*

See Figures 1& 2

Questions 4-6: *Would you like more information about the following topics?*

	% Response	No Response	YES	NO
4. <i>History</i>	89.4%	4.0% (12/302)	41.7% (126/302)	54.3% (164/302)
5. <i>Arms/Armour</i>	96.0%	3.6% (11/302)	25.2% (76/302)	71.2% (215/302)
6. <i>Monarchs</i>	96.4%	4.0% (12/302)	48.7% (147/302)	47.4% (143/302)

Questions 7-13: *How would you rank the following topics?*

	% Response	No Response	Poor	Okay	Good	V.Good	Average
7.	99.3%	0.7% (2/302)	0% (0/302)	7.3% (22/302)	52.3% (158/302)	39.7% (120/302)	3.327±0.0686
8.	100%	0% (0/302)	.3% (1/302)	7.6% (23/302)	44.7% (135/302)	47.4% (143/302)	3.391±0.0724
9.	100%	0% (0/302)	0.7% (2/302)	6.0% (18/302)	37.4% (113/302)	56.0% (169/302)	3.487±0.072
10.	98.7%	1.3% (4/302)	0.7% (2/302)	15.2% (46/302)	47.0% (142/302)	35.8% (108/302)	3.195±0.0809
11.	59.3%	40.7% (123/302)	6.6% (20/302)	12.9% (39/302)	20.5% (62/302)	19.2% (58/302)	2.883±0.1451
12.	64.9%	35.1% (106/302)	0.3% (1/302)	6.67% (20/302)	26.8% (81/302)	31.1% (94/302)	3.367±0.0959
13.	96.7%	3.3% (10/302)	1.0% (3/302)	16.6% (50/302)	49.7% (150/302)	29.5% (89/302)	3.113±0.0816

Question 14: *Would you have any suggestions?*

See Figures 3 & 4

Question 15: Would you recommend the White Tower to a friend?

% Response	No Response	YES	NO
99.3%	.7% (2/302)	97.7% (295/302)	1.7% (5/302)

Question 16: Have you gone on any tours today?

% Response	Yeoman Warder	Audio Tour	Self-Guided	Other	None
100%	31.1% (94/302)	6.3% (19/302)	5.0% (15/302)	4.0% (12/302)	55.3% (167/302)

Question 17: What prompted your visit to HM Tower of London today?

% Response	A	B	C	D	E	F	G	H
100%	75.5% (228/302)	59.3% (179/302)	21.9% (66/302)	20.9% (63/302)	4.6% (14/302)	15.2% (46/302)	4.0% (12/302)	38.4% (116/302)

Question 18: Your first language?

See Figures 5 & 6

Question 19: Primary country of residence?

See Figures 7 & 8

Question 20: Gender?

% Response	MALE	FEMALE
100%	46.4% (140/302)	53.6% (162/302)

Question 21: Age?

% Response	15>	16-17	18-24	25-34	35-44	45-54	55-64	65+
100%	8.6% (26/302)	4.0% (12/302)	13.0% (39/302)	20.5% (62/302)	21.9% (66/302)	15.2% (46/302)	10.6% (32/302)	6.3% (19/302)

NONRECOMMENDATIONS: 1.7% (5/302)

Survey #s: 65, 77, 103, 121, 238

Question 1: First visit? YES: 100% (5/5)

Question 2: Time spent in the White Tower?

0-30 Minutes	30-60 Minutes	60+ Minutes
20% (1/5)	40% (2/5)	40% (2/5)

Question 3: What did you like best?

40% (2/5): Armour

60% (3/5): Nothing

Questions 4-6: Would you like more information about the following topics?

	YES
4. History	40% (2/5)
5. Arms/Armour	60% (3/5)
6. Monarchs	60% (3/5)

Rankings of Questions 7-13: How would you rank the following topics?

	Average
7.	2.8
8.	2.0
9.	2.8
10.	2.8
11.	2.5
12.	No Opinion
13.	2.2

Question 14: Would you have any suggestions? 40% (2/5) had no opinion

-audio guide

-torture instruments

-brochure/written guide

-larger writing on labels

-timeline of historical events

-more information, overview outside
before walking in

Question 17: What prompted your visit to HM Tower of London today?

% Response	A	B	H
100%	80% (4/5)	60% (3/5)	40% (2/5)

Question 18: *Your first language?*

60% (3/5) English
20% (1/5) Gujerati
20% (1/5) Norwegian

Question 19: *Primary country of residence?*

40% (2/5) US

20% (1/5) UK
20% (1/5) India
20% (1/5) Norway

Question 20: *Gender?*

MALE	FEMALE
60% (3/5)	40% (2/5)

Question 21: *Age?*

18-24	25-34
20% (1/5)	80% (4/5)

DATA COMPARISON OF MALE vs. FEMALE RESPONSES

Questions 4-6: Would like more information on...

Topic	Male	Female
<i>History</i>	39.3% (55/140)	43.8% (71/162)
<i>Arms/Armour</i>	28.6% (40/140)	22.2% (36/162)
<i>Monarchs</i>	45.0% (63/140)	51.8% (84/162)

FEMALE RANKINGS OF QUESTIONS 7-13

	No Response	Poor	Okay	Good	V.Good	Average
7.	0.6% (1/162)	0% (0/162)	9.3% (15/162)	50.6% (82/162)	39.5% (64/162)	3.304±0.098
8.	0% (0/162)	0% (0/162)	9.9% (16/162)	46.9% (76/162)	43.2% (70/162)	3.333±0.1001
9.	0% (0/162)	0.6% (1/162)	7.4% (12/162)	38.3% (62/162)	53.7% (87/162)	3.450±0.102
10.	1.2% (2/162)	0.6% (1/162)	17.3% (28/162)	45.7% (74/162)	35.2% (57/162)	3.169±0.113
11.	38.9% (63/162)	6.8% (11/162)	15.4% (25/162)	19.8% (32/162)	19.1% (31/162)	2.838±0.196
12.	33.3% (54/162)	0% (0/162)	6.2% (10/162)	25.9% (42/162)	34.6% (56/162)	3.426±0.063
13.	3.7% (6/162)	0.6% (1/162)	16.7% (27/162)	51.2% (83/162)	27.8% (45/162)	3.103±0.109

MALE RANKINGS OF QUESTIONS 7-13

	No Response	Poor	Okay	Good	V.Good	Average
7.	0.7% (1/140)	0% (0/140)	5.0% (7/140)	54.3% (76/140)	40.0% (56/140)	3.353±0.096
8.	0% (0/140)	0.7% (1/140)	5.0% (7/140)	42.1% (59/140)	52.1% (73/140)	3.457±0.104
9.	0% (0/140)	0.7% (1/140)	4.3% (6/140)	36.4% (51/140)	58.6% (82/140)	3.529±0.102
10.	1.4% (2/140)	0.7% (1/140)	12.9% (18/140)	48.6% (68/140)	36.4% (51/140)	3.225±0.116
11.	42.9% (60/140)	6.4% (9/140)	10.0% (14/140)	21.4% (30/140)	19.3% (27/140)	2.938±0.216
12.	37.1% (52/140)	0.7% (1/140)	7.1% (10/140)	27.9% (39/140)	27.1% (38/140)	3.295±0.149
13.	2.9% (4/140)	1.4% (2/140)	16.4% (23/140)	47.9% (67/140)	31.4% (44/140)	3.125±0.127

ANALYSIS OF QUESTIONS 7-13

ANALYSIS BASED ON FIRST VISIT: 79.80% (241/302)

	No Response	Poor	Okay	Good	V.Good	Average
7.	0.8% (2/241)	0% (0/241)	7.9% (19/241)	50.6% (122/241)	40.7% (98/241)	3.331±0.0783
8.	0% (0/241)	0.4% (1/241)	7.9% (19/241)	46.1% (111/241)	45.6% (110/241)	3.369±0.0816
9.	0% (0/241)	0.4% (1/241)	7.1% (17/241)	39.0% (94/241)	53.5% (129/241)	3.456±0.0814
10.	0.8% (2/241)	0.4% (1/241)	14.9% (36/241)	47.7% (115/241)	36.19% (87/241)	3.205±0.0889
11.	39.4% (95/241)	6.2% (15/241)	14.5% (35/241)	19.5% (47/241)	20.3% (49/241)	2.938±0.1607
12.	37.3% (90/241)	0% (0/241)	6.6% (16/241)	25.7% (62/241)	30.3% (73/241)	3.295±0.1078
13.	2.5% (6/241)	1.2% (3/241)	17.0% (41/241)	49.8% (120/241)	29.5% (71/241)	2.890±0.0884

ANALYSIS BASED ON REPEAT VISIT: 20.19% (61/302)

	No Response	Poor	Okay	Good	V.Good	Average
7.	0% (0/61)	0% (0/61)	4.9% (3/61)	59.0% (36/61)	36.1% (22/61)	3.311±0.1415
8.	0% (0/61)	0% (0/61)	6.6% (4/61)	39.3% (24/61)	54.1% (33/61)	3.475±0.1561
9.	0% (0/61)	1.6% (1/61)	1.6% (1/61)	31.1% (19/61)	65.6% (40/61)	3.607±0.1539
10.	3.3% (2/61)	1.6% (1/61)	16.4% (10/61)	44.3% (27/61)	34.4% (21/61)	3.153±0.1943
11.	45.9% (28/61)	8.2% (5/61)	6.6% (4/61)	24.6% (15/61)	14.8% (9/61)	2.848±0.3425
12.	26.2% (16/61)	1.6% (1/61)	6.6% (4/61)	31.1% (19/61)	34.4% (21/61)	3.333±0.2158
13.	6.6% (4/61)	0% (0/61)	14.8% (9/61)	49.2% (30/61)	29.5% (18/61)	3.158±0.1755

ANALYSIS BASED ON TIME SPENT IN THE WHITE TOWER

Questions 4-6: Would like more information on...

Topic	0-30Min	30-60Min	60+ Min
<i>History</i>	45.59% (31/68)	42.02% (50/119)	39.13% (45/115)
<i>Arms/Armour</i>	27.94% (19/68)	22.69% (27/119)	26.09% (30/115)
<i>Monarchs</i>	52.94% (36/68)	52.94% (63/119)	41.74% (48/115)

Questions 7-13

Time Spent: 0-30 Minutes 38.01% (115/302)

	No Response	Poor	Okay	Good	V.Good	Average
7.	1.7% (2/115)	0% (0/115)	7.8% (9/115)	57.4% (66/115)	33.0% (38/115)	3.2245±0.1097
8.	0% (0/115)	0% (0/115)	10.4% (12/115)	50.4% (58/115)	38.1% (45/115)	3.287±0.1180
9.	0% (0/115)	0.9% (1/115)	7.0% (8/115)	38.3% (44/115)	53.9% (62/115)	3.452±0.1217
10.	0% (0/115)	0.9% (1/115)	14.8% (17/115)	52.2% (60/115)	32.2% (37/115)	3.1245±0.1273
11.	37.4% (43/115)	5.2% (6/115)	14.8% (17/115)	27.8% (32/115)	14.8% (17/115)	2.833±0.2051
12.	33.0% (38/115)	0.9% (1/115)	7.0% (8/115)	30.4% (35/115)	28.7% (33/115)	3.299±0.1582
13.	5.2% (6/115)	0.9% (1/115)	16.5% (19/115)	51.3% (59/115)	26.1% (30/115)	3.083±0.1438

Time Spent: 30-60 Minutes 39.40% (119/302)

	No Response	Poor	Okay	Good	V.Good	Average
7.	0% (0/119)	0% (0/119)	5.0% (6/119)	47.9% (57/119)	47.1% (56/119)	3.420±0.1059
8.	0% (0/119)	0% (0/119)	5.0% (6/119)	42.9% (51/119)	52.1% (62/119)	3.471±0.1067
9.	0% (0/119)	0% (0/119)	4.2% (5/119)	37.0% (44/119)	58.8% (70/119)	3.546±0.1039
10.	1.7% (2/119)	0% (0/119)	17.6% (21/119)	40.3% (48/119)	40.3% (48/119)	3.231±0.1333
11.	52.1% (62/119)	3.4% (4/119)	9.2% (11/119)	13.4% (16/119)	21.8% (26/119)	3.123±0.2505
12.	44.5% (53/119)	0% (0/119)	5.9% (7/119)	15.1% (18/119)	34.5% (41/119)	3.515±0.1652
13.	1.7% (2/119)	1.7% (2/119)	16.0% (19/119)	47.9% (57/119)	32.8% (39/119)	3.137±0.1344

Time Spent: 60+ Minutes 22.52% (68/302)

	No Response	Poor	Okay	Good	V.Good	Average
7.	0% (0/68)	0% (0/68)	10.3% (7/68)	51.5% (35/68)	38.2% (26/68)	3.279±0.1528
8.	0% (0/68)	1.5% (1/68)	7.4% (5/68)	38.2% (26/68)	52.9% (36/68)	3.426±0.1659
9.	0% (0/68)	1.5% (1/68)	7.4% (5/68)	36.8% (25/68)	54.4% (37/68)	3.441±0.1662
10.	2.9% (2/68)	1.5% (1/68)	11.8% (8/68)	50.0% (34/68)	33.8% (23/68)	3.197±0.1704
11.	26.5% (18/68)	14.7% (10/68)	16.2% (11/68)	20.6% (14/68)	22.1% (15/68)	2.680±0.2611
12.	22.1% (15/68)	0% (0/68)	7.4% (5/68)	41.2% (28/68)	29.4% (20/68)	3.283±0.1363
13.	2.9% (2/68)	0% (0/68)	17.6% (12/68)	50.0% (34/68)	29.4% (20/68)	3.121±0.1667

ANALYSIS BASED ON ENGLISH vs. NON-ENGLISH 1ST LANGUAGE

1ST LANGUAGE NON-ENGLISH: 18.87% (57/302)

	No Response	Poor	Okay	Good	V.Good	Average
7.	0% (0/57)	0% (0/57)	19.3% (11/57)	36.8% (21/57)	43.7% (25/57)	3.246±0.1980
8.	0% (0/57)	1.8% (1/57)	14.0% (8/57)	45.6% (26/57)	38.6% (22/57)	3.211±0.1946
9.	0% (0/57)	1.8% (1/57)	15.8% (9/57)	35.1% (20/57)	47.4% (27/57)	3.281±0.2067
10.	0% (0/57)	1.8% (1/57)	19.3% (11/57)	54.4% (31/57)	24.6% (14/57)	3.018±0.1868
11.	12.3% (7/57)	17.5% (10/57)	22.8% (13/57)	31.6% (18/57)	15.8% (9/57)	2.460±0.2818
12.	24.6% (14/57)	0% (0/57)	15.8% (9/57)	43.9% (25/57)	15.8% (9/57)	3.000±0.1957
13.	3.5% (2/57)	0% (0/57)	28.1% (16/57)	47.1% (28/57)	19.3% (11/57)	2.909±0.1853

1ST LANGUAGE ENGLISH: 81.17% (245/302)

	No Response	Poor	Okay	Good	V.Good	Average
7.	0.8% (2/245)	0% (0/245)	4.5% (11/245)	55.9% (137/245)	38.8% (95/245)	3.346±0.0710
8.	0% (0/245)	0% (0/245)	6.1% (15/245)	44.5% (109/245)	49.4% (121/245)	3.433±0.0761
9.	0% (0/245)	0.4% (1/245)	3.7% (9/245)	38.0% (93/245)	58.0% (142/245)	3.535±0.0739
10.	1.6% (4/245)	0.4% (1/245)	14.3% (35/245)	45.3% (111/245)	38.4% (94/245)	3.237±0.0891
11.	47.3% (116/245)	4.1% (10/245)	10.6% (26/245)	18.0% (44/245)	20.0% (49/245)	3.023±0.1635
12.	37.6% (92/245)	0.4% (1/245)	4.5% (11/245)	22.9% (56/245)	34.7% (85/245)	3.471±0.1045
13.	3.3% (8/245)	1.2% (3/245)	13.9% (34/245)	49.8% (122/245)	31.8% (78/245)	3.160±0.0863

7.1.3 Graphical Results from Survey Data

Figure 1. Question 3: What Visitors to the White Tower Liked the Best

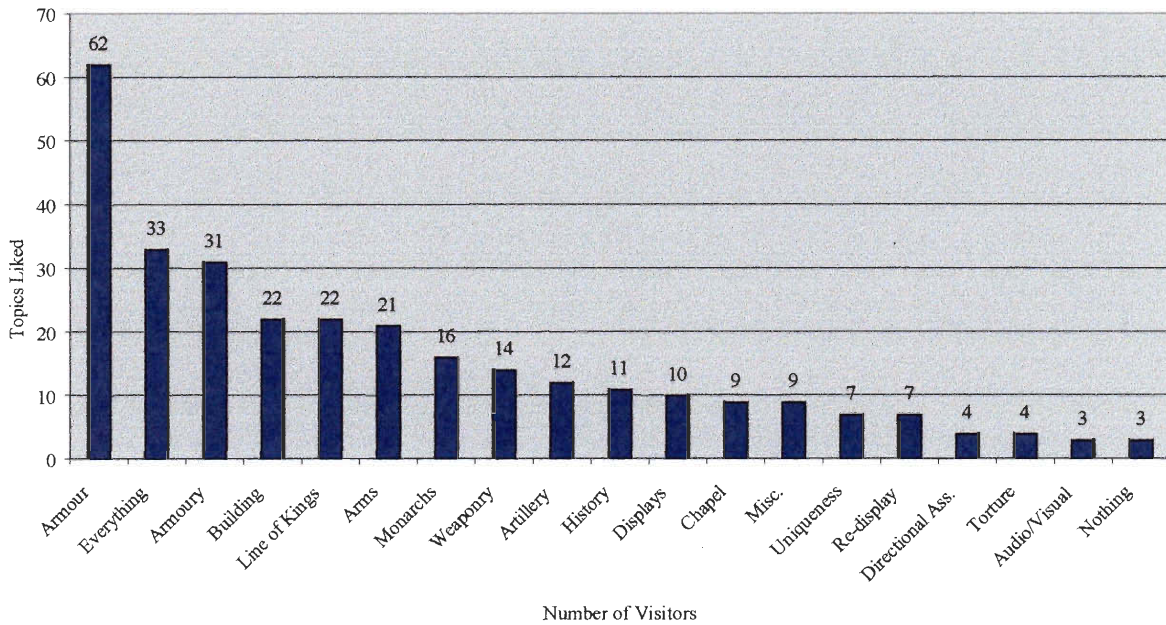


Figure 2. Question 3: What Visitors to the White Tower Liked the Best

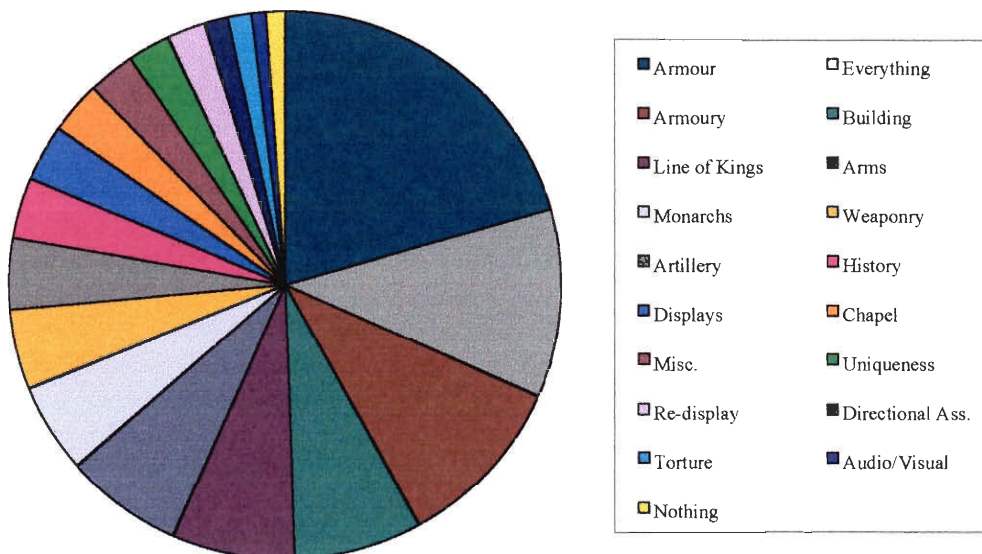


Figure 3. Question 14: Common Suggestions from Visitors to the White Tower

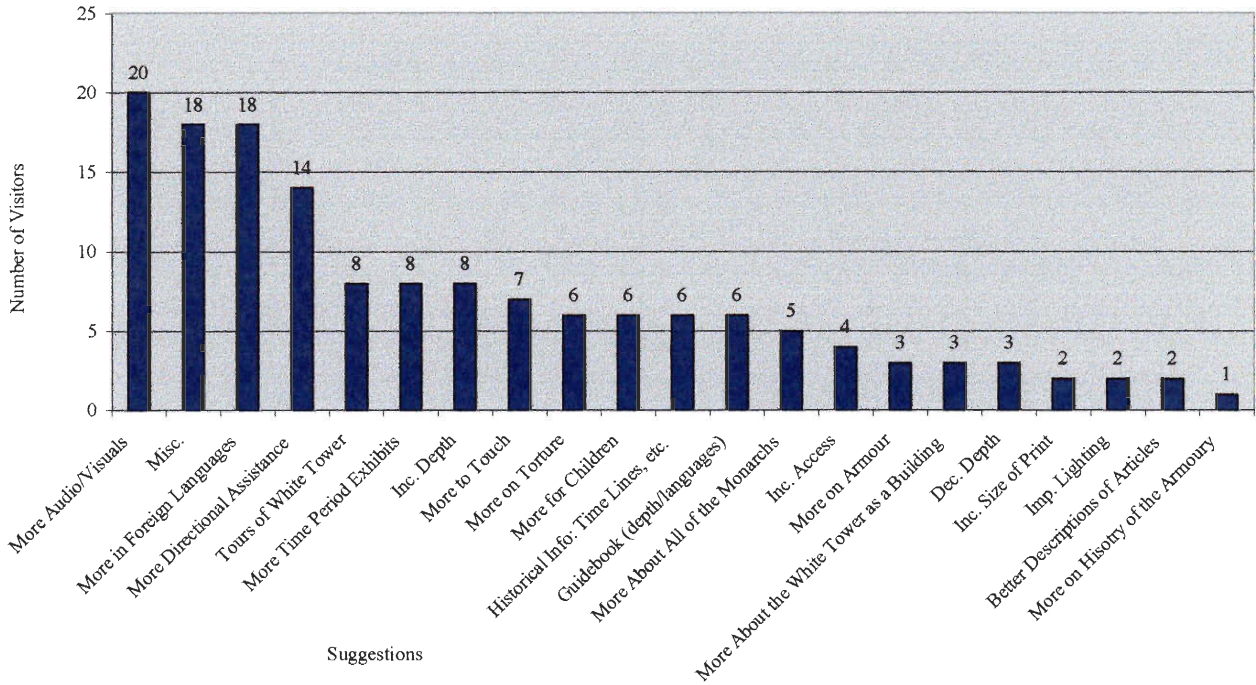


Figure 4. Question 14: Common Suggestions from Visitors to the White Tower

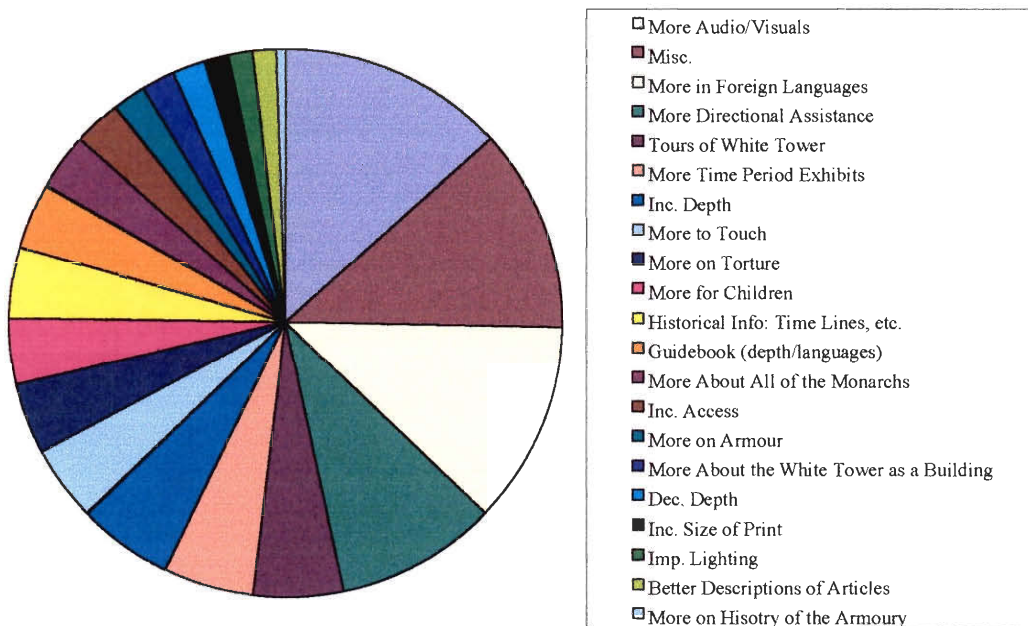


Figure 5. Question 18: First Languages of Visitors to the White Tower

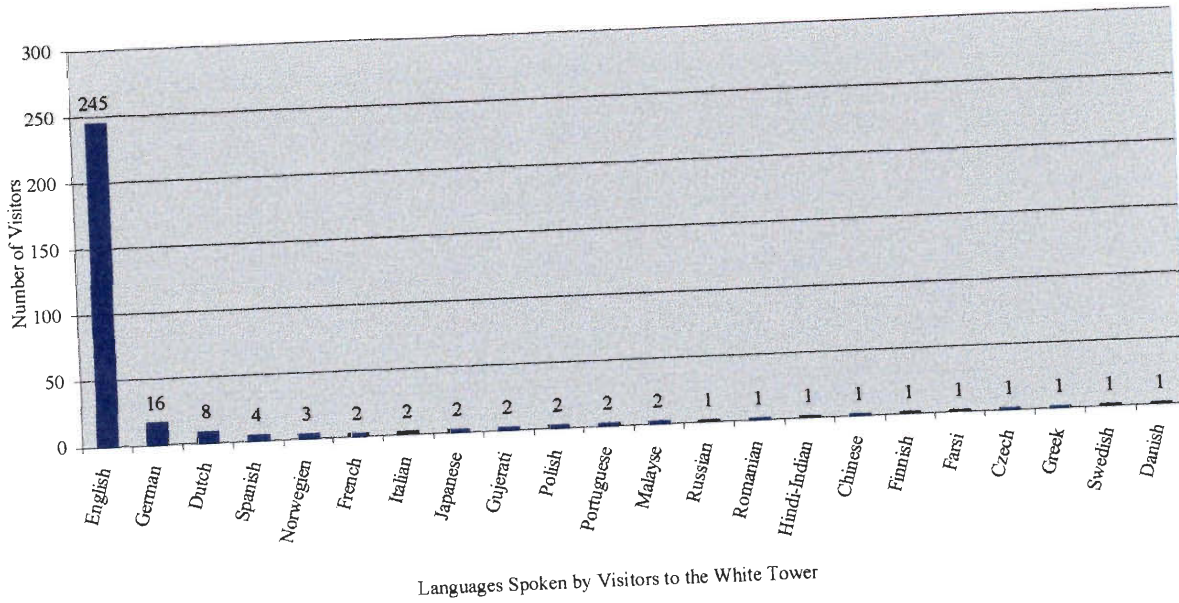


Figure 6. Question 18: First Language Breakdown for Visitors of the White Tower

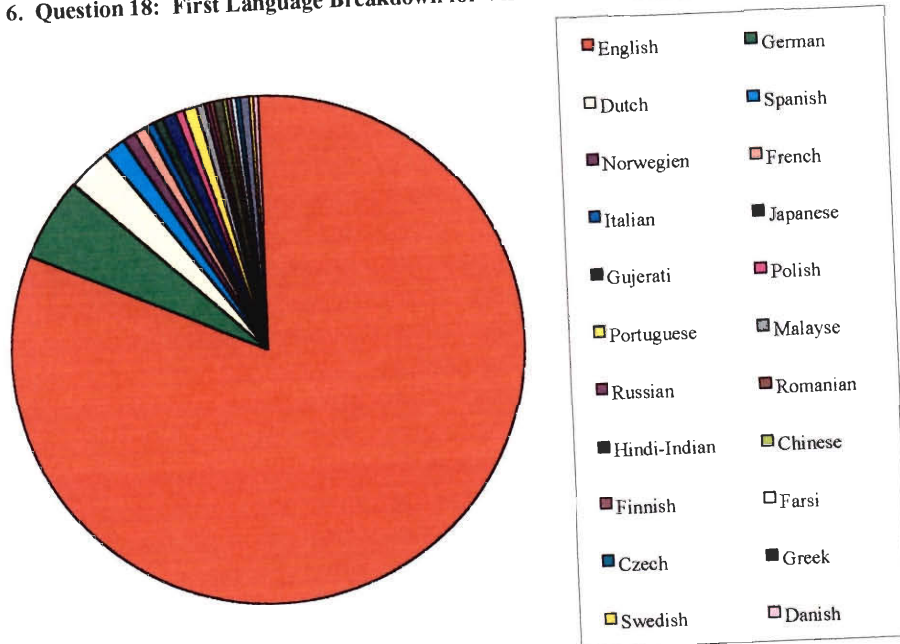


Figure 7. Question 19: Area of Residence Breakdown for Visitors of the White Tower

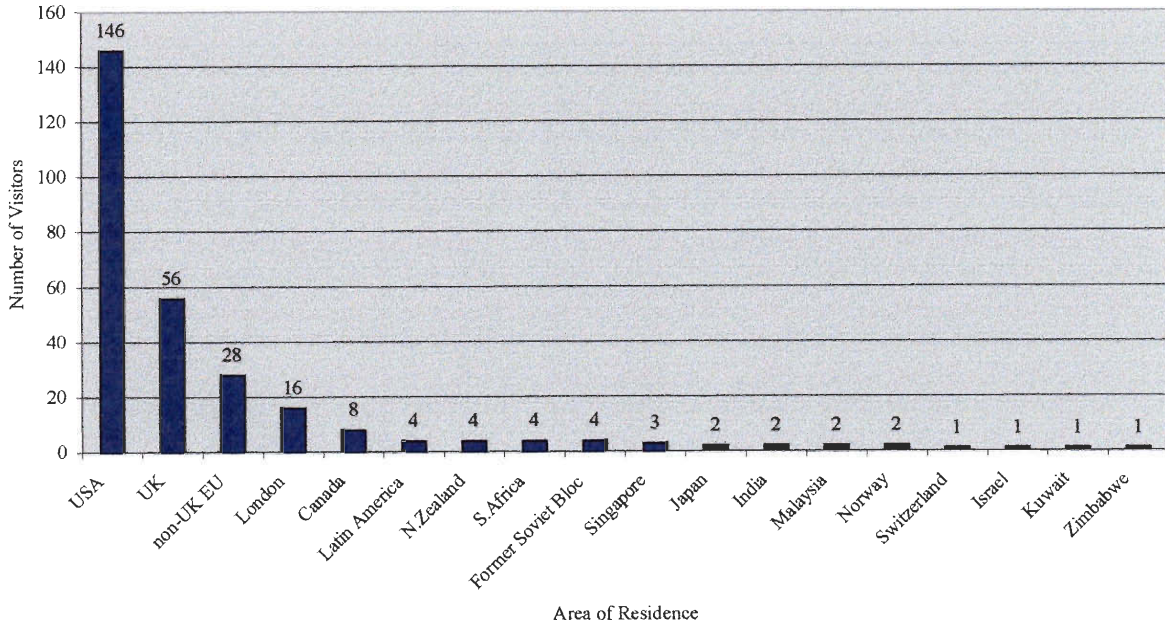
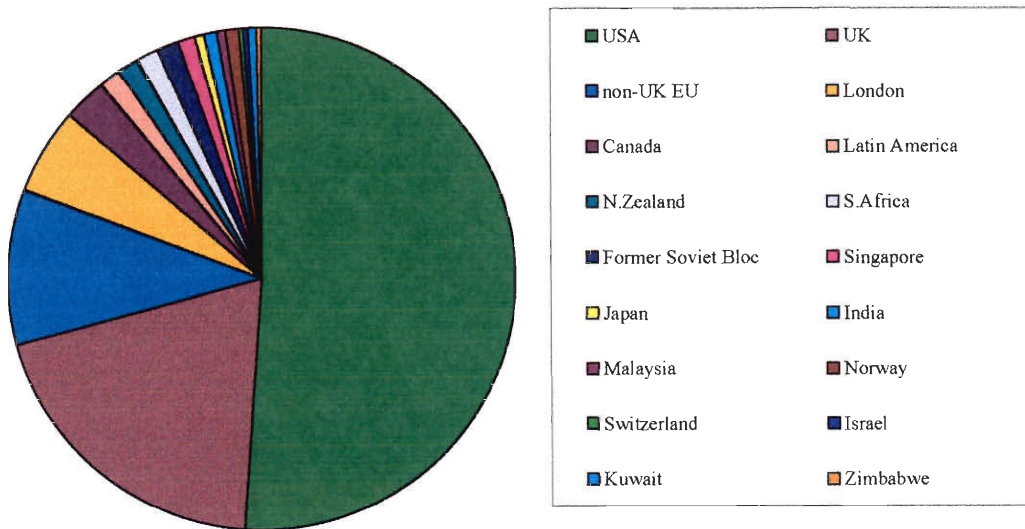


Figure 8. Question 19: Area of Residence Breakdown for Visitors of the White Tower



**Figure 9. Comparison of Rankings for Questions 7-13:
Total vs. Non-Recommendation Averages**

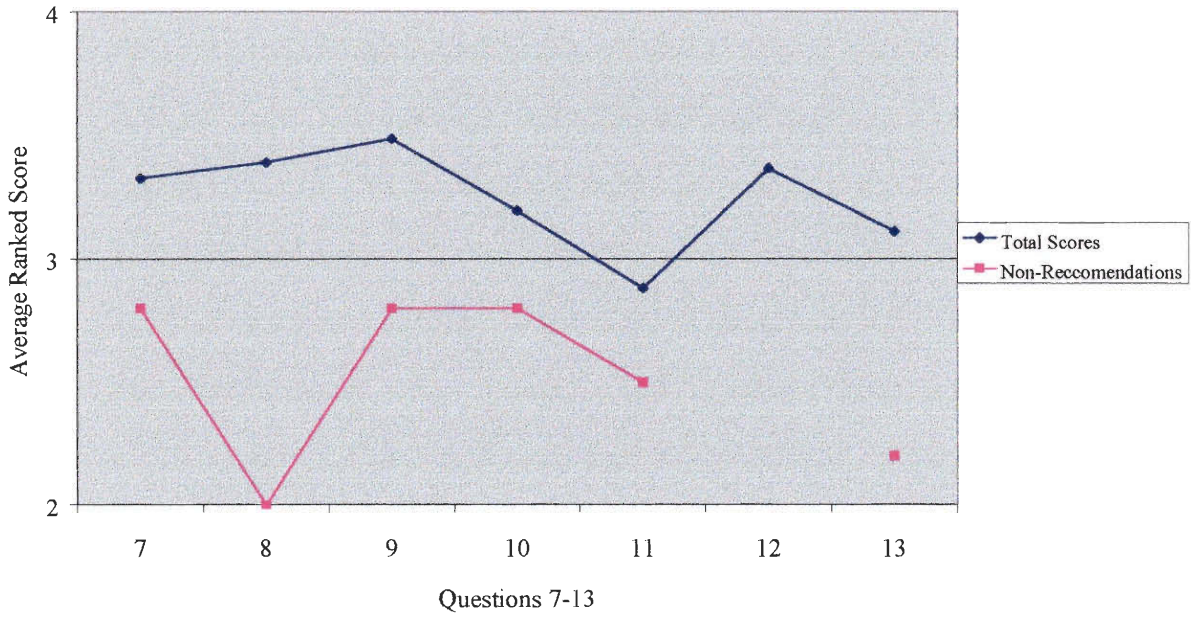


Figure 10. Comparison of Rankings for Questions 7-13: Female vs. Male Averages

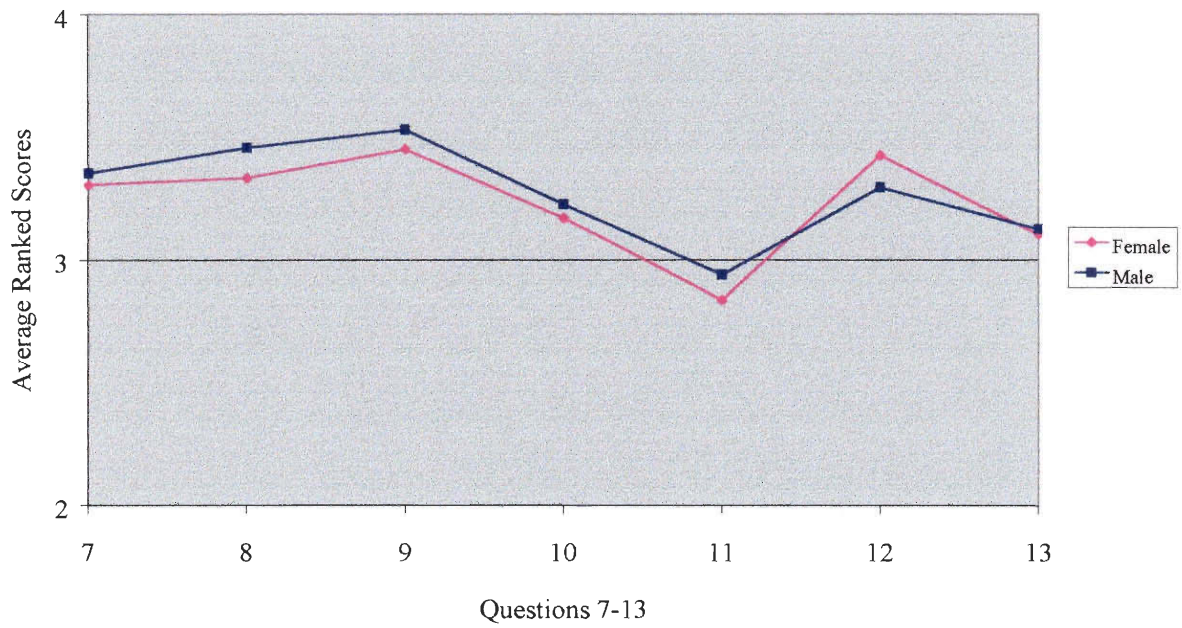


Figure 11. Comparison of Rankings for Questions 7-13: Based on Time Spent in the White Tower

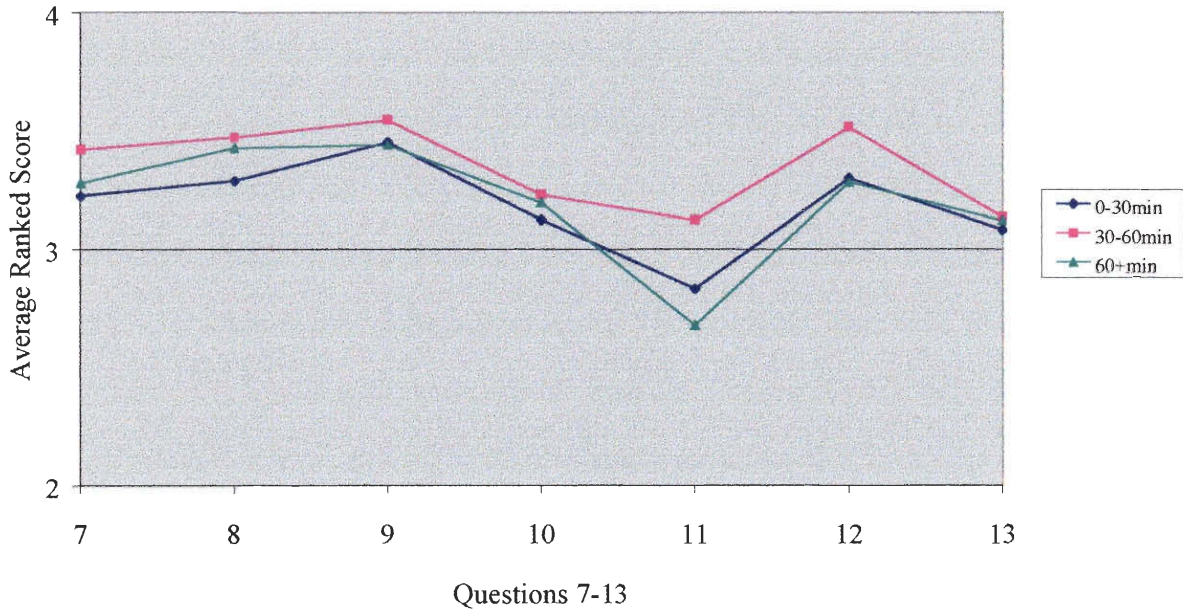


Figure 12. Comparison of Rankings for Questions 7-13: First Visit vs. Repeat Visit Averages

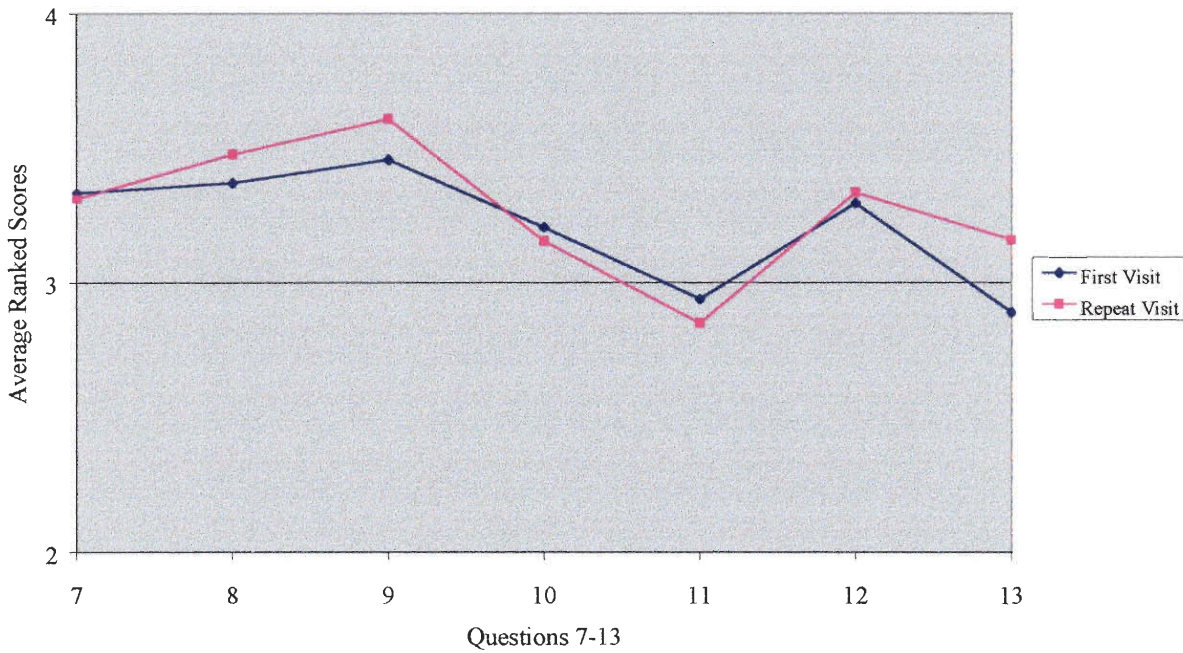
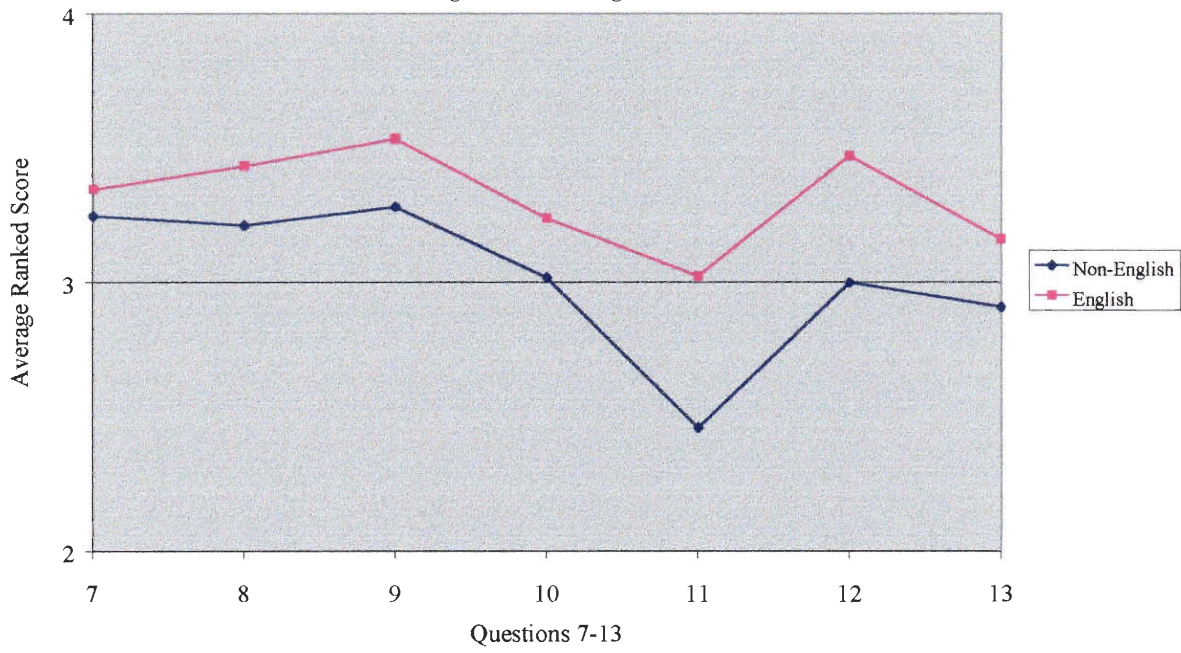


Figure 13. Comparison of Rankings for Questions 7-13: Based on First Language: English vs. Non-English



7.2 Appendix B: Royal Armouries and Historic Royal Palaces at HM Tower of London

7.2.1 The Mission Statement, Objectives and Statutory Duties of the Royal Armouries

as Established in the 1993-1996 Royal Armouries Triennial Report

Mission Statement :

To promote in the UK and world-wide the knowledge and appreciation of arms and armour and of the Tower through the collections of the museum and the expertise of its staff.

Objectives:

- To help enhance the Tower as a visitor attraction
- To release space and make possible developments which will enable the Tower-related part of the collection remaining in the Tower to be displayed to the highest standards in its proper context
- To generate increased income for both the Royal Armouries and the Historic Royal Palaces Agency.

Statutory Duties- The National Heritage Act 1983 lays down that the Trustees must:

- care for, preserve and add to the objects in their collections
- secure that the objects are exhibited to the public
- secure that the objects are available for study and research
- maintain a record relating to their collections, to arms and armour in general and to the Tower
- generally promote the public's enjoyment and understanding of arms and armour

To help fulfil these duties the Act says that the Trustee may:

- provide education, instruction and advice
- enter into contracts and other agreements
- acquire and dispose of land and other property
- charge for admission to their collections displays outside the Tower
- make limited disposals from their collections
- lend and borrow objects

7.2.2 Royal Armouries Visitor Surveys at the Tower of London

VISITOR SUGGESTION BOOK

1. From October 1993 to March 1995 visitors were invited to record their comments in a suggestions book at the exit from the White Tower by completing short answer form.
2. 93% (5,065 out of 5,428) of visitors considered that the exhibits were well represented: the rest did not.
3. 87% (4,424 out of 5,066) of visitors found the information provided about the exhibits was useful: the rest did not.

(The main reason given for negative responses was the lack of foreign translation of signs and labels.)

4. 94% (3,079 out of 3,447) of visitors found the staff helpful: the rest did not.

(The main reason given for negative responses was that staff had not been asked for help or had not volunteered it.)

5. Only a minority responded to the questions: What were the best things about your visit to the Armouries? The most frequent responses were:
 - overall quality and presentation of the collections (170)
 - armour (197)
 - the armour of Henry VIII (132)
 - horse armours (118)
 - firearms and cannon (204)
 - instruments of torture (262)
6. Only a minority responded to the question: Can you suggest how we could improve what we offer visitors? The most frequent responses were:
 - add more interesting exhibits (especially instruments of torture)
 - reduce the overall number of exhibits (319)
 - make the information above the exhibits more interesting to the ordinary visitor (e.g. How arm and armour were made, how they functioned and were used, any associations with famous personalities or events, the historical or social context) (324)
 - provide information in foreign languages (379)
 - use other forms of interpretation (audio visuals, interactives, demonstrations, talks, guided tours, hands on) (278)
 - improve physical access (66)
 - improve routing (better signs, more options, more seating) (158)

VISITOR QUESTIONNAIRE

7. From January 1994 until March 1995 a self-completing questionnaire was distributed by warding staff to a cross section of visitors entering the White Tower each day.

396 completed questionnaires were returned.

8. On the basis of these returns, visitor satisfaction ratings were constructed using rating scales as follows:
 - very easy/helpful/good (2)
 - quite easy/helpful/good (1)
 - neither easy nor hard/helpful, not unhelpful/good nor poor (0)
 - quite hard/not very helpful/rather poor (-1)
 - very hard/not at all helpful/very poor (-2)

The ratings were as follows:

Routing	1.17
Helpfulness of Staff	1.48
Presentation of Exhibits	1.42
Information about the Exhibits	1.25
Shop	1.05

SOURCE: An excerpt from Royal Armouries Triennial Report, 1993-1996, p. 47.

7.2.3. Historic Royal Palaces

Duties

Historic Royal Palaces is responsible for the care, conservation, and presentation to the public of the Tower of London, Hampton Court Palace, Kensington Palace State Apartments, the Banqueting House in Whitehall and Kew Palace with Queen Charlotte's Cottage. The palaces are owned by Her Majesty The Queen and managed by the Secretary of State.

Objectives

- Preserve the palaces for future generations
- Provide an educational and enjoyable experience for our visitors
- Provide an effective and efficient service to our visitors

Visitor Satisfaction Ratings for All HRP Sites

Topic	Target Rating	Result *	<i>Using the following scale:</i>	
Value for Money	0.7 to 1.0	1.03	2.0 =	<i>Extremely good</i>
Enjoyment of Visit	above 1.4	1.46	1.0 =	<i>Quite good</i>
Helpfulness/friendliness of staff	1.45	1.53	0.0 =	<i>Ok</i>
			-1.0 =	<i>Quite poor</i>
			-2.0 =	<i>Very poor</i>

SOURCE: Excerpts from Historic Royal Palaces Annual Report and Accounts, 1997-1998, p. 4-5.

*For more information concerning Historic Royal Palaces' statistical results from any of its visitors surveys, please contact HRP at HM Tower of London directly.

7.3 Appendix C: Museum of London

7.3.1 Statement of Standards

MUSEUM OF LONDON

STATEMENT OF STANDARDS

The Museum of London's mission is to enlarge people's perception of the richness and complexity of London and its history by adding to, caring for and interpreting the Museum's collections to a wide audience.

Services provided by the Museum of London

To this end the Museum of London provides the following public services:-

- exhibitions, events and public facilities in the main building at London Wall;
- visits to study collections and sites for the general public;
- facilities for those wishing to use the study collections and associated data for research;
- loans of items from the collections to other organisations;
- information about London's history, the collections, conservation and museum practise generally;
- outreach services (including mobile museums, lectures, work placements, volunteer programmes and careers advice);
- services to schools, colleges and universities.

In providing these services the Museum of London will ensure that:

- all staff wear name badges;
- comments and complaints forms are available, and the procedure for using them set out;
- the standards to which the Museum aspires are published;
- correspondence, orders and telephone calls will be dealt with promptly.

STANDARDS

SERVICE	STANDARD	TARGET	MEASURE
informative and valuable experience by visitors	favourable public response good specific reaction	90% favourable comments exceed criticism by 100%	market research shows good or excellent response totalling 90% or more; monthly analysis of comments
request for information, loans, education use, access to study collections and identifications by phone, letter and in person	where an immediate answer is not possible, a letter is sent within 10 working days	95%	random sample of department's correspondence over 1 month period; taken every 6 months
courteous conduct by all staff to visitors	favourable public response	complaints do not exceed 1% of visitors	monthly analysis of comments
clean environment in all public areas	favourable public response	as above	as above
response to complaints and comments forms	letters sent within 5 working days responding to problems	95%	monthly check on marketing department responses to forms
telephone calls	all calls will be answered within 10 rings	95%	call logger to be installed

7.3.2 Visitor Survey

1 Have you ever visited the Museum of London before? Yes
 No

2 What was your main reason for coming to the Museum today?

- General interest in the history of London
- Came to see a specific exhibition, gallery or item
- Came for an event within the public events programme (workshops, lectures etc)
- Other reason

If "specific exhibition, gallery or item", please state which:

If "Other reason", please give details:

3 How did you hear about the Museum?

- Through friends or relations
- Saw advertisements
- Museum of London leaflet
- Read about it in a guidebook
- Saw the Museum's web site on the Internet
- Heard about it at a Tourist Information Centre
- Through an editorial feature, picture or listing in a newspaper or magazine
- Recommendation on TV or Radio
- "Always known"
- Other source of information

If through a leaflet, where was this picked up?

If through a magazine or newspaper, please name the publication:

If through TV or Radio, please name the programme:

If "Other source of information", please name that source:

4. Do you recall seeing any advertising for the Terence Donovan Photographic Exhibition, which opens on 17th March? (THIS DOES NOT INCLUDE THE POSTERS IN THE MUSEUM LOCALITY)

Yes No

5 (NOW SHOW BOARDS WITH EXAMPLES OF TUBE CARDS) These are examples of tube cards that are currently on display inside train carriages on the London Underground. Do you recall seeing these?

Yes
 No
 Not sure

6 What was your main method of getting to the Museum today?

Train Tube Bus Taxi Walk Coach Car Other

7 Do you recall seeing any articles or photographs about the Museum of London in any newspapers or magazines in the last month? (THIS DOES NOT INCLUDE LISTINGS)

Yes
 No

If "Yes", please name the publication:

Do you recall seeing anything about the Museum on the TV, or hearing anything about it on the radio in the last month?

Yes
 No

If "Yes", please name the programme:

What is your permanent, longterm address?

Town/Area (if British, please enter the county or city, and if in London, please specify which area of London)

And which nation:

8. What is your current occupation? _____

9. Please can you tell me what age group you are in: (SHOW CARD WITH AGE GROUPS ON) _____

ONLY ASK THE NEXT SET OF QUESTIONS IF THE VISITOR LIVES IN LONDON:

The Museum is trying to find out how important Londoners think the study of the past and archaeology are. We are interested in knowing what elements of archaeology people find interesting and would like to know more about.

10. How important is archaeology and the study of the early past (before 1700) to modern London?

- Very important
- Important
- Not very important
- Not important at all
- Don't know

11. What period in the early past (before 1700) are you most interested in hearing about?

- Prehistoric (before Romans)
- Romans
- Saxon
- Medieval
- Tudor & Stuart
- Don't know
- None

12. What areas of London and its early past are you most interested in finding out about?

- All of London
- Central London (City, Southwark & Westminster)
- Your London borough (e.g. Barnet, Lewisham)
- Your immediate neighbourhood (e.g. Highgate, Tooting, Woolwich)

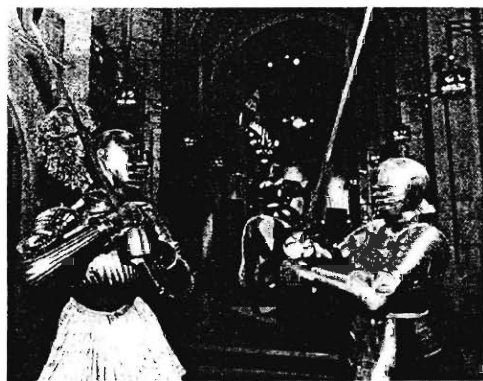
13. What parts of archaeology interest you most?

- Excavations
- New finds
- Scientific methods for examining the past
- What discoveries tell us about past people

- Other
- Not interested
- Don't know

7.4 Appendix D: Higgins Armory Museum

7.4.1 Brief Description



A view of the Great Hall from the Foot Soldier's perspective. Photo courtesy of the Hon. Franklin and George Merrill.

We were ankle-deep in water January 2, but the new year also found us standing on high financial ground, solidly in the black. The floodwaters were dismaying but not as impressive as those great torrents of achievement that are chronicled below in the Director's report. As a former Trustee remarked at a pre-flood reception: "You are fortunate. This is a great time to be President." I readily conceded the point, and still believe it to be true despite the pestilence of rehabilitation that has been felt most acutely by the staff.

This is not to commend a wild or thoughtless enthusiasm for the Museum's future, however. Our fine collection of hushhats, which Trustees donned for board meetings when the institution's prospects were less uniformly brilliant, has been deaccessioned. Challenges remain, how-

ever. Our endowment is plainly inadequate, generating income sufficient only to cover occupancy costs, and this fact reflects a deeper concern. Along with other cultural institutions, we are having to work harder than ever to build a sizable and an active Board that can help the Museum to capitalize on its potential. This is why the Director and I hosted some ten "Friday lunches" at the Museum last Fall attempting to strengthen relationships with Trustees, Incorporators, supporters, and prospective friends. In the not-for-profit world, an institution's competitive advantage derives from the depth and range of such relationships, and so my priority for 1998 will be to continue this work which is really a joy.

As such effort prospers, the Museum will take on the character of the Damascus steel that many of us learned about a few years ago during the exhibit, *Arms of the East: Jeweled Weapons of Status and Rank*. The watered crucible steel produced in Persia and India from the Middle Ages onwards, combines a super-high carbon content that qualifies it as wrought iron with the elasticity and resilience that permits it to take a very fine edge. Higgins already has a super-high content of striking facilities, incomparable collections and exhibitions, and stimulating programs for all ages. It is a strong and splendid piece of steel, but all of that strength will not be enough to ensure success during this time of economic and social upheaval. The Museum will require resilience and flexibility as well as strength if it is to keep its edges sharp in a increasingly competitive cultural environment. Much of that edge will come from our exemplary professional leadership, but an important measure will need to be supplied by a nimble Board of Trustees and a persevering band of Incorporators and friends. I pledge my best efforts towards helping to build such a Board and band, knowing this is one project that we never will be able to mark "finished."

Robert S. Bacheider



The Museum experienced a watershed year in 1997. We sustained the extraordinary momentum of growth that led to an operational surplus for the second consecutive year. We also can report strong growth in our endowment, drawdown was 3.1%. Most museums set a 5% target rate, which means that our performance was 32% better than the standard drawdown rate recommended for most not-for-profit organizations. Our corporate sponsorship and grants continued to grow. We were amongst three other Massachusetts cultural institutions to receive the maximum Institute of Museum and Library Services grant for 1997 through 1999. This year once again, The Stratevest Group is generously sponsoring this publication and the costs associated with the annual meeting.

Attendance, membership and programs combined grew by 26%, while store sales improved by 4%. The hard work of the education department in developing exciting programs and successfully marketing them and the imaginative curatorial projects attracted the attention of new audiences. The gallery on the first floor was renamed the Mary Louise Wilding-White Orientation Gallery at a gala celebrating John Woodman Higgins' daughter's lifetime commitment to the Museum. The public relations department was hard at work at keeping the Museum's name in high visibility; we were on the cover of the AAM's *Museum News* and innumerable radio, newspaper and TV spots during the year.

Continued on page 6



Higgins as a young man in the 1840s

YOUNG JOHN HIGGINS

John Woodman Higgins was born on West Street in Worcester, Massachusetts on September 1, 1874. The younger son of Milton Prince and Katharine Elizabeth (Chapin) Higgins, John was named for his father's professor at the Chandler Scientific School of Dartmouth College. Milton Higgins was affiliated with Worcester Polytechnic Institute, a founder and president of Norton Company, as well as the father of the modern trade school movement in the U.S.

Except for one year in Atlanta, Higgins was schooled in Worcester. He was poor in spelling and languages, but shared his father's natural talent and interest in mathematics and mechanics. He also possessed a fascination with metalworking, and spent many hours observing blacksmiths, farmers and factory workers at work. Like many of his contemporaries, young John was also enchanted by the chivalric tales of knights and knighthood, a common literary theme at that time. These interests manifested themselves in a life-long devotion

A DOCTOR OR MANUFACTURER

Since his youth, Higgins had wanted to be either a doctor or a manufacturer. Therefore, it was not surprising that in 1896 after graduating from Worcester Polytechnic Institute, John joined his father's Plunger Elevator Company. When the firm was sold, the two men purchased the Worcester Ferrule and Manufacturing Company, reorganizing it in 1905 as the Worcester Pressed Steel Company. When his father died in 1912, Higgins became President and Treasurer, positions he held until 1950 when his oldest son took over.



Design for the Pressed trademark. The knight on the armor's chest was copied after this



Three-quarter armor, probably for the 2nd Earl of Pembroke. North Italian, circa 1560-70.

A DREAM IS FORGED

It was on one of Higgins' many trips to Europe that he resolved to build a first-class collection of armor. In 1927, he recorded that a June 1926 sale at Christie's in London, presumably the Princes Radziwill collection, set him on his course. He lamented that while he had "one or two copies of suits....," he was still searching for a "real good genuine suit...an interesting genuine museum piece." He achieved this goal in 1928 when he purchased a group of armors from Sir Joseph Duveen, the famous art connoisseur and dealer. This was Higgins' first truly significant acquisition and was followed by several equally important purchases during the next decade.

At this time, Higgins realized that he needed a facility in which to house his growing collection, and he began to conceptualize a museum that would serve as a temple to the art of metalworking, with armor as the focus. He envisioned a commercial museum, where exhibits of all qualities would be available for

A CELLAR PAINTED SILVER

On January 17, 1906, after what he described as a "very, very long" courtship, Higgins married Clara Louise Carter of St. Louis. They soon visited Europe, and while in Venice, Higgins purchased his earliest documentable armor: a modern reproduction. By 1914, the Higginases, now a family with a son, Carter (soon followed by another son, Bradley, and a daughter, Mary Louise) built a new house on William Street, near Elm Park. Constructed at a cost of more than \$80,000, it was filled with many state-of-the-art innovations, including coat dryers in closets, ice machines, secret panels, shoe polishers and automated window shutters. Higgins' love for metal even reached into the bowels of his home: the William Street

A "STEEL MUSEUM" IS BUILT

W

hen his dream was finally realized in 1931, Higgins' "Steel Museum" was housed along with the Worcester Pressed Steel offices in a new, state-of-the-art, glass and steel curtain wall building. Designed by Joseph D. Leland Architects of Boston, the structure cost over \$300,000. The main gallery was inspired by the many noble houses and castles Higgins had visited in Europe. This gothic style Great Hall was divided into "Ancient" and "Modern" wings, with exhibits showing both historical and modern steel products, ranging from Renaissance suits of armor to a Piper Cub aircraft that was suspended from the vaulted ceiling. (The plane was removed in the early 1970s when the modern displays were eliminated.)

After touring the museum, visitors were invited to watch the manufacture of modern steel products in Worcester Pressed Steel's adjoining factory, which Higgins called "the biggest exhibit of them all."



The Higgins Armory Museum, late 1940s.



John Higgins explains the details of the Teutonic armor to a young visitor. Photo taken in 1946 by Augie Anderson of Auburn, Mass.

"IF WE CAN STRIKE A SPARK..."

On October 19, 1961, at the age of eighty-seven, the "man of steel" died of a heart attack. His museum, however, lives on as an active memorial to one man's desire to record and praise Humankind's artistic and creative history. Today, more than 25 years after his death, Higgins' spirit continues to fill the Great Hall. The ranks of armor stand resplendent, representing the last of the pre-World War II, privately formed American collections to remain in its original home. More than 15,000 visitors annually marvel at the trophies of one man's efforts, a dream made real for the education and pleasure of all and with his belief that "If we can strike a spark and interest visitors, we are rewarded."

Quoted from a speech by Walter J. Karbeshki, Jr. in *Journal of the Steel Industry*, Editor: Edouard Komarov, 1962.

MUSEUM
100 EAST WASHINGTON, WORCESTER, MASSACHUSETTS 01602 (508) 853-0015

"THE MAN OF STEEL"

JOHN WOODMAN HIGGINS
& THE EARLY YEARS
OF HIS MUSEUM



"Every industry should establish its own technical museum for the inspiration of others in industry, the study of its clients, and the general education of the public, and they should not only cover history, but present products and possibilities for the future."

JOHN WOODMAN HIGGINS

7.4.2. Educational Program Survey

Higgins Armory Museum 100 Barber Ave. Worcester, MA 01606 (508)853-6015

Higgins Program Evaluation

We hope that your group enjoyed its visit to the museum. Please help insure quality programs by filling out this evaluation form and returning it to the Admissions Desk before you leave, or by mailing it back to us. Thank you.

Name: _____

Teacher Chaperone

School: _____

Grade: _____ Date: _____

Auditorium Program – Please rate this presentation: Excellent Good Fair Poor

Comments: _____

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Comments: _____

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Comments: _____

Was the material and presentation suitable for the age/grade level? Yes No

Comments: _____

What additional material would you like to have included?

Comments: _____

How did you learn about the Museum's school program? Brochure Colleague

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Comments: