

MASTER THESIS CULTURAL ECONOMICS AND  
ENTREPRENEURSHIP

THE VISITOR APPRECIATION OF THE EYE FILM INSTITUTE  
ARCHITECTURE

A STUDY ON THE VISITOR MOTIVATION BY AND WILLINGNESS TO PAY  
FOR THE VALUES OF ARCHITECTURE



Photo: Wojtek Gurak

JURJEN RÖBEN  
2014

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## ABSTRACT

Despite the financial crisis and the high expenses, many museums in the Netherlands invest in the (re)construction of new buildings. There are many reasons to do this, but the question rises if architecture interests the museum visitor. The aim of this research is to find out which values of architecture are important to these visitors using a case study of the EYE Film Institute and their remarkable new museum building. Research firstly is done with a literature review in order to analyse which values architecture can have in general and for museum visitors. A review of different articles and researches on architecture resulted in the seven categories exchange, use, image, social, environmental, aesthetic and symbolic value of architecture. Secondly these architectural values were analysed for their importance to museum visitors with an empirical research and the case study of the EYE Film Institutes is used in order to investigate this link. A Contingent Valuation study with a Willingness To Pay survey is done with 121 visitors of the building of EYE in order to see which values are most important to them. The results show how visitors are mainly positive about the influence of architecture. The Aesthetic value, if the building is beautiful, is most important to them. Also the Use value and functionality is important. The symbolic and image value or what the building communicates, were moderately important. These values motivated respondents to visit EYE and they were willing to pay an extra fee for them. Less important to the respondents were the buildings influence on the environment and strikingly its ability to encourage social contact. The social value of architecture was less important to visitors than the other values. Furthermore this research goes deeper into the values of architecture and their importance to visitors.

**KEYWORDS:** Architecture, museum buildings, visitors, EYE Film Institute, Film, Amsterdam, culture, values.

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# I - INTRODUCTION

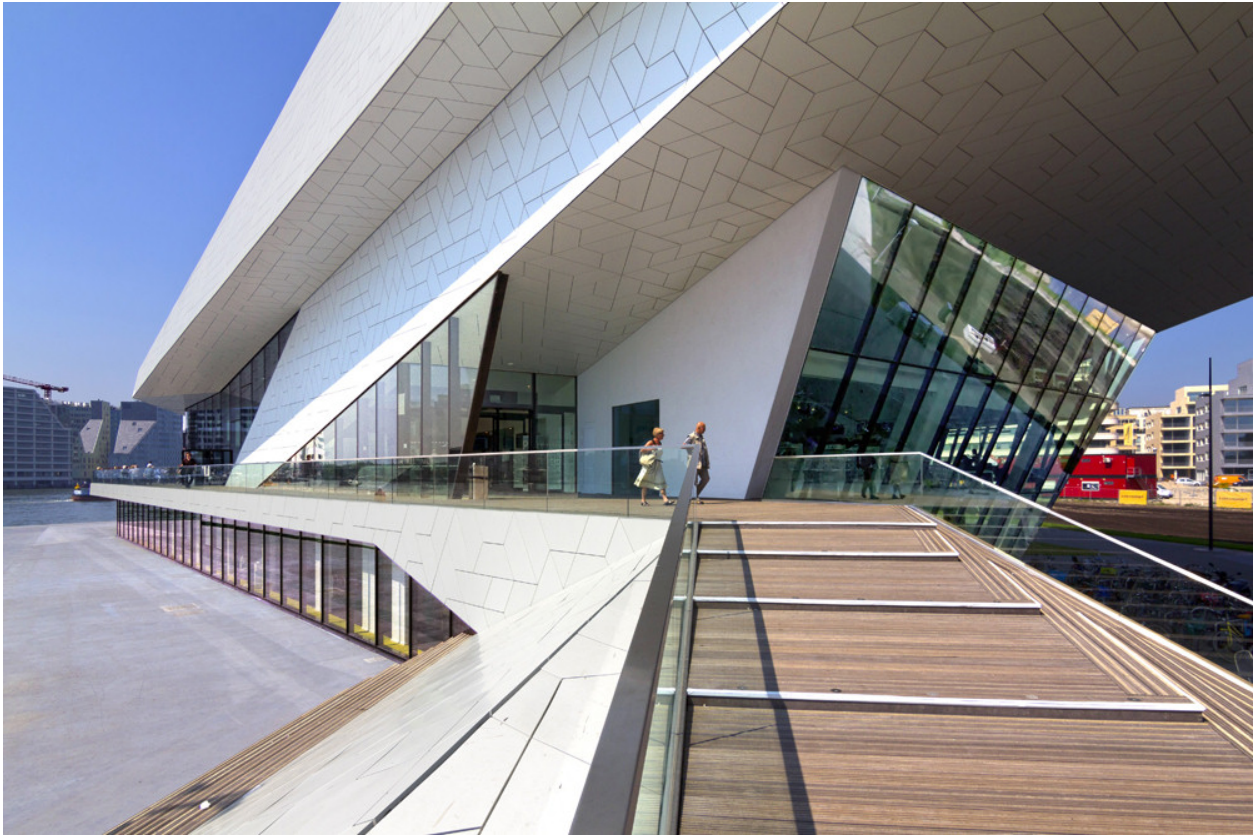


Photo: Wojtek Gurak

## 1. INTRODUCTION

Nowadays, art is often exhibited in extraordinary, expensive museum buildings designed by internationally known architects. Museums tend to have buildings that are recognizable, stand out and have architectural designs that make the museum a piece of art itself. Everywhere in the world enormous museums are built and the one is even bigger than the other. The often-mentioned Guggenheim Bilbao Museum, designed by architect Frank Gehry, is no exception. People from all over the world come to the museum to see the collection and admire the building. A relatively new or renovated, distinct building seems to be important to modern museums and is even seen as part of the characteristics of a *superstar museum* (Frey & Meier, 2006; Giebelhausen, 2003). Also local governments and cities are keen on the development of buildings in their city and it is even suggested that they are competing collectors of contemporary architecture. It looks like the lines between modern art and architecture are blurring (Ponzini, 2010).

Especially in the last part of the 20<sup>th</sup> century a museum boom was emerging, as one third of the total museums in the world were built in the end of the 20<sup>th</sup> century (Davidts, 2003a; Idema & Van Herpt, 2010). A recent inventory shows that similar events are still occurring in the Netherlands. Outstanding amounts of money are spent on the (re)construction of museum buildings. Since 1990 around 1,5 billion euros are spent on new or renovated museum buildings of which 700 million in Amsterdam only. An account of the last twenty five years shows that 41 museums invested in a new building or wing and another 15 museums had reconstruction or conversion work done on their buildings. This shows that the interest for the museum buildings seems to be rather high in the Netherlands and it keeps continuing. In the coming years, amongst others, several known museums like Boijmans van Beuningen, Van Gogh Museum, Naturalis and Centraal Museum Utrecht are planning to renovate or build additions to their museum (Van Lent, 2013). The investments in buildings still play an important role in the Dutch museum field.

Clearly not only museums invest in architecture as many organisations have incentives to build an exceptional building. Literature suggests that architecture can be of much importance for society, cities and individuals. Economist, sociologists and cultural researchers formulate arguments that support the importance of architecture and include more than financial arguments. Architecture, amongst other cultural goods, is said to lift regional development and attract a certain amount of 'cultural capital' to a city, important for innovative projects,

development and economic growth (Bille & Schulze, 2006; Giebelhausen, 2003). Obviously economic values count and can be an incentive to invest in architecture but other arguments are also important. Museum investments in architecture are often based on arguments about lack of facilities in old buildings, lack of space and the lack of public appeal to the building. Recent plans to invest in a new Museum of Modern Arts in Arnhem show that these arguments are often the main incentive to start constructing a new building (Van Lent, 2013). Museums need a place to show their collection. Furthermore other functions, values and benefits of architecture are also used to justify investments in architecture and experts take aesthetic, social, cultural and environmental values into account from all kinds of disciplines when valuating architecture (Davidts, 2008; CABE, 2001).

These values, although not all tangible, motivate to invest in architecture. The high costs of a building consisting of the architectural design, construction and its maintenance, can however be a financial burden for museums. Next to this, possible disappointing visitor numbers, higher costs for exploitation and electricity make it difficult for them to stay financially healthy after such an investment. Museums with financial problems after investing in architecture and not considering extra costs appear a lot in the Netherlands. This makes it worth to reconsider the expected added value of an expensive museum building. For instance, in the recent referendum on investment in a new building for the Museum of Modern Arts in Arnhem, 85% of the public voted against because of the high costs (Van Lent, 2013). Financial problems also made it inevitable for the Dutch government to cut subsidies in the cultural field, which affect museum budgets and forces them to find new ways of funding. At least fourteen Dutch museums had to close in the period from 2011-2013, orchestras, theatres and dance collectives had to shut down and numerous others have financial problems (Van Lent, 2013). This makes it for cultural organisations like museums even more questionable to invest in architecture. As said before, cuts will force museums to become more customer-oriented. More visitors will raise income and it is therefore important to know what a potential visitor is looking for. Often, museums react with blockbuster exhibitions or become more of an experience in order to attract more visitors and raise income to use on other expenses.

A possible visitor-attracting category is the building of the museum. Numerous studies in the genre of city development show that certain aspects are important for a city to develop economically but also creatively. One of these aspects can be a museum designed by an internationally known architect, creating a building that tickles the imagination and attracts many



tourists. Dutch examples of this are the Groninger Museum and Bonnefantenmuseum in Maastricht that both have buildings designed by internationally known *Starchitects* attracting many visitors despite their outlying locations. Hence, architecture is seen as an opportunity to attract visitors (Van Lent, 2013; Ponzini, 2010; Jodido, 2010).

Architecture has become a part of the museum experience that can attract visitors, but part of becoming more visitor-oriented is knowledge about the desires of these visitors. More information about what customers at a museum think about the architecture and if they acknowledge its importance is crucial to anticipate and understand its value for the museum. This issue raises questions about what visitors actually think of its architecture. Do they consider architecture as important? Or do they not acknowledge its values? One would say that visiting a museum is often more about the collection and the exhibitions. The art is what counts, not the building. These contradictions raise the questions this research tries to answer. The way these questions will be answered will be explained in the next section.

### 1.1 CASE STUDY: EYE FILM INSTITUTE

A recent example of the investment in museum architecture is the building of the Amsterdam based EYE Film Institute. Different private and public organisations worked together to finance the exceptional building next to the IJ water that opened in April 2012. The EYE Film Institute's main activities are managing and making available their collection of original films, photos, posters, books, soundtracks and film equipment archives to the public and houses a museum, cinema, restaurant and museum shop. The architecture is striking and has attracted many visitors over the two years it is open now. The new and exceptional building, the museal function and the amount of visitors make this a good case study in order to investigate the importance of a museum building to its visitors. In chapter 5 the case study and its relevance to this study will be elaborated more.

### 1.2 AIMS & OBJECTIVES

Since there is still much invested in museum architecture, these buildings must have certain values that justify the investments for the interested parties. The question is whether these values are important to (potential) visitors of a museum. Since visitors become more and more important to museums in order to stay financially healthy, this research will address the relation between the values of architecture and visitors of the EYE Film Institute.

In order to do this, research will be done into the visitor opinion on the values of architecture. The aim of this research is to explore what values of architecture are important to visitors of the EYE Film Institute. To achieve this, the objective of this research is to do a cross-sectional quantitative research using questionnaires at a key point in the area where the EYE Film Institute is located. Visitors are asked to fill in a questionnaire about the values of architecture. This quantitative research can make it possible to answer the following main research question:

*Which values of architecture are appreciated the most by visitors of the building of the EYE Film Institute in Amsterdam?*

To answer the main question, sub-questions are posed. Answering these questions will help solve the main research question and enrich the answer. The sub questions are divided in two parts. The first part will consider a literature research on architectures' values. In this part the theoretical base will be laid for the questionnaire. In the second part, the results of the questionnaire will be used to answer questions about architectures' influence on visitors.

#### **Literature research**

*1: What are the values of architecture according to literature?*

*2: What values can architecture have for museums and its visitors according to literature?*

#### **Empirical research**

*3: Which values of architecture as defined in literature motivate visitors of the EYE Film Institute building to visit?*

*4: Which values of architecture as defined in literature influence the willingness to pay of the building visitors for exhibitions in the EYE Film Institute?*

### **1.3 RELEVANCE**

This research will address themes about architecture that are highly relevant and contemporary. It will have an interface with recent financial problems in the cultural sector and addresses the on-going interest in (re)constructing museum buildings in the Netherlands. It will include a case study of a recently finished key building in Dutch museological architecture that represents this on-going interest. Architecture is all around us and is said to influence people on so many levels (Pevsner, 1963). The fact that architecture can influence people in different ways is an argument to keep on doing research in this field in order to understand this influence and use

this knowledge in the advantage of both society and organisations. The values that architecture can have and influence people are a field of scientific research that needs to keep being explored. Because of the previously mentioned subsidy cuts and the economic crisis in the Netherlands, research in the economic situation of cultural organisations is relevant. The results can give insight in the justification of investments in expensive architecture. This research and its outcomes are academic relevant because they attribute to research on the importance of architecture from the demand side for cultural goods and services. Literature suggests the importance of architecture but it is hardly investigated if visitors attach any value to it. This research will therefore provide insight in public opinion on the value of architecture in the case of the EYE film museum and thereby has both academic and public value by being contemporary and adding value to existing research on both architecture and museum visitors.

#### 1.4 READING GUIDE

In the second part of this thesis, theory about the different subjects of this research will be addressed. Treating the different aspects of museums, architecture and visitors will give the information needed to research this field. In chapter 2 the relevant literature on the value of architecture will be elaborated. Its perceived qualities, benefits, importance, positive influence and values are explained. The first sub question about the values of architecture will be answered. Chapter 3 will go deeper into the situation of museums and its visitors. Literature on the characteristics of museum institutions and its visitors will be elaborated and literature on architecture will be applied to these situations. The position of architecture in the field of museums is explained and the second sub question on the values of architecture for the visitors of museums will be answered. In chapter 4 the ways of researching these kinds of values and additional literature is elaborated and in chapter 5 the case study of the EYE will be deepened. In the third part of this research and chapter 6, the methodology used to research the influence of the values of museum architecture on visitors is explained. The choices of the case study, units of analysis and methods of data collecting and analysing are justified and the questionnaire design treated. Chapter 7 will include the result analysis. Part four and chapter 8 contain the conclusions of this research.

## II – LITERATURE



Photo: Wojtek Gurak

## 2. ARCHITECTURE

### 2.1 INTRODUCTION

This chapter contains an exploration of the main literature on the functions and values of architecture. First however, a few key aspects of this research will be defined in order to make clear in what light this research will address them. Subsequently, the different aspects that make architecture important according to literature will be elaborated. In the next chapter these aspects will be applied to the specific situation of museums and visitors.

The main subject of this thesis, architecture, is a naturally broad concept. Architecture can have different meanings and aspects as it applies to many different objects. Architecture is defined by The Oxford English Dictionary (2014) as *“the art or science of building or constructing edifices of any kind for human use”*. This definition however is not specific enough and ignores the more visual aspect by focussing on functionality. The Commission for Architecture and Built Environment of the UK (CABE) defined the architecture for office designs as the buildings themselves and associated environments both internal and external. *“Together, these can be looked at as a series of layers defined by building life cycles, with each component of the building having a different longevity, from the infinite life of the site to the day-to-day variability of setting”* (CABE, 2005). Although this goes deeper into the different dimensions of architecture, it ignores the more visual side of architecture. The way Vandell & Lane (1989) defined architecture in their research on the financial benefits of architectural design, comes closer to a definition fit for this research. They see architecture as the effect that the buildings’ external appearance has on the people who look upon it. The visual aspect of the building is also important compared to the functional structure of the building. Vandell & Lane state that the amenity of the design is an aesthetic value, as the visual environment of a building provides a sort of pleasure to stakeholders of the building (1989). Architecture historian Sir Pevsner (2009) notes that everything that makes a space for humans to move into can be called a building. The difference with architecture is that the term architecture is made with knowledge of visual attractiveness. This aesthetic value of the building comes from looking at the exterior architecture, the inside interior design and the views from inside the building (Vandell & Lane, 1989). This visual definition of architecture will be adopted in this research.

The term value, when talking about the value of architecture, also needs to be defined. It is important to make clear what the qualities, values, benefits, influences and the positive sides of architecture are. Saxon (2005) sees value as the balance between the benefits and the costs of

the architecture. If this balance is positive, there is some sort of value created that has benefits and merits for people. These positive influences of the architectural design, tangible or intangible, will therefore be called values in this research.

## 2.2 ARCHITECTURE & VALUE

The values of architecture can justify investments in architectural design and prove its existence useful. Already in 448 Before Christ competitions were held for the design of a war monument on the Acropolis. Since the times of the ancient Greeks, the value of architecture is said to have been part of discussions in decision-making (Volker, Lauche, Heintz & De Jonge, 2008). To understand the difficulty in addressing the value of architecture, it is important to explain how architecture has the characteristics of cultural goods and what this entails.

Cultural goods and services are often seen as the expression of culture in art form with creative, symbolic and intellectual property outputs. These expressions however, do not always have a tangible market price, which makes their value hard to measure. The market value of goods and services focuses on the use value, but the non-use values of cultural goods and services are equally as important (Klamer, 2011; Throsby, 2001; Ginsburgh & Throsby, 2006; Towse, 2011; Cuccia, 2003; Snowball, 2008). Non-market values result in so called 'market failures' and disturbed market prices that do not represent the full value of cultural goods. These goods are known to have externalities that can benefit entrepreneurs that do not take part in, or pay for the production of the product. Cultural goods are also often non-excludable, which make them enjoyable to non-paying customers. They consume a good but do not pay a market price to the producer. The producer does not get the chance to market this group and the customer is not able to state its preferences, which is called the 'free rider' problem (Frey, 2011; Snowball, 2008). Likewise, non-market demand does not represent itself in the price of cultural goods, although it should create value. This type of demand exists out of non-paying people that do however attach value to the idea that a cultural good exists. One for instance sees it as a source of pride and a gift to future generations, but does not consume the good. These are called non-user benefits (Cwi, 1980; Frey 2011; Snowball, 2008; Frey & Meier, 2006). Disturbed price mechanisms also occur when people make irrational decisions because of the unclear definitions and categories of cultural goods (Frey, 2011; Frey, 2006). Prices of cultural goods on the supply side are also subject to market failure. There are many monopolies that sell a small amount of cultural products that bring the price up. Next to this cultural organisations have difficulties with high investment costs, which also influences the prices for these goods. These

characteristics show that it is hard to come by the actual value of cultural goods and are often the reason for government intervention and paternalism (Frey, 2011; Towse, 2011; Blaug, 2003). The market failures connect to the fact that cultural goods are known for their intangible values. Art and culture is said to provide constant education, integrate people socially and give pride and national identity (Saxon, 2005; Cwi, 1980). It can communicate critique, ideologies, values, and expressions. It can have aesthetic, historical, experience and entertainment value, all of which are rather intangible and different of worth to people. The value of these goods depends on the stakeholders to whom the value may come and is created in the conversation between people depending on numerous contingencies (Hutter & Frey, 2010; Snowball, 2008; Hutter & Shusterman, 2006).

The intangible values, the market failure, the externalities and similar effects give insight in the non-market values of cultural goods. Comparable problems arise when valuating architecture. Not only objective monetary investment and real estate values make up for the value of the architectural design for its stakeholders, also other subjective and intangible values need to be taken into account. The positive influence of quality architectural design is not to be denied. People can avoid interacting with the influence of the value of arts and its difficulties but cannot escape the influence buildings because they are all around us (Pevsner, 2009; Hough & Kratz, 1983). If the architectural design has noticeable effects on the stakeholders of the buildings, one might suggest they would value it higher on the market. However, market failure occurs when stakeholders are uninterested in architecture and do not see its potential value. Externalities without market price occur if stakeholders have direct encounters with the building, like passers-by, and consume the aesthetic benefits, but do not pay and are unable to state their preferences as would be normal in a market system (Hough & Kratz, 1983). Stakeholders all have different criteria to evaluate the building, which is contingent dependent. The design of the building can for instance be of significant influence on the way a building is valued but professionals agree that the value of the design is not to be measured by rational objectives and criteria posed upfront (Volker et al. 2008). This complicates the evaluation of intangible values as they are always interpreted differently. For instance the experience of architecture professionals will make them more likely to base their decisions on intuition. They will use different kinds of references for reviewing the quality of building design than common people would (Volker et al. 2008). These aspects make valuating architecture and its design a difficult task.

### 2.3 QUALIFYING DESIGN

Different ways of measuring the quality of architectural design will be addressed before addressing the values of architecture. Quality attributes to value and poor quality is able to destroy value (Saxon, 2005). Quality is therefore an important factor when looking at value.

In their research on the structuring of user perceptions of University buildings, Gonzalez, Fernandez and Cameselle distinguish between two types of evaluations of an environment (1997). First there is the *perspective-cognitive* evaluation that concentrates on the objective characteristics of the surrounding, meaning *temperature, air, space* and *illumination*. Secondly, the *affective* evaluation focuses much more on the feeling of the environment and is somewhat subjective. The *affective* evaluation is much more an emotional reaction to the buildings and exists in their research out of *pleasantness* and *aesthetics*. They included these two in a total of five dimensions that might predict people's satisfaction with their surroundings. The other four dimensions were the parts of the *perspective-cognitive* evaluation. Their research showed that the emotional dimension, the *affective* evaluation, was the best predictor of user satisfaction with their surroundings. *Affective* evaluation can influence people's experience of a surrounding because it shapes attitudes and feelings and these have more influence on the experience of a building than *perspective-cognitive* aspects do (Gonzalez et al. 1997; Van den Sigtenhorst, 2003). Vandell & Lane (1989), make a similar distinction. They see architecture as something that can be valued as art consumption that provides an aesthetic response, or as a more functional contribution to the productivity of a business with a more physical response. They argue that the quality of architectural design depends on aspects as colour, texture and quality of the surface materials. However this approach ignores some intangible aspects and therefore is too incomplete.

One simple way of qualifying design value is by looking at design awards and their criterions. A building that won many prestigious prizes must be of a high quality. However, the main concerns is that the criterion used by award judges and experts are often untransparant and very different from for instance neighbours, passers-by, users and other stakeholders of the buildings. Decisions are made by experts behind closed doors and are focussed on specific qualities and buildings (Gann, Salter & Whyte, 2003). This method ignores both common types of buildings and the value for all other stakeholders than experts. This method is what Gann & Whyte (2003) call the *judgement-based* approach in their article on measuring design quality. A second approach is the *manage & measure* approach where designers are considered as able



to decide about the needs of the social, economic and environmental surroundings. By measuring and benchmarking with the data, but also better management, design can improve according to this approach. Rationality is the main focus here. According to the third approach called *rational-adaptive*, the value of a building design should be captured by opinions of both professionals and non-expert users. This might be hard to measure but it is important to consider both opinions when assessing the impact of design (Volker et al. 2008; Gann, Salter & Whyte, 2003).

Both expert and user opinions are tried to grasp in the Design Quality Indicators (DQI) designed by the Construction Industry Council in the UK. This index was developed to measure explicitly the quality of the building design and captures the stakeholder perceptions of this quality using a questionnaire. The value is in this case defined as the benefits for the stakeholders of the building that arise from the ideas in the design process carried out in the development. Therefore the quality of a building is not the result a single measurement but of different viewpoints (Volker et al. 2008; Gann, Salter & Whyte, 2003). A framework was developed for the DQI consisting of three elements based on works by Roman architect Vitruvius. This framework includes the quality fields *Function*, *Build Quality* and *Impact*. *Function* is described as the usefulness of the building and exists out of use, access and space. *Impact* is more concerned with the ability of the building to influence its community and create a sense of a place and included urban & social integration, internal environment, form & materials and character & innovation. *Build Quality* contains performance, engineering systems and the construction of the building. These three aspects form the basis for the definition of the quality of design of the DQI (Gann, Salter & Whyte, 2003; Volker et al.; Saxon, 2005; DQI). Quality, and therefore value, is to be achieved when all three aspects are in harmony, overlap and have a synergy (Volker et al. 2008; Saxon, 2005). An important aspect of this measurement is that it includes the purpose of the building. It is unrealistic to include only design quality without looking at the intention of the building (Gann, Salter & Whyte, 2003). This approach takes into account the subjective and intangible aspects of the values that rely on the perceptions of people and other contingencies, which shows how one unified standard of quality is impossible. Therefore the DQI accepts this subjectivity and by that also focuses also on intangible values of the building design that are often ignored in other measurements (Dewulf & Van Meel, 2004). The measurement is done through questionnaires filled in by users and stakeholders of the (future) building. They are asked to define the quality of buildings on a six-point scale in the three sectors and prioritize these qualities (Gann, Salter & Whyte, 2003).

Although this way of measuring the quality of design is a good attempt, it ignores certain aspects and is therefore somewhat incomplete in its elaboration. The method combines objective measures and subjective perceptions of humans in its consideration, which may interfere in the quality of the measurement. It is also an illusion that all stakeholders are able to express their honest perceptions. Difficult questions or strategic and socially accepted answers might confuse the results. Also the intention of the method is often unclear and methodology lack descriptions (Markus, 2003; Dewulf & Van Meel, 2004 & Prasad, 2004). It does however, as said before, offer a practical tool for communicating about the quality of the design of building and is adopted world wide as mandatory part of development processes by for instance the New York Department of Design and Construction (Dewulf & Van Meel, 2004; DQI, 2014). DQI also shows that it is important to include opinions of all stakeholders when qualifying design. The tool can justify investments, value quality and show stakeholders the importance of architecture (Dewulf & Van Meel, 2004; Pemsel, Wide'n & Hansson, 2009). This also demonstrates that users of buildings, like museum visitors, should also be included when valuating architecture.

## 2.4 STRUCTURING ARCHITECTURAL VALUES

The Commission for Architecture and Built Environment (CABE: Now the Design Council and former UK government advisor on built environment design) combines previous approaches into detailed view on values of architecture. They are specialized in research on architecture and include not only financial but also intangible values and functions (Design Council, 2014).

CABE argues that it is a simplistic, but established, view that the values of most products only come to the stakeholders that pay for them. In this simplistic view products and services often get the price that it has on a certain market, which is not the best indicator in determining the values of cultural goods (CABE, 2001). CABE states that the external and social effects of well designed urban spaces and workplaces are not directly translatable in market prices but have significant effects and much more value than is expressible in a price on the market (CABE, 2001). These arguments fit in with this research' approach of architecture as a cultural good and therefore pave the way for an elaboration of these values. CABE distinguished six groups of architectural values, which makes it possible to address and group different angles of the value. The six diverse kinds of values of urban design and buildings are *exchange value*, *use value*, *image value*, *social value*, *environmental value* and *cultural value* (Macmillan, 2006; Carmona,

2004). This research will adopt CABE's structure as a guideline to elaborate the values of architecture. A literature research resulted in a list of additional sources that confirm this structure and the existence of these values. In the next section each of these values will be explained and summarized. The results of the literature research are available per value in Appendix A. In the next chapter this framework will be used to address the importance of architecture for museums and its visitors and contra arguments will also be discussed

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#### 2.4.1 EXCHANGE VALUE

The first value distinguished by CABE is the exchange value. It represents the trade value in a market and if the building represents good value for money. This obviously depends on the size and the location of the building but also on a wide range of other factors (Macmillan, 2006). The architectural design can add to the value of the building and its quality can increase the price. There are also warnings that bad design can negatively influence the financial value (Simmons, 2006). The quality of the design can influence property prices, rents and returns on investments. A selection of articles that emphasize these influences is presented in Appendix A, table A1. These researches show that even experts are vulnerable to the influence of architectural design and that quality architectural design matters economically. Part of the exchange value is how wisely government funding is invested in a building. This is especially interesting in the scope of this research and will therefore be elaborated more in the chapter on museum architecture (Macmillan, 2006).

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#### 2.4.2 USE VALUE

The use value is the value that a building can add to the organisational outcomes and whether it is fit enough for the intention of its creation. The building should be in service and support of the occupying organisation and their activities (Macmillan, 2006; Saxon, 2005). The organisational outcomes include productivity and competitiveness but also more human resource related outcomes like staff satisfaction and health. If architecture is able to influence its occupiers it makes it much more valuable and useful (Macmillan 2006; Vandall & Lane, 1989). This value has strong connections with the previous mentioned aspect of the DQI called *Function* (Volker et al., 2008; Saxon, 2005; Gann, Salter & Whyte, 2003). A lot of research on this value is done from a business angle, in order to find influences of architecture on productivity, effectiveness and efficiency. The first researches that showed how physical surroundings could influence employee productivity were the Hawthorne studies. They showed how things like lightening could have enormous effects (Rainey, 2009; Ward & Holtham, 2000). CABE's review of case

studies and researches on the relationship between office design and business performance also results in a list of argued influences of office design on performance. It is reasoned to have an influence on the productivity, motivation, retention, knowledge, skills of the staff, innovation and creativity in the workplace, responsiveness to business or technological change and cultural shifts. It creates cohesion between employees. Next to this, their meta-analysis of research in this field appoints that it can influence customer attraction and retention, as is important from the image point of view which will be explained later (CABE, 2005). Obviously, a functional designed building will add value for the organisation that occupies it. Practical supplies and interior organisation will have positive influences; this is a value that needs no explaining. However, as shown, a good quality design can also have other influences. A selection of researches is addressed in appendix A table A2. These researches show how architecture can contribute to the specific outcomes for an organisation; those for a museum will be explained later.

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#### 2.4.3 IMAGE VALUE

Architecture is able to make strong images in their environment. Buildings are able to become symbols of certain areas and show the occupying organisation to have a vision. Cities, public and private organisations can promote and communicate their identity, image and products with buildings and make themselves visible. It can create pride, status and is a statement about the user of the building. The intrinsic quality of the design and the status of the designer associated with culture add to this value. Architecture becomes an informing object. This is the image value of architecture (Macmillan, 2006; Saxon, 2005; Evans et al., 1998). Identity is important to organisations. If this identity is clear for themselves but also for outsiders, this identity stronger and easier to communicate. Examples also show what architecture was ought capable in creating identity of for centuries now. The way architecture creates this value is made clear in several sources. Buildings that catch the eye of people and have a certain factor that stands out can offer a few chances for organisations but also municipalities and politicians. A remarkable building might create consciousness of a certain place and obtain attention from the press (Macmillan, 2006). This is also the case for big (public) buildings like Museums. The sources presented in Table A3 show the extensive image and visual value of architecture that can be of great service to organisations in order to profile themselves.

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#### 2.4.4 SOCIAL VALUE

Architecture is also said to have a social value, an influence on social connections and interactions of people. Architecture can positively affect social relationships and networks (Macmillan, 2006). The social value is the influence architecture has on the public by for instance amenities, environmental enhancement, area regeneration et cetera (Saxon, 2005). Architecture is said to have the ability to promote and improve social cohesion in a certain district and improve conditions by its internal, but also by its external facilities. Architecture is able to create spaces that bring people together. Not only its shelter function, but also its aesthetic and visual aspects can make a difference in shaping communities. This is comparable to architecture's ability to create cohesion amongst employees of a business, as explained before (Hargreaves McIntyre, 2006; Macmillan, 2006). Part of creating social cohesion is identity and pride of peoples' history and heritage. By being a beacon of recognition and thereby shaping spaces, architecture can bring some sort of pride and identity to a community, which will help people to integrate in places or communities. Heritage and recognizable architecture can form cohesion through giving identity to an area, which can result in commitment towards an area and dignity for its inhabitants (Rijksgebouwendienst, 2008; Hargreaves McIntyre, 2006). These examples and the researches in Appendix A, table A4 show that architecture can have a social value, influence interaction between people and shape relations, communities and networks.

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#### 2.4.5 ENVIRONMENTAL VALUE

The production, maintenance and usage of buildings can hurt the environment. Production can produce pollution and waste and maintenance can influence the environment through electrical, oil and gas usage. The environmental value is architecture's ability to diminish this impact on the environment and be energy efficient (Macmillan, 2006). It is the equilibrium between the costs and the benefits to the natural surroundings (Saxon, 2005). Examples of buildings with environmental value are those that have solar panels, do not waste fuel and pollute the environment. A bad designed building, with no attention to the environment will first of all have more maintenance costs although the investment in environment supporting buildings also costs money (Simmons, 2006). This environmental value is important to many people and is sometimes even used as an expression of a certain image. An environmental friendly building can be a permanent message to the public of the environmental awareness of the occupier. Many researches show how certain constructions can improve the environmental value of

buildings. Appendix A, table A5 shows examples of how environmental values of architecture can even influence other aspects than the environment itself.

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#### 2.4.6 CULTURAL VALUE

The architectural design of a building is part of the culture it belongs to and its surroundings. It says something about the time it was built, the identity of the people then and what people were capable of. Buildings can have an extraordinary value now and in the future by giving value to a location and its character. The cultural value includes intangible and subjective symbolic, inspirational and aesthetic values that contribute to a community (Macmillan, 2006; Saxon, 2005). These are values that are really dependent on the person who encounters the building but are not to be ignored as they can be of big influence. Like Gonzalez et al. (1997) made clear in their research, the intangible aesthetics and pleasantness of a building are often of bigger influence than more tangible aspects like temperature, because it shapes attitudes and feelings towards architecture. The important difference between functional and aesthetic value is that the derived value comes from a physical reaction to the functional aspects or from an aesthetic reaction to the building (Vandell & Lane, 1989). The aesthetic value also contributes to the cultural value. The beauty of a building can contribute to being part of a culture and its value (Macmillan, 2006). As mentioned before, architecture design can be of creative and inspiring value to users. Its beauty can result in inspiration for people on all kinds of levels. This makes the building an influence on culture and people (Ward & Holtham, 2000; Bjerke et al., 2007). Part of the cultural value is the symbolic value and entails the ability to express a certain emotion or symbolic meaning to which people attach value. Examples of architecture with symbolic value can be monuments, churches and cemeteries. They serve a more symbolic than purely a functional purpose for their users. For instance the building of a church can be of relatively low real estate value, but of significant worth to its users. This symbolic value will be explored more elaborately in the next section as museums are known for having a great deal of symbolic value. Obviously the intangible and subjective aspects of this value make it a big point of discussion. Many different opinions collide in the debate whether a certain building has aesthetic value or not (Volker et al., 2008). Table A6, in Appendix A, shows a few researches in this matter.

To sum up, table 2.1 shows the values distinguished by CIBE, which were extended in this chapter. This also forms the answer to the first sub question 1: *What are the values of*

*architecture according to literature?* The next chapter will build on this when applying the values of architecture to the situation of museums and its visitors.

**Table 2.1. The values of architecture as adopted from Macmillan (2006), own elaboration.**

<b>Term / value</b>	<b>Meaning</b>	<b>Measurement</b>	<b>Assessment</b>
<b>Exchange value</b>	Trade and commercial value for the owners and developers.	<ul style="list-style-type: none"> <li>• Price</li> <li>• Rent</li> <li>• Yield</li> </ul>	Buildings present good money for value, public funds are wisely invested, help maintain value of surrounding property, encourage investment and regeneration
<b>Use value</b>	Contribution of the building to the organisational outcomes. The functionality of the building.	<ul style="list-style-type: none"> <li>• Satisfaction</li> <li>• Motivation</li> <li>• Productivity</li> <li>• Profitability</li> <li>• Space &amp; access</li> </ul>	Buildings provide functional, attractive and healthy working conditions that support staff but also other occupants, visitors and customers.
<b>Image value</b>	Contribution of the building to the identity, prestige, vision, reputation and image of the occupier.	<ul style="list-style-type: none"> <li>• Image</li> <li>• Prestige</li> <li>• Brand awareness</li> <li>• Recognition</li> <li>• Wow factors</li> </ul>	Buildings show the vision of the occupier towards local identity and pride.
<b>Social value</b>	Contribution of the building to the connections between people, positive social interaction, social identity, civic pride, social inclusion, morale, goodwill, neighbourly behaviour, safety, security and the reduction of vandalism and crime	<ul style="list-style-type: none"> <li>• Sense of community</li> <li>• Civic pride</li> <li>• Reduction crime &amp; vandalism</li> <li>• Interaction</li> </ul>	Buildings offer opportunities for social interaction, neighbourly behaviour and reduce antisocial behaviour like vandalism and crime.
<b>Environmental value</b>	Precautions towards consumption of finite resources and climate change. Flexibility and robustness of the building, low maintenance.	<ul style="list-style-type: none"> <li>• Environmental impact</li> <li>• Whole-life value</li> <li>• Ecological footprint</li> </ul>	Buildings are energy efficient, flexible, use little energy and water, have low maintenance.
<b>Cultural value</b>	Buildings contribution to a city's tapestry and sense of place. Its symbolic, inspirational and aesthetic value and its relation to location, context and historical content.	<ul style="list-style-type: none"> <li>• Critical opinions &amp; reviews</li> <li>• Professional press coverage</li> <li>• Lay press coverage</li> </ul>	The buildings contribute to the character of the surroundings and are valued as part of local heritage.

## 3. MUSEUMS

### 3.1 INTRODUCTION

In this chapter the distinguished values of architecture will be addressed in the situation of museums. Literature on the characteristics of both museums and museum visitors will be explained as well as the position of architecture in this. This way, the value of architecture for museums will be addressed.

When defining museums, they are often seen as places that present items. The Oxford Dictionary defines it as a building or institution that conserves and exhibits historical, scientific, artistic or cultural interesting objects and can be defined by content, size, age and institutional form (The Oxford Dictionary, 2014; Frey & Meier, 2006). It is striking to see that the building itself is seen as part of the definition of a museum. The International Council of Museums (partner of UNESCO), also developed an in research often-used definition in 2007 that describes a museum as a “*non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits tangible and intangible heritage of humanity and its environment for purpose of education, study and enjoyment*” (ICOM, 2014). The latter definition is adopted in this research, with an extra emphasize on the building because this is considered to be a vital part of the museum. The ICOM definition corresponds with the Joseph Veach Nobles’ exploration of the responsibilities of museums in the ‘Museum Manifesto’ (1970). He said the museum functions are collecting and acquiring, conserving, studying or researching, interpreting, communicating and exhibiting (Frey & Steiner, 2011; Heilbrun & Gray, 2001; Noble, 1970). Later on, these functions were developed and combined to make three basic responsibilities called *preservation*, which included collecting and conserving, *research* and *communication*, which included exhibiting (Frey & Steiner, 2011; Weil, 2004; Noble, 1970). *Preservation* results in museums with extensive collections that are, amongst the building, their biggest asset. Even the smallest museums can have collections worth millions. This also results in opportunity costs for the unused opportunity of selling their collection, invest the money or sell the building for more financial profitable usage. Museums also have a role in the leisure activities and entertainment of people and therefore attract to tourists (Frey & Meier, 2006). In order to compete with other leisure time activities, attributes like museum shops and restaurants become more important (Johnson, 2003). How architecture can support museums in fulfilling their responsibilities and attracting visitors is explained in this chapter in order to answer sub question 3: *What values can architecture have for museums and its potential visitors according to literature?*



### 3.2 VISITORS & MUSEUMS

Visitors and tourist are more important to museums to stay financially healthy (Goubling, 2000). Therefore the characteristics of the demand side of culture should be reviewed. The biggest part of the demand for museums comes from the visitor looking at it as leisure time activities or as part of their profession. Visitors often want to learn things, experience something new and enrich their life (Kelly, 2001; Jansen-Verbeke & Van Rekom, 1996). This is part of the *private demand*, and is often said to be dependent of different factors. The admission is of influence, however the demand for museums is said to be relatively price inelastic (Johnson, 2003: 316). The opportunity costs, the costs not doing something else, also influence on the demand. High-income visitors have more 'costs' when they spend time in museums instead of earning money with work. This also results in income elasticity of the demand. Furthermore the price of other leisure time activities, educational level, the quality and value of the museum collection, marketing, travel and accommodation costs, amenities and lastly the attractiveness of the building are said to have influence on demand (Frey, 2009; Frey & Meier, 2006; Johnson, 2003). Next to the private demand is the *social demand*, which is influenced by aforementioned externalities that museum produce. These externalities influence both visitor and non-visitor demand, which make museums more valuable. The *option value* represents the intangible value of the possibility of going to the museum in a certain future. People also value the *existence* of the museum through the knowledge it contributes to education and a sense of culture, although they might never visit it. Value is also derived from the knowledge that future generations and communities are able to profit from the museums, which is called the *bequest value*. Also pride and *prestige* is derived from knowing that others value the museum highly. Lastly, museums contribution to the *education* of people is valued. Next to this, museums can create tangible aforementioned externalities and generate economic externalities to other businesses in the neighbourhood (Marlet, Poort & Van Woerkens, 2011; Bille & Schulze, 2006; Frey & Meier, 2006; Johnson, 2003; Throsby, 2001). These values form the foundation of public funding museums and make clear that non-market values and externalities are too important to ignore (Johnson, 2003).

Visitors of museums have specific characteristics in both interest and demographics. Many researches show that highly educated people visit museums more often. Income also correlates positively with visits. Museum visitors come regularly from an older generation, which also coincides with a higher income and higher education (Frey, 2009; Bille & Schulze, 2006; Kelly, 2001). Another characteristic of museum visitors is their tendency to repeat visits. They have

often been exposed to museums before and it is said that cultural consumers appreciate goods more when they consume more (Cuccia, 2003; Kelly, 2001).

### 3.3 VISITORS & ARCHITECTURE

Public opinion on architecture often varies, although research in the United Kingdom shows some interesting insights. Most of the respondents show that they think architects should concentrate on designing buildings that appeal to as many people as possible. Most of them like new buildings but tend to disagree that those have to be adventurous or different. They also find it important that public buildings, which include museums, should be accessible to people with disabilities (CABE, 2002).

As mentioned before, the often-cited “Bilbao Effect” suggests that architecture is of great value for areas and museums. A single architectural flagship museum can bring about large flows of tourists to an area (Jodidio, 2010; Bille & Schulze, 2006; Giebelhausen, 2003; Plaza, 2000). Although details are sometimes imprecise, real estate can be linked to customer satisfaction and even loyalty to institutions (CABE, 2005). There have been discussions about what the function of the museum building and its architectural design can be. First of all it is important to facilitate exhibitions and store the collection, referring to the use value. Secondly the building is seen as a structure that connects the institution to its surroundings and offers an experience to both visitors and other stakeholders. The value of the building is nevertheless merely a result of who decides what the function of the building is (Parsons, 2011; Gann, Salter & Whyte, 2003). The museum and its architecture are seen as a new type of agora: a place of gathering with a political, social and commercial function. For visitors, the museum experience entails not only the exhibited goods but also its architecture and installations (Duncan & Wallach, 1980). This shows that there is a link between the public and the architecture of (public) buildings. Therefore the potential influence of architecture on museums and its visitors is considered. The previous distilled values will be discussed in the light of the characteristics, functions and values of museums and museum visitors.

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#### 3.3.1 EXCHANGE VALUE

The exchange value of the museum building focuses on its monetary value for both itself and its surroundings. The aesthetics of cultural heritage can influence the economic value and the architecture of museums is able to influence its monetary value. Although debated, many cities see museums and its architecture as an opportunity to raise the economic value of surroundings and attract economic activity. If museum architecture can attract visitors that increase economic

activity in an area, then architecture can be of economic influence. Flagship architecture is used as marketing tool. However most of the economic value of cultural goods is determined by the worth it creates to the public and it is difficult to see how the exchange value can influence visitors (Ponzini, 2011, Plaza, 2010; Ruijgrok, 2006; Cuccia, 2003). One might argue that financial value can attract visitors that want to see objects that have high value like jewellery or artefacts. The exhibition around the 75 million euro diamond skull by Damian Hirst, attracted over 118.000 visitors in six weeks. A lot of visitors were attracted by the hype around the expensive skull (Trouw, 2008; NRC, 2008). Part of the exchange value described before is dependent of how wisely public money is invested. It can be important to museums to show that government funding is invested wisely in the museum building. People might be attracted to see and judge if the building is actually worth the taxpayers' money. This research focusses on how wisely government money is spent and how this might attract visitors.

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### 3.3.2 USE VALUE

The use value exists out of the functionality of the building and its contribution to the occupiers' organisational outcomes. It has to adhere to the needs of the museum (Macmillan, 2008; Davidts, 2003a). Classical pillars of architecture are form, function and construction. Especially form and function are important because they represent visible aspects of the building and can be seen by and motivate potential public. The organisational outcomes of a museum would be amongst others attracting visitors to use the goods and services they have to offer. For visitors the function includes so called *scene setters* that emphasize that visitors need to be able to orient themselves well in order to enjoy the experience. Apart from information and guidance, the entrance of a museum is a scene setter that makes the visitors able to locate themselves in both time and space. The structure of the physical environment is therefore important. Also crowding, density and noise, as possible result of bad space design, can have a negative effect on visitors (Davidts, 2003a; 2003b; Gann, Salter & Whyte, 2003; Goubling, 2000). The building needs to support the visitors of a museum where possible in order to improve the experience. This functionality might attract visitors.

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### 3.3.3 IMAGE VALUE

A museum building is desired to be a place that materializes a certain identity the museum wants for itself (Davidts, 2003a). Although it is argued this focuses too much on the outside, architecture is indeed able to express vision. Museums are occasionally more known for their building than the content and often valued by the first. It is suggested that museum architecture

has to represent the museum content in some way. Once inside however museums often look the same (Davidts, 2003b). The building of a museum can visualise what and how it will serve its public and is used in that way to impress people. The architecture express the importance, power and the function it claims to have. The social values and power of the building are placed in the centre of the building structure (Duncan & Wallach, 1980; Weil, 2004; Duncan, 1991). This way the building becomes part of the marketing by creating credibility through showing the museums commitment towards innovation and design for instance. It might even be said that a museum without a noteworthy building cannot be taken seriously. Museum buildings show some sort of authority by its looks (Duncan, 1980). Exhibiting a certain identity, value and importance through for instance museums and its building can be seen as a form of political propaganda. The museum (building) is now even part of city marketing (Duncan, 1991). Cities are more and more seen as competing collectors of contemporary architecture because it shows that the city is able to fit in a certain group of western cities that have an identity that appeals (Ponzini, 2010; Giebelhausen, 2003). One might however argue that of most influence on the visitor is the ability of the building to communicate the vision, image, function and identity of the museum in order to attract and appeal to them.

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#### 3.3.4 SOCIAL VALUE

Museums can have social value as is for instance explained in an article by Kinghorn & Willis (2008). Museums can facilitate in social interactions and influence social capital and the social component of the museum experience is important to many visitors. The opportunity to interact attracts visitors and makes the visit meaningful in individual but also in social context. Also learning in the museum is a social activity. Part of the interaction is the participation of the visitor with others and the exhibitions (Hebert & Fritsch, 2013; Kinghorn & Willis, 2008; Goubling, 2000). Architecture of public institutions can enforce the social value of its institution and communities and is said to encourage involvement and interaction by looking welcoming and open (Macmillan, 2006). Architecture is able to facilitate these interactions, which can be important to visitors seeking for interaction (MacLeod, 2013; Hood, 2004).

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#### 3.3.5 ENVIRONMENTAL VALUE

Museums are not exceptionally known for their influence on the environment but there are examples of environmentally aware museums. The concept called the *green museum* describes environmental friendly museums or those that communicate and educate about the environment. Supporters argue that it is museums' public responsibility to be *green* because

they serve as role models and places of learning. The identity as green is even used as marketing tool to express a vision towards the public (Brophy & Wylie, 2006; Sutter, 2006; Museums Association, 2008). The link between visitors and environmental value of the building is not strongly verified, although one can argue that an environmental friendly building might be more attractive to visitors who think this is important. Obviously, the environmental value should be common knowledge or visible on the outside in order to be attractive to visitors upfront.

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### 3.3.6 CULTURAL VALUE.

The cultural value of architecture evolves around its ability to create a sense of place, ambiance and environment. With museums this evolves around its ability to give visitors an experience with both aesthetic value and symbolic values that appeal people but also set them thinking. The building itself can be a cultural product (Macleod, 2013; Throsby, 2001). Because these aspects are important in the case of museums, the cultural value is divided in two separate aspects called the aesthetic and the symbolic value.

#### AESTHETIC VALUE

The aesthetic value is the worth people attach to the beauty of the building design. Logically thinking, if one finds something beautiful, one might be more urged to see it. The concept 'visitor experience' explains the how the aesthetics of a museum can create this urge. When everything, including art and exhibitions, is constantly accessible via the Internet, actually going to a museum seems irrelevant (Parsons, 2011). However, the experience of actually going and seeing exhibitions in a beautiful environment is something else and strengthens the concept of seeing art. In a book about museum design, Idema & van Herpt (2010) argue that aesthetic quality of architecture is of influence on the experience of visiting a museum. The museum building is not just a place to store art of past times, it is a place to work on the here and now and create an experience. The memory of a museum is shaped by both the collection and architectures beauty. This beauty is dependent of the time and techniques available at the time but is of significant importance. The modern museum building is often seen as an artwork itself (Ponzini, 2010; Davidts, 2008; Anderson, 2004; Throsby, 2001). A visit to a museum is therefore aimed to be more than the ordinary and takes the visitor away from the everyday life into a different experience. The architecture of the museum becomes an instrument to realise this experience, disconnected from everyday life (Macleod, 2013; Giebelhausen, 2003). The look of architecture can therefore attribute greatly to the experience of the museum and create special environments that take the visitor away. This look is therefore of influence on visitors and might attract them.

## SYMBOLIC VALUE

Museums are not just neutral shelters for art but are seen as symbolic places. They often have some similarities with ceremonial buildings like temples and churches. In the early days, museum facades resembled temples in order to reminisce some secularity and importance, which shows how museums wanted to adopt the ideas of early architecture (Hood, 2004; Duncan, 1991; Duncan & Wallach, 1980). This importance and other messages are still sought after in new architecture. Using symbols and meanings architects and their constituents send a message. By fulfilling the tasks described before, the museum even plays an ideologically and politically symbolic function (Giebelhausen, 2003; Duncan, 1991; Duncan & Wallach, 1980). The difference with image value is that this message is more of a symbolic than of an informing value. The building of a museum represents a deeper meaning that entails a message to the public. This symbolic value might somehow speak to (potential) visitors and result in visits.

## 3.4 CONTRA-ARGUMENTS

Although the mentioned values of architecture sound more or less convincing, a lot of them have opposing arguments that reject their existence. It is good for this research to also consider the disadvantages of architecture and the arguments against investing in it. Obviously, during times of crisis, public opinions tend to vote against the investment in expensive buildings. There are more urgent matters to devote time and money on and the values mentioned before as the example of the referendum in Arnhem showed (Van Lent, 2013).

Some argue that the acclaimed values of architecture are somewhat implausible and idealistic. As Ponzini (2011; 2010) writes, architectural aesthetics do not respond to the hoped effects in urban areas. Architecture of cultural facilities does not always result into the development and often is part of a larger policy to regenerate certain areas. Several arguments oppose the ideas that portray architecture as individual positive factor. The arguments for the value of architecture and its potential influence on visitors are, some more than others, motivating. They suggest a certain influence of the museum architecture but it is also argued that architecture does not achieve these successes on its own, but in cooperation with its surroundings (Plaza & Haarich, 2013). The famous example of Bilbao is often criticized and undermined. If everywhere around the world exceptional buildings arise, paradoxically, homogenization will occur. The effect of architecture was also said to occur solely because of the content of the museum or the marketing techniques that stressed the importance of the architecture. Architecture itself might not even influence visitors at all and is just part of a bigger project. The true function of a building might solely depend on the interpretation of it, or the persuasiveness of the pleaders of

a certain function. There is no true function for buildings like museums and they are only manifested by the reality around it (Plaza & Haarich, 2013; Parsons, 2011; Plaza, 2010; 2000; Russel, 2005).

The externalities that are accounted to cultural goods like architecture are sometimes called too small to notice and certainly not more than any other economic activity. The question is whether the proposed influences noticeable compared to influences of other contingencies (Frey, 2011). One must keep in mind the previous mentioned researches and examples that prove the value of architecture are all from different parts of the world. The effects of contingencies and cultural situation cannot be forgotten. These variables can affect the influence of architecture and it is therefore important to notice that this weakens the proof of the values of architecture.

The question is whether the acclaimed values, that are part of the reason to invest in architecture, attract visitors and if they care about these aspects. Do visitors care about the aesthetic value of the museum or is the social value more important to their motivation to visit? Therefore this research tries to find out the precise connectivity between museum architecture and visitors and what values of architecture connect to them. This chapter shows that the values distilled in the previous chapter are also applicable to the situation of museums and its visitors. One value is even split in two because of its importance, resulting in the *exchange, use, image, social, environmental, aesthetic* and *symbolic value*.

## 4. VALUATION METHODS

Discussing the valuation of architecture makes it necessary to consider the actual methods of valuation of cultural goods. The arts are said to have three impacts that are all measured differently. Short run growth in economic activities in an area is measured by economic impact studies. Long run growth in economic development is best measured with the hedonic price model. Values for consumers, both use and non-use, are to be measured with the Contingent Valuation Method (CVM) (Snowball, 2008; Bille & Schulze, 2006; Seaman, 2003; Throsby, 2003). Snowball (2008) distinguished the *revealed preference* approach and the *stated preference* approach. The first focuses on direct and indirect methods to find out the actual spending of visitors. The direct methods include referenda and experiments. Indirect methods include hedonic pricing and travel costs methods. The *stated preference* approaches focus on the preferences respondents actually affirm in questionnaires (Snowball, 2008). The important methods are explained below.

### 4.1 HEDONIC PRICING MODEL

In the field of *stated preference* approaches the influence of cultural goods and services on their surroundings can be measured with the hedonic pricing model. This model is used to measure the influence of certain assets in a region on the real estate value of houses in the area. The idea is that people are willing to pay higher prices to live in a neighbourhood with certain facilities and amenities like culture, which influences the housing prices (Snowball, 2008; Bille & Schulze, 2006). Using data of real estate value of the surroundings and relate them to certain landmarks of architecture for instance. Ahlfeldt and Maenning (2010) used data about the property prices in the surroundings of historical landmarks and found a correlation between the height of the property prices and the proximity of the landmark. Hough & Kratz (1983) used a similar method in calculating the influence of architectural design on rent prices for properties.

### 4.2 ECONOMIC IMPACT STUDIES

An economic impact study measures the additional economic activity in an area resulting from an event or facility by researching visitor spending with questionnaires. It can result in quantitative data and economic impact figures, comparable to other situations. The outcomes of this method are however extremely sensitive to the method design and the targeted impact area, with overestimation or misrepresentation of the goods as a result. Data can be very speculative, inaccurate and hard to obtain (Snowball, 2008; Bille & Schulze 2006). Also, the economic effects of cultural organisations on a region come often from the spending of the



organisation themselves and not the attracted tourists, who's spending are often rather small. It oversimplifies the value of cultural goods to a pure financial market value and ignores its non-market values. It can however be fruitful as a part of an analysis that also includes more aesthetic and cultural values (Snowball, 2008).

#### 4.3 TRAVEL COST METHOD

The travel cost method is a way of measuring the travel costs potential visitors are willing to pay in order to attend a certain cultural service or event. This method is effective in showing what people are willing to give for something. However, it does focus solely on the economic use value of the cultural good. It does not include the non-use values for people who benefit without using the cultural good directly. Also, it assumes that the particular visit to a museum was the only purpose of the travel (Snowball, 2008; Bille & Schulze, 2006).

#### 4.4 CONTINGENT VALUATION METHOD

CVM is a way of asking people directly for their preference and how much value they attach to a certain cultural good with non-market value. It is possible to ask both experts and non-experts about their opinion and allows researchers to measure values that are not directly explainable by monetary means (Snowball, 2008; Bille & Schulze, 2006; Ruijgrok, 2006; Sanz, Herrero & Bedate, 2003; Cuccia, 2003). Asking what visitors are willing to pay or accept for these intangible aspects is a way of measuring what something is worth to them and is done with Willingness To Pay (WTP) or Willingness To Accept (WTA) questions. These WTP & WTA methods assist respondents in making a fundamental and real market decision about the intangible values and ask them directly how much they would pay or accept to keep or lose something (Snowball, 2008; Cuccia, 2003).

Although this is one of the main research methods in the field, there are a couple of issues. The method relies on the *rational choice theory* that people make rational choices in their answers, but rationality is not always the guideline for decisions. When respondents give answers to questions about the value they attach to an item, several biases influence their answers. The results could conflict with *economic theory* (Snowball, 2008; Cuccia, 2003). Different discrepancies between the valuation and the real value for respondents can occur. For instance disparity between WTP and WTA exists because losing something owned, often costs more than gaining something by purchasing it, which is called the *endowment effect* (Cuccia & Signorello, 2002). The dishonesty of respondents is the result of social and strategic behaviour where they are refusing to make rational real market decisions. The *hypothetical bias* occurs

due to the lack of a real payment for the respondents. Different studies show this problem arising in experiments with two groups having similar questions but different liabilities. Strategic behaviour can occur if respondents try to secure that a good remains by overstating their WTP (Bedate, Herrero & Sanz, 2009; Snowball, 2008; Cuccia, 2003). People also tend to overestimate the value of cultural goods when WTP is questioned in isolation. The *warm glow* problem shows that people do not value a good in an economic way, but rather just show support and an attitude. They express sensitivity towards the scope of the research, which influences their answers (Snowball, 2008; Sunstein, 2002).

Nonetheless, research suggests that the data from WTP surveys are still usable and different counteracts to the problems are identified. Snowball (2008) reviews numerous researches in her book on the measurement of value and sees CVM as one of the main research methods in this field. The contingent valuation method is seen as one of the best methods that enable to give value to non-market components of cultural goods and services. It is simple adaptable to different situations and can estimate all aspects of goods economically (Snowball, 2008; Ruijgrok, 2006; Throsby, 2003). An elaboration of CVM studies on the influence of the built environment (Monuments, cultural heritage et cetera) on WTP is presented in table 4.1.

**Table 4.1. CVM research on the influence of cultural built environment (own elaboration).**

Source	Study	Findings
Santagata & Signorello, 2000	Research with a contingent valuation of the Case of "Napoli Musei Aperti".	The estimations of the WTP appeared to have a reasonable size.
Cuccia, & Signorello, 2002	A contingent valuation study of willingness to pay for heritage visits: Case study of Noto.	There is WTP support for the village Noto in Sicily amongst the respondents.
Sanz, Herrero & Bedate, 2003; Bedate, Sanz & Herrero 2009	Contingent valuation research with a case study of the National Museum of Sculpture in Valladolid, Spain	There exists a strong WTP for the Museum and its amenities.
Morey & Rossman, 2003	Research with Stated Preference Questionnaires to investigate WTP for preserving marble monuments in Washington.	Results show that preservation is good, until a certain level and dependent of contingencies.
Riganti, Nese & Colombino, 2004	Case study on the preferences of visitors to the Temples of Paestum.	People are willing to pay for more functionality on the sight.
Del Saz Salazar & Montagud Marques, 2004	Research towards the WTP for the restoration of an old Arab tower in the Valencia Region of Spain.	The WTP for the restoration is considerably higher for high consumers of cultural goods.
Dutta, Banerjee & Husain, 2007	A contingent valuation study of the Prinsep Ghat heritage, Calcutta.	The results show the presence of a substantial untapped demand for the sight that can be utilized by suitable marketing of the site without affecting its historic appeal.

Tuana & Navrud, 2008	Research Capturing the benefits of preserving My Son heritage in Vietnam with a CVM.	Although lower, there exists a WTP for the preservation of My Son among tourists and citizens.
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A development of the Contingent Valuation method is the Conjoint Cost Analysis. This method uses bundles of alternatives and attributes that the respondent has to trade off against each other (Peacock & Rizzo, 2008; Snowball, 2008).

## 5. THE EYE FILM INSTITUTE

The aforementioned case of the EYE Film Institute has characteristics that adhere to the items elaborated in the literature and is a museum with an exceptional new building. The institute houses a film theatre, archive and a museum. Their main activities are managing, researching and making available their collection of films, photo's, posters, books, soundtracks and film equipment. The institute is the only Dutch museum focussed exclusively on film and moving image. It shows film as art, heritage and source of knowledge, offers educational programs and communicates through different types of (new) media. The aforementioned basic responsibilities of a museum, are therefore more or less fulfilled by EYE (EYE, 2013d). In 2012 EYE had around 140 employees and 100 volunteers, but that amount shrunk in 2013 (EYE, 2013; Moorman, 2012; Van Zwol, 2012a; 2012b). In the first half of 2014 there were two exhibitions in the EYE; one free permanent exhibition about the collection and one that focussed on remakes of existing movies by visual artists. In the theatres both art-house, classical movies and modern blockbusters were shown and the restaurant and shop were open to the public (EYE, 2014).

The museum has an exceptional building that opened in April 2012. They moved from a small theatre to a building that has exhibitions spaces, four movie theatres, archives and a restaurant. The theatres have around 640 seats and 1200 square metres of exposition space (NRC Handelsblad, 2011; EYE, 2012; Moorman, 2012). The new building is very important to the Institute. They use it as a marketing tool in both advertisement online and in the streets of Amsterdam. Books and posters with pictures of the building are sold and it is seen as a landmark in the city (EYE, 2014; Van den Boogaard, 2011). The building is designed by Austrian Delugan Meissl Associated Architects (DMAA) and is often compared to the Sydney Opera House by Jørn Utzon. The architects were approached to take part in a contest with complete freedom of any restrictions, which resulted in this design (Hulsman, 2012). The choice for these architects might reflect the admiration for aforementioned *starchitects* resulting in blind trust and freedom. The building is designed in order to create a physical reaction for the visitors, to leave the city of Amsterdam behind and enter the world of cinema. The design includes many different shapes and windows with views on the city of Amsterdam and the IJ. Next to wooden floors, there are a lot of clean and white spaces, which are even said to cause disorientation (Moorman, 2012). The architects were lead by two motives that represent the experience of the cinema with light and movement. These motives were both multiple perspectives and the physiological effects. For instance the white roof represents cinematography (EYE, 2012). This

reveals that the building is intended as more than just an accommodation and the architecture might have some of the values discussed in previous chapters (Hulsman, 2012; Metz, 2012).

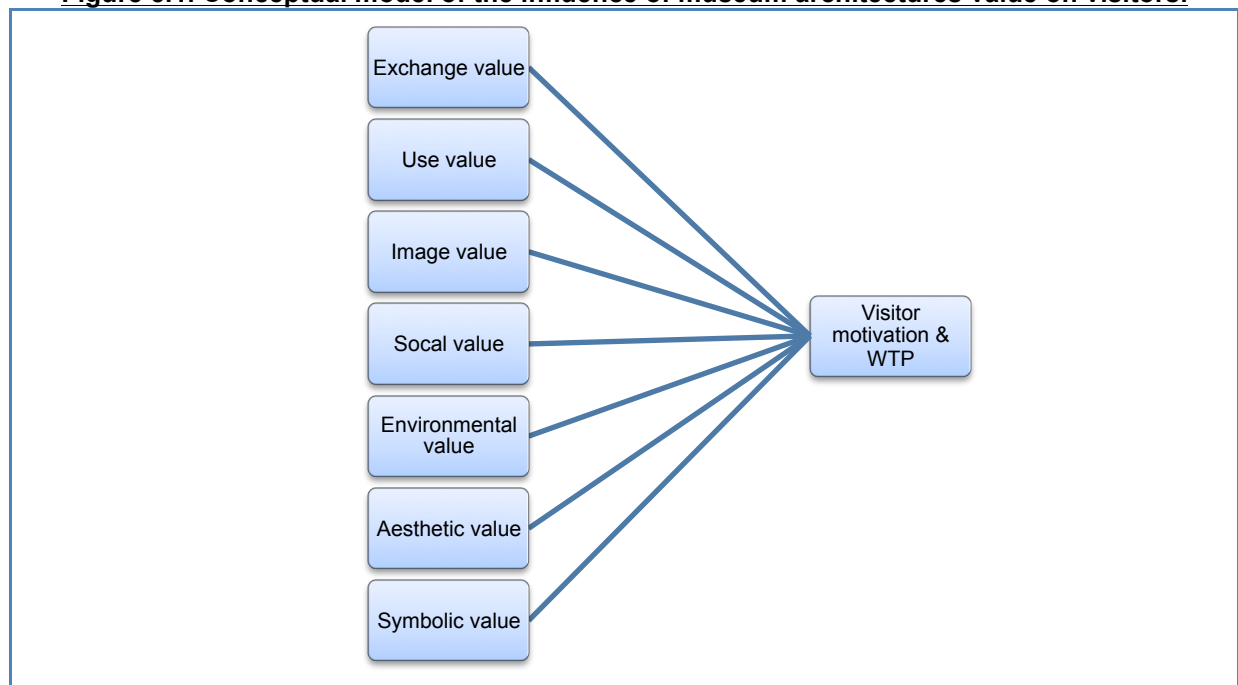
The new building is developed by and property of ING Real Estate. The construction of the building took more time (six years) and money than expected. The expected costs of 12 million euro's increased to approximately between 30 and 38 million euro's (Metz, 2012; Het Financieele Dagblad, 2012). The security given by both Ministerie van OCW and the Municipality of Amsterdam supported the development. The institute itself is responsible for the funding of the interior (EYE, 2012). EYE rents the building from ING Real Estate, for the 'cultural bargain' price of 1,45 million euros per year. ING wants to sell the building to the Municipality of Amsterdam, as they claim this was part of the deal when no potential buyer would arise three months after the building was finished. However, no buyer is found until now (ANP, 2012). Next to the expensive building, subsidy cuts struck EYE. The Government subsidy shrunk from 7,2 to 6,7 million euros and the promised 1,6 million extra costs for the building were also withdrawn. Recently the organisation had to cut staff positions and reduced the budget with 10%. The Institute should, according to subsidiary organisation Raad voor Cultuur, focus more on tasks concerning the collection the museum, instead of releasing movies (2013; Van Zwol, 2012c; NRC Handelsblad, 2011). The budget was aimed at around 13 to 14 million per year in 2012, one third of this was supposed to come from private financiers. In order to make up for the financial gaps, the organisation is coming up with different types of financing by selling seats and privileges through their U&EYE fund (Het Financieel Dagblad, 2012; Van Zwol, 2012c; Start, 2011).

Especially in the period after the opening the visitor-numbers of the EYE were high. In the first week the Film Institute received over 38.000 and the first months over 100.000 visitors (Van Zwol, 2012a; ANP, 2012). In December 2012 the EYE already had paying 250.000 and a total 500.000 of visitors, which is more than the 225.000 paying customers needed per year. Only last year the activities of the EYE had over 750.000 visitors, of which more than 250.000 solely visiting the free accessible areas (EYE, 2013). The striking building is seen as a sign for the development of North Amsterdam. Different parties consider this as a chance to revitalise the different development projects that stopped as a result of the financial crisis (Hulsman & Kramer, 2013; Hulsman, 2012; Van den Boogaard, 2011). The development of a spectacular building is considered to be an opportunity to increase the prices of a yet to develop district of houses and offices by ING Real Estate but they stopped this development in 2009 and the

municipality had to support in order to continue the development of EYE (Rengers, 2012). The EYE Film Institute might also have the function of attracting people to the North and be able to offer entertainment for the inhabitants. The trust in the capacity of EYE and its building is for instance shown in a one-off donation of 750.000 euros by the district of Northern Amsterdam (Van Gelder & Straathof, 2012). From several sources it becomes clear that for the EYE Film Institute effects that are described by the values of architecture are hoped. The mentioned visitor numbers demonstrates its potential.

The literature, measuring methods and case study make it possible to test the values of architecture of its worth to visitors. The model presented in figure 5.1 captures the presumed relations explored in this research and will form the bases of this research. It also answers the second sub question on the values of architecture that are important to museums and its visitors. The next chapter explains this research' methodology using the conceptual model that is derived from the literature.

**Figure 5.1. Conceptual model of the influence of museum architectures value on visitors.**



# III – METHODOLOGY



Photo: Wojtek Gurak

## 6. METHODOLOGY

### 6.1 INTRODUCTION

The aim of this research is to find out which values of museum architecture are most important to visitors using a case study of the EYE Film Institute. In order to do this, this research looks at the influence of architecture on the decision to visit and the Willingness To Pay of visitors of the museum building. The objective is therefore to distribute a cross-sectional Contingent Valuation questionnaire to a sample of the building visitors of the EYE Film institute in Amsterdam. Visitors will be asked questions about their motivations and WTP as well as demographic questions that might influence their answers. This quantitative research can make it possible to answer the following main research question:

*Which values of architecture are appreciated the most by visitors of the building of the EYE Film Institute in Amsterdam?*

The main question is answered by finding the answers to the sub questions. The first two sub questions are answered in the literature research. The third and fourth questions are answered with an empirical research. In this section, first the choice for the case study will be justified. Secondly the units of analysis, including the population and the sample will be explained. Thirdly the methods of data collection will be explained, including methodology justification and the questionnaire design. Finally the methods of data analysis will be explained.

### 6.1 CASE STUDY

This quantitative research will include a case study in order to examine the influence of architecture on visitors. Case studies, using quantitative data measurement on the influence of the more intangible values of architecture is scarce. The generalizability of a case study can be relatively limited, however if set up according to principles of validity and reliability it can give important insights. The case study of the EYE Film Institute is chosen because of different reasons. First off all, as explained in the literature, EYE has a museum function, which gives the opportunity to research an institution with a cultural function. This makes the case relevant to the cultural sector. Next to this the EYE has new exceptional flagship architecture. The building is relatively new and can be considered as outstanding, which makes it possible to research the influence of these kinds of buildings. The building opened in 2012, which makes the building and the case currently relevant. Though, the after-opening hype that might influence results has decreased. As described before, the institute and its building also has a relative number of



visitors. This gives the thought that the building amongst other influences attracts visitors, which is important when researching the connection between visitors and the architecture. Lastly, the building is accredited a lot of positive influences which shows the faith in these kinds of structures. It is seen as a beacon of recognition and a chance to influence urban regeneration in the North of Amsterdam (Van Gelder & Straathof, 2012). It makes it interesting to research if this positive influence is somehow present. The research is done independently of the EYE because this will increase objectivity, avoids influence of the institute itself and conflicts on possible disagreements.

## 6.2 UNITS OF ANALYSIS

The population in a CVM depends on the nature, location and the question *who* might gain use and non-use values from the cultural good (Snowball, 2008; Cuccia, 2003). In this case the externalities provide values for a broad category of visitors and the definition of 'visitors' of the EYE building will therefore be relatively broad in this research. Considering the externalities, both national and international visitors looking inside, drinking a cup of coffee, eating, seeing a movie and visiting an exhibition in the EYE will be seen as visitors. All these activities require a journey specifically to the EYE building, as there are not much other facilities in the area. The population therefore exists out of all visitors of the EYE building. The EYE defines its visitors as a broad group of people ranging from museum visitors, to tourists, architecture lovers, scientists, cinema fanatics, students and day-trippers (EYE, 2013d). The population in this case exists out of the group of visitors of the EYE building in one week. Looking at visitor numbers of 670.000 people per year to the building, this should be around a population of 12.800 people.

The sample of the visitors of the EYE building will be drawn from the people entering and exiting the building for one of the activities aforementioned. During a period of 6 days in April and May, a random selection of people both coming from and going to the EYE by passing the bridge towards the building are surveyed picked randomly. This distance to the building makes the visitors able to look at it again before filling in the survey. This is done during the middle of the day when all facilities of the EYE are opened in order to capture visitors from all categories. Visitors from 18 years and over are asked in order to make sure some form of financial independency. Time constraints and holidays determined that the best data including both weekends and weekdays to do this were:

- Tuesday 22<sup>th</sup> of April
- Wednesday the 23<sup>th</sup> of April
- Thursday the 24<sup>th</sup> of April
- Friday the 25<sup>th</sup> of April
- Monday the 28<sup>th</sup> of April
- Saturday the 3<sup>rd</sup> of May

This sample can be compared to the average visitor numbers per week and the general information about the demographics of visitors of cultural goods and services, as many researches are done on that topic.

### 6.3 METHODS OF DATA COLLECTION & ANALYSIS

As the aim of this research concerns the importance of the values of architecture to visitors and some of these values are non-use or intangible, the selection of a measurement is challenging. The chosen method is a CV study with a supervised self-completion Willingness To Pay survey on sight. The CV study makes it possible to ask directly towards the worth of intangible aspects of culture for respondents. Both experts and non-experts can be asked about their preferences, which is the aim of this research. Then it is possible to estimate the worth of a certain surplus in demand for externalities. The aforementioned Hedonic pricing method proves to work when a simple market value of architecture is sought. However, this method is not proven to be the best method for cultural goods because these are certainly not the main influence to live in a certain area. It does not capture the benefit for people who do not directly use the building and ignores the values of architecture that are not reflected in market prices (Snowball, 2008; Hough & Kratz, 1983). Besides that, data on property prices of entire areas functional for these kinds of research methods is hard to retrieve and expensive. Economic impact studies are not suitable for this research because its aim is to include intangible values of architecture, which is difficult with an economic impact study. The travel cost method assumes the cultural product is the only reason to travel to a certain area while other factors obviously count. Next to this it does not focus on specific aspects of the good, which is the aim of this research. The conjoint analysis asks for an elaboration of different alternatives of which the respondents have to choose, due to space and time constraints in the survey this method was not possible to apply.

Self-completion questionnaires are commonly used with CV as they make it possible to reach a substantial amount of respondents in a short period of time and at little costs. It gives the opportunity to ask a structured and fair amount of questions about attitudes, opinions, feelings

and thoughts. Although it is not possible to go deep into the matter, questionnaires result less likely in social desired answers and other biases as is common with interviews. Also the answers are mutual comparable. Mentioning all relevant information about the situation and possible biases to put in respective the results is important (Baarda, de Goede & Kalmijn, 2007; Snowball, 2008; 't Hart, Boeije & Hox, 2007; Dutta, Banerjee & Husain, 2007). The self-completion questionnaires have been distributed manually on sight, as this improves response and comprehensiveness of the intentions of the research and takes away faced problems. The influence of researches on the respondents is however minimized in order to limit disturbed answers. To achieve a sample as broad as possible, it is taken during six different days of the week.

The variables and concepts in this research are made functional for the questionnaire by conceptualizing and operationalizing them into questions (Baarda, De Goede & Kalmijn, 2007). Respondents are sensitive to the phrasing and order of the questions, the scope of the possible answers, the amount of information and the questionnaire design in general. This makes the design an extremely important and sensitive subject (Snowball, 2008; Bryman, 2008). The design of the questions and the operationalization of the concepts will be explained in the order of the questionnaire. A pilot test, run on the 20<sup>th</sup> and 21<sup>st</sup> of April with family and friends resulted in several adjustments in content and layout. The complete questionnaire is available in Appendix B.

The quality of the responses also relies on the amount of unbiased information offered to the respondents to be up-to-date, but not to be influenced. They will try to answer everything they get asked and the information they receive is therefore crucial (Snowball, 2008; Mitchell and Carson, 1993). That is why the questionnaire of this research starts with a brief explanation of the background and the goal of the research. Information about architectures' cost is placed firstly to counterbalance the focus on architectures benefits. The respondents also need to be able to go quickly through the survey with simple but not facile phrasing without being influenced by any jargon about architecture. As the research targeted a broad definition of the concept visitor, the questionnaire is short, comprehensive and easy to distribute (Bryman, 2008; Gann, Salter & Whyte, 2003).

Most WTP questionnaires are divided in four sections (Snowball, 2008). The first section usually considers the use values and includes questions about the frequency, purpose of visits and

perceptions of quality of the experience. However, only the perceived motivational function of the architecture is included in this research, which cannot be considered as a direct use value. Since the research focuses on non-use aspects of architecture and has time constraints, this section will not be included. Frequency of museum visits in general will be included in the demographic questions.

Secondly there is a section on the non-use values of (aspects of) cultural goods and services with questions on the perceived benefits of these (Snowball, 2008). Here the perceived motivational influence of the values of architecture is explored in order to answer the third sub question: *Which values of architecture as defined in literature motivate visitors of the EYE Film Institute building to visit?* Initially a general question is posed in order to test the respondents' initial opinion and to use as a consistency check in combination with the more in-depth questions further in the questionnaire. By repeating questions with similar scope, people are pushed to rethink their answers (Snowball, 2008; Santagata & Signorello, 2000). The survey will start with a general question about the respondents' opinion on the ability of museum architecture to attract visitors. Then the respondents will be asked to agree or disagree with seven more in depth statements (items) about the perceived influence of the aspects of architecture on their decision to visit the EYE Film Institute. These statements will be formulated around the seven values of architecture. The prescriptions of the values of architecture, as extended from CABE and Macmillan (2006) are conceptualised and operationalized into items to test with the respondents and presented in table 6.1. A Likert-scale is used as indicators of the visitors' attitude towards the items as this scale is well known for its ability to capture attitudes towards a specific area. A 5-point scale measures the level of agreement or disagreement and respondents express their attitude through the numbers (Bryman, 2008). To keep the order of the questions from influencing respondents and increase comprehensiveness, the items will be presented in a different order (Dupont, 2003).

**Table 6.1. Conceptualisation & operationalization of the dependent variables.**

<b>Dependent variables</b>	<b>Conceptualisation</b>	<b>Operationalization</b>
<b>Exchange value</b>	Public funds are invested wisely in the EYE museum building because it has great trade value and influences surrounding properties positively.	Public funds are invested wisely.
<b>Use value</b>	The EYE museum building of the EYE is functional and supportive for its customers and staff.	The building looks visitor-friendly.
<b>Image value</b>	The EYE museum building contributes to the identity, prestige, vision, reputation and image of the EYE.	The building represents the identity and image of the EYE.
<b>Social value</b>	The EYE museum building contributes to the connections between people, positive social interaction, social identity,	The building looks like a place where I can get in contact with

	civic pride, social inclusion, morale, goodwill, neighbourly behaviour, safety, security and the reduction of vandalism and crime.	other people.
<b>Environmental value</b>	The EYE museum building is precautious towards consumption of finite resources and climate change. Flexibility and robustness of the building, low maintenance.	The building is looks environmental friendly (Sun panels, windmills etc.)
<b>Cultural value (Aesthetic)</b>	The museum building has aesthetic value.	The building attractive and beautiful.
<b>Cultural value (Symbolic)</b>	The museum building has symbolic meaning in its sense of place and inspirational value and its relation to location, context and historical content	The building has a symbolic meaning.

The third section includes WTP questions (Snowball, 2008). Here the perceived willingness to pay for the values of architecture is explored using the seven items that assess of the value of architecture, in order to answer the fourth sub question: *Which values of architecture as defined in literature influence the willingness to pay of the building visitors for exhibitions in the EYE Film Institute?* The scenario of the WTP questions needs to be realistic and comprehensive to respondents and the vehicle of payment and the point of which respondents set their opinion (starting bid) must have as little influence on their answers as possible (Snowball, 2008). The situation that was presented is one where the exhibitions of the EYE are completely free of entrance. The visitors were asked if they were willing to pay an additional fee of 50 eurocents to compensate for, or to improve the items of the architecture. The answer alternatives were a different take on dichotomous ‘yes’ and ‘no’ options. Especially with the WTP questions respondents find it difficult to value certain aspects. With dichotomous answers, the cognitive difficulty will be reduced and people basically have to choose whether or not to support a certain aspect. For instance, open questions can result in more unanswered questions because people are unable to value the researched item. Nevertheless, dichotomous questions can also raise WTP reasonably, which is taken into account (Snowball, 2008; Cuccia, 2003; Bennett & Tranter, 1998). However, the NOAA guidelines on questionnaire design suggest using a dichotomous question (Snowball, 2008; Arrow et al., 1993). It is however often opted to add a ‘don’t know’ answer to the ‘yes’ and ‘no’ choices in order to give people the chance nuance their answer if they want to pay for a certain good or not. Therefore the same Likert scale, used in the motivation questions, was used in order to keep it simple and comprehensible. The fact that only the answer alternatives 4 and 5 represent the willingness to pay the additional 50 eurocents is emphasised in the survey. This was done to urge the respondents to make a real market decision and limit bias (Bedate, Herrero & Sanz, 2009; Snowball, 2008). An additional WTP question, suggested as consistency check in many articles, was not included in the survey but asked verbally. After completing the questionnaire, respondents were asked if they would be willing to pay the 50 eurocents they agreed to pay for the 7 aspects, on sight to the researcher.

Albeit the mentioned influence of interviewers, this method was used to check if the respondents are willing to make a real market transaction. Obviously when respondents agreed to make a real transaction the researcher refused to take the money, but the answer was noted on the questionnaire. These internal consistency checks make people aware of their decisions and enforce the representativeness of the CV (Bryman, 2008; Snowball, 2008).

The fourth section with demographics can be used to determine and explain certain outcomes and to review the representativeness of the sample for the population. Because of time and space constraints, the only demographics questioned in this study were *sex*, *age*, *education* and *residency* as they might explain differences in attitudes towards the architecture (Snowball, 2008). Also the number of museum visits in the last twelve months was included, in order to see if this indeed increases appreciation towards cultural goods as predicted by various researches. In line with this, frequent users of cultural goods and the appreciation of these goods are said to have a higher WTP. Hence a question about the frequency of the respondents' visits to museums was included in the questionnaire (Del Saz Salazar & Marques, 2005; Snowball, 2008; Towse, 2010).

**Table 6.2. Independent variables**

<b>Demographic</b>	<b>Measurement</b>
Sex	Binary: Male, female
Age	Ratio: Years
Education level	Ordinal: Lower than High School, High School, Some college, University, PhD
Residency	Binary: Dutch; Non-Dutch
Visits to a museum in the past twelve months	Ordinal: 1,2,3,4,5 or more

In order to avoid ethical issues surveys were anonymously, as stated on the questionnaire, and recoded into respondent numbers for data analyses. Demographics with personal matters, political affiliation and religion were excluded (Baarda, De Goede & Kalmijn, 2007; Snowball, 2008). The questionnaires were handed out in Dutch or English in order to concede to respondents' languages. It was made clear in the questionnaire that the research is independent of the EYE Film Museum, in order to avoid any conflicts and confirm objectiveness.

**Table 6.3. Survey components**

	<b>Survey components</b>
<b>1</b>	Respondents' general attitude towards the motivational function of museum architecture
<b>2</b>	Respondents' perceived motivational function of the values of museum architecture
<b>3</b>	Respondents' perceived WTP for the values of museum architecture
<b>4</b>	Respondents' demographics
<b>5</b>	Actual verbal WTP question

The results are analysed using the analytical program SPSS. Next to comparing the frequencies of the Likert-scale answers given to the questions about the items, logistic regression is used in order to see if independent variables were able to predict differences in the answers. These made it possible to answer the questions posed in this research, but also to say something about possible differences between demographics. The methodology and data analysis will make it possible to answer the two last sub questions, which is done in the next section.

# IV – RESULTS



Photo: Wojtek Gurak



## 7. RESULTS

### 7.1 INTRODUCTION

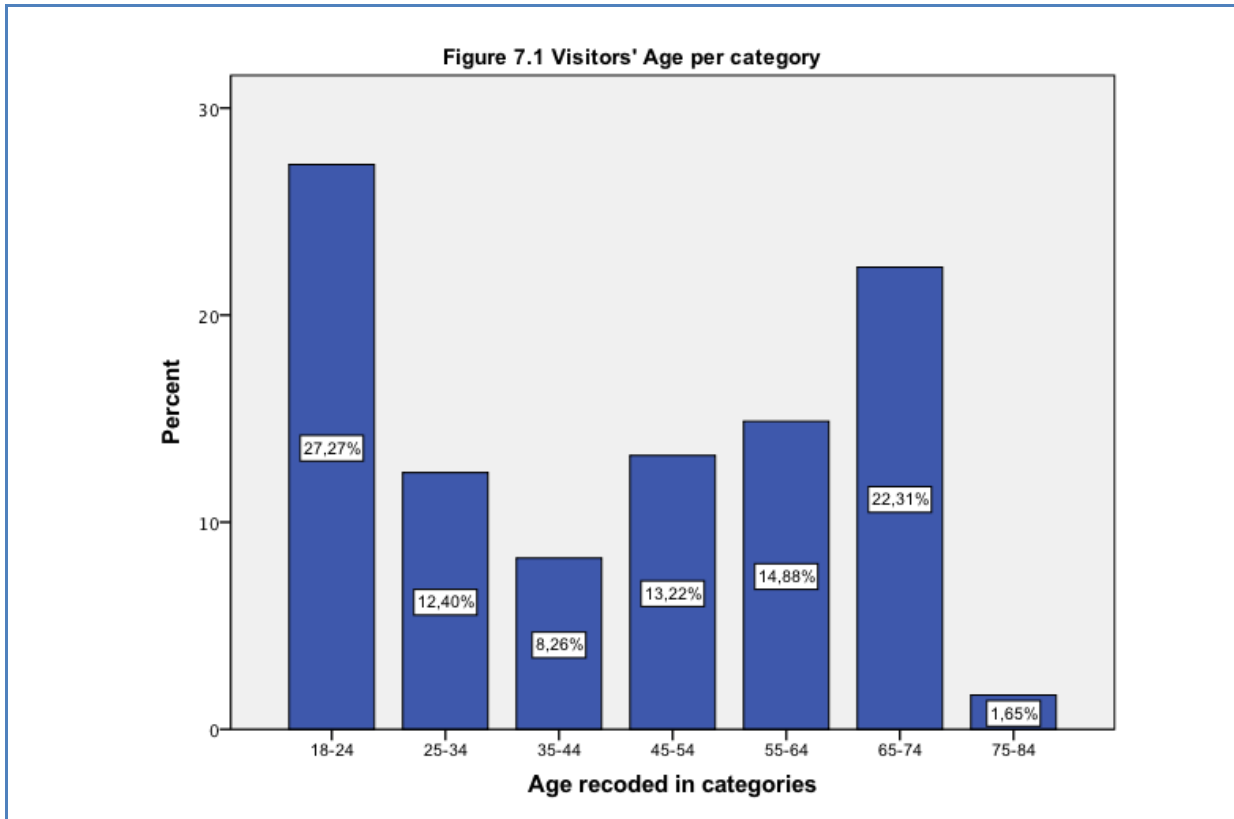
In this chapter the results of the survey that raised 121 individual cases will be analysed. In chapter 7.2 the demographics and the profile of the visitors is considered. Chapter 7.3 and 7.4 will answer the third sub question: *Which values of architecture as defined in literature motivate visitors of the EYE Film Institute building to visit?* It will show which values of architecture have influenced visitor motivation and which was most important. The influence of demographics is also considered. Chapter 7.5 and 7.6 will answer the fourth sub question: *Which values of architecture as defined in literature influence the willingness to pay of the building visitors for exhibitions in the EYE Film Institute?* It will show which values of architecture might have influenced WTP of the visitors and which was most important. The influence of demographics is considered again. Answering these two sub questions will make it possible to answer which values of architecture are valued the most by the visitors of the EYE Film Institute building in the end.

### 7.2 VISITOR PROFILE

The visitors' profile shows slightly more women in the sample (45,5 % male & 54,5% female). Despite a small difference, this corresponds with other researches that find a slight overrepresentation of women in cultural activities. Although the difference might fluctuate between several activities, this difference is minor (Ranshuysen, 1998; Broek, Huysmans & Haan, 2005; Kelly, 2001).

The age of the visitors in the sample has a median of 47 years and a mean of 45,07 with N=121 valid cases. The standard deviation is 19,324, which shows that the distribution is broad. Most of the visitors fall in the category of 18 to 24 years old with 27,27%, although more than 50% of the respondents is older than 46. This is the result of a very small group between 35 and 44 years old (8,26%), which is explicable by the amount of workdays on which is surveyed (5/6). The relatively big amount of young respondents does not correspond directly with the image of the cultural activity visitors where frequently older people are represented. It does however correspond with data that shows that younger people do visit cinema and also museums more often (Broek et al., 2005). It is also stated that the older and elitist visitors are decreasing in the Netherlands, which might account for the group of younger visitors in the sample (Ranshuysen, 2009). Nonetheless, the second biggest category is between 65 and 74 years old (22,31%) so it

is safe to say the older generation, as is common with cultural activities, is still strongly represented, which also corresponds with international sources on this matter (Kelly, 2001).



(Source: Own elaboration of data)

The educational level is relatively high in the population. As described before, a global grouping of international differences in education results in less specified categories, but the outcomes show that the majority of the sample either finished or is following some form of higher university education or PhD (72,73%). This corresponds with both national and international sources that confirm the large amount of higher educated people represented in cultural activities. Dutch sources show for example around 60% of museum visitors had finished a higher education, which corresponds with this sample as it also includes non-finished educations and international visitors (Ranshuysen, 2009; Broek et al., 2005; Kelly, 2001; Frey, 2009; Bille & Schulze, 2006).

**Table 7.1. Visitors' educational level**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lower than High School	2	1,7	1,7	1,7
	High School	12	9,9	9,9	11,6
	Some College	19	15,7	15,7	27,3
	University	83	68,6	68,6	95,9
	PhD	5	4,1	4,1	100,0
	Total	121	100,0	100,0	

(Source: Own elaboration of data)

Although not the biggest source of information, the dataset shows that the amount of foreign visitors to the building is relatively high with 35,5% of the sample. Research displays that the average amount of foreign visitors to Dutch museums was around 5-10% in 2009 due for example the financial crisis (Ranshuysen, 2009). Explanations for this high amount can be the slight recovery of financial problems recently or the location of the building next to the Amsterdam Central Station and other transport resources. It could also be the result of the EYE's English program and promotion or its free accessible areas. Especially the admission aspects seems important to foreign visitors (Ranshuysen, 2009).

The amount of visits to museums is relatively high amongst the respondents. As table 7.2 shows, 44,63% filled in they visited a museum more than five times in the past year. All the other categories scored relatively low, the mean is 3,29 and the standard deviation is 1,789. This corresponds with different researches that suggest visitors of cultural activities are likely to repeat their visits and visit many other cultural activities (Ranshuysen, 2009; Cuccia, 2003; Kelly, 2001). Female responds visited museums more often as 51,5% of them visited 5 times or more and 36,4% of the men did. This corresponds with earlier results that the women tend to visit cultural activities slightly more then men (Broek et al., 2005; Ranshuysen, 1998).

**Table 7.2. Visitors' museum visits in the last 12 months**

		Frequency	Percent	Valid Percent	Cumulative Percent	Percent Men	Percent Women
Valid	0	6	5,8	5,8	5,8	9,1	3,0
	1	24	19,8	19,8	25,6	20,0	19,7
	2	16	13,2	13,2	38,8	16,4	10,6
	3	11	9,1	9,1	47,9	9,1	9,1
	4	9	7,4	7,4	55,4	9,1	6,1
	5 or more	54	44,6	44,6	100,0	36,4	51,5
	Total	121	100,0	100,0		100,0	100,0

(Source: Own elaboration of the data)

### 7.3 GENERAL QUESTION

The next section will answer the third sub question: *Which values of architecture as defined in the literature motivate visitors of the EYE Film Institute building to visit?* Respondents were asked to fill in how much they agreed with a general statement and seven more in depth statements about the influence of the values of architecture. First of all they were asked to fill their degree of agreement on a 5-point Likert-scale to a general statement about the ability of museum buildings to attract visitors. The numbers 1 to 5 represent a degree of agreement and therefore will be treated like a scale, as argued by Brown (2011). Answer alternatives varied from strongly disagreement to strongly agreement and as table 7.3 shows, the majority (with N=119) agreed more or less (4: 42%; 5: 40,3%). No respondents disagreed totally with the statement, although 1,7% scored the item a 2. The mean is 4,19 and the standard deviation 0,778.

**Table 7.3. Museum buildings ability to attract visitors.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	0	0,0	0,0	0,0
	2	2	1,7	1,7	1,7
	3	19	15,7	16,0	17,6
	4	50	41,3	42,0	59,7
	5	48	39,7	40,3	100,0
	Total	119	98,3	100,0	
Missing	System	2	1,7		
Total		121	100,0		

(Source: Own elaboration of the data)

The T-test shows no significant distinctions in the answers between different genders and residency. Nonetheless, in order to see which demographic factors might predict the perceived attractive ability of museum buildings, a logistic regression was done between the independent variables of the respondents' demographics and their agreement with the ability of museum buildings to attract. The results are show in table 7.4. The Nagelkerke R<sup>2</sup> is 0.171, which is not particularly high and means that the model for only 17% predicts the results.

**Table 7.4. Logistic regression of the perceived attractiveness of museum buildings.**

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	Sex	,058	,534	,012	1	,913	1,060
	Education			4,728	4	,316	
	Education(1)	,477	2,138	,050	1	,823	1,612
	Education(2)	1,554	1,313	1,402	1	,236	4,732
	<b>Education(3)</b>	<b>3,062</b>	<b>1,478</b>	<b>4,293</b>	<b>1</b>	<b>,038</b>	<b>21,361</b>
	Education(4)	1,287	1,032	1,555	1	,212	3,623
	Residency	,398	,590	,454	1	,500	1,489
	Age	-,032	,144	,049	1	,825	,969

Museumvisits				7,742	5	,171	
Museumvisits(1)	-2,081	1,087	3,666	1	,056	,125	
Museumvisits(2)	-,669	,714	,879	1	,348	,512	
Museumvisits(3)	,085	,936	,008	1	,928	1,088	
<b>Museumvisits(4)</b>	<b>-1,662</b>	<b>,822</b>	<b>4,084</b>	<b>1</b>	<b>,043</b>	<b>,190</b>	
Museumvisits(5)	,165	1,176	,020	1	,888	1,180	
Constant	,453	1,191	,144	1	,704	1,573	

a. Variable(s) entered on step 1: Sex, Education, Residency, Age, Museumvisits.

(Source: Own elaboration of the data)

The results show that there are only two independent variables with a significance level below 0.05 that can predict the perceived ability of museum buildings to attract visitors. First of all the higher university education has a significant outcome. Respondents with a higher education are more likely to perceive the building of a museum able to attract visitors (Sig. 0,038 and B = 3,062). This correlates with literature that suggests that museum-visitors are often higher educated, go more often and therefore appreciate it more (Bille & Schulze, 2006). The other significant outcome shows that people that visit museums 4 times are less likely to rate the influence of the museum building high (Sig. 0,043 and B = -1,662).

#### 7.4 MOTIVATION QUESTION

Secondly, the different values of architecture were tested for their influence on visitors' decision to go to EYE. The aforementioned Likert-scale followed the items, which allowed the respondents to state their perceived motivation. Counting the total of scores for the values of architecture with a minimum of 7 and a maximum of 35 gave a median of 26, which corresponds with the average of 3,7 for the different values. The results per value are shown in table 7.5.

**Table 7.5. Visitors' perceived motivation by architectures' values**

		Use value motivation	Image value motivation	Social value motivation	Environmental value motivation	Aesthetic value motivation	Symbolic value motivation	Exchange value motivation
N	Valid	121	121	121	121	121	121	120
	Missing	0	0	0	0	0	0	1
<b>Mean</b>		<b>3,88</b>	<b>3,88</b>	<b>3,22</b>	<b>3,28</b>	<b>4,50</b>	<b>3,64</b>	<b>3,50</b>
Median		4,00	4,00	3,00	3,00	5,00	4,00	4,00
Std. Deviation		,868	,868	1,061	1,156	,621	1,147	1,123
Skewness		-,706	-,395	-,076	-,109	-1,078	-,627	-,507
Std. Error of Skewness		,220	,220	,220	,220	,220	,220	,221

(Source: Own elaboration of the data)

The means show a rather positive average for all architectural values. Overall, most of the respondents saw the values as of positive influence on the decision to taking a look at the EYE building. This could be a result of the 'warm glow' effect where respondents show an exceptional amount of support for a good because of its treatment in isolation without taking into

account other aspects of influence (Sunstein, 2002; Snowball, 2008). However, the difference in appreciation shows interesting results. First of all it is to see that to the respondents the most important value of architecture is its aesthetic with a mean of 4,5. In other words, in comparison to the other values, respondents feel most attracted to the museum if they think the building is beautiful. The least important to visitors is the social value with a mean of 3,22 followed by the environmental with a mean of 3,28. Out of all the values of architecture, its ability to get people in contact with each other is least important for visitors when they go to a museum. An explanation for this could be that people often go in groups to museums and interact with these groups, but are not looking for interaction with other people. The environmental value could be less important due to museums lesser known ability to be green (Sutter, 2006). The exchange value shows a missing variable but nevertheless scores relatively positive. In all cases the majority of the respondents voted 4. Except for the environmental value, for which the majority voted 3. The low result for the social value derives from the fact that over 55,3% voted 3 or lower. For the aesthetic value the majority voted 5.

Decoding the answers into dichotomous answers disagree (1,2,3) and agree (4,5) makes it possible to do a logistic regression and see if any demographic factors are able to predict differences in answers. This analysis shows some, but not many significant results. It shows how Non Dutch respondents are less motivated by Use value than Dutch respondents (Sig. 0,043 and B = -1,108). Its also shows that the Non Dutch respondents are less likely to be motivated by the environmental value (Sig. 0,008 and B = 1,289). Older people are more likely to be motivated by the symbolic value, as age is significant (Sig. 0,011 and B=0,319). And respondents that visited museums over 5 times in the last year were less likely to be motivated by the Image value of the building (Sig, 0,022 and B = -1,866). The Nagelkerke R<sup>2</sup> is however often relatively low, which shows a weak connection between most of the dependent and independent variables.

## 7.5 WTP QUESTION

This section will answer the question: *Which values of architecture as defined in literature influence the willingness to pay of the building visitors for exhibitions in the EYE Film Institute?* Thirdly in the questionnaire, the WTP of the visitors for the values of architecture was tested through the Likert-scale. It was used to measure the degree of agreement with paying the extra fee to compensate or improve one of the values of architecture when visiting an exhibition in EYE. Counting the total of scores for the WTP gives a median of 27 (Ranging from 7 to 35),

which again demonstrates a rather positive attitude towards the values of architecture shown in the attitude towards WTP.

**Table 7.6. Visitors' perceived WTP for architectures' values**

		Use value WTP	Image value WTP	Social value WTP	Environmental value WTP	Aesthetic value WTP	Symbolic value WTP	Exchange value WTP
N	Valid	121	121	121	121	121	121	121
	Missing	0	0	0	0	0	0	0
<b>Mean</b>		<b>3,89</b>	<b>3,64</b>	<b>3,49</b>	<b>3,69</b>	<b>4,27</b>	<b>3,74</b>	<b>3,58</b>
Median		4,00	4,00	4,00	4,00	4,00	4,00	4,00
Std. Deviation		1,071	1,168	1,170	1,139	,837	1,263	1,270
Skewness		-1,025	-,675	-,462	-,578	-1,681	-,747	-,700
Std. Error of Skewness		,220	,220	,220	,220	,220	,220	,220

(Source: Own elaboration of the data)

Just as with motivation, people's WTP is also highest for the aesthetic value of the museum with a mean of 4,27. It is to see that people find this the most important and we're agreeing mostly to pay for this value. People are least willing to pay for the social value of architecture with an average of 3,49, which correlates with earlier motivation questions. A striking result is that the WTP for the improvement of the environmental value is relatively high (3,69) compared to the previous section where it scored the second lowest mean. This could mean that people are actually more willing to pay to improve the environmental value of the building than is actually motivating.

As the answers were divided between not willing to pay (1,2,3) and willing to pay (4,5), it is to see that all means for all values except the social value show positive attitude towards WTP. If the variables are divided in dichotomous answers WTP and not WTP, it is possible to do a logistic regression to see whether there are any demographic variables influencing the WTP. The logistic regression of the different variables however only resulted in a few significant differences. For the Use Value, it is to see that Non Dutch respondents are relatively less willing to pay (Sig. 0,042 and B -1,027). This might have to do with their residency and less connectivity with the museum. Similar results are seen for the Aesthetic value, were again Non Dutch respondents are also less likely to pay the extra fee (Sig. 0,05 and B -2,048). The symbolic value showed to be slightly influenced by age (Sig. 0,021 and B 0,231). Older people are slightly more willing to pay for symbolic value of architecture. However, the Nagelkerke  $R^2$  shows relatively low explanation rates for these variables, which also indicates relatively low influence of these independent variables on the WTP.

## 7.6 ACTUAL WTP QUESTION

The actual WTP question, asked by the researcher verbally after the survey, shows the difference between actual willingness to pay and stated willingness to pay. 15 respondents, that is 12,4% of the population, agreed to pay the actual fee on sight in order to compensate for, or to improve the values of architecture. Therefore 87,6% disagreed to make an actual market transaction. This could be the result of the aforementioned absence of liability in earlier WTP questions, resulting in visitors overestimating their WTP (Bedate, Herrero & Sanz, 2009; Snowball, 2008; Cuccia, 2003). It can also be a result of the situation on sight where respondents were asked to give money directly to an unknown researcher. Nevertheless a much heard argument on sight was that the visitors either already paid for an exhibition the day of the survey or only want to pay when they actually go to an exhibition. In a regression of the actual WTP question, no significant (Sig.< 0,05) results were found in a logistic regression with visitors' demographics. All of the respondents that were prepared to actually pay agreed to pay for the aesthetic value. Only 10 out of the 15 chose to pay for the Environmental value.

In general the results show that there is a strong base of appreciation for the visual aesthetics of the museum building. Lesser appreciation is found for the social and environmental values as lesser respondents agreed to their influence on decisions to visit or their willingness to pay. The Next chapter will include full conclusions of the research.



# V – CONCLUSION



Photo: Wojtek Gurak

## 8. CONCLUSION

Despite the crisis, subsidy cuts and the expenses for new buildings, a lot of organisations (re)construct new museums. As visitors are needed to compensate these costs and generate income, the aim of this research was to find out their preferences and if these kinds buildings attract them. The case study of the EYE Film Institute, with their new and striking building, is used in order to investigate this relation. A CV survey and WTP study served as vehicle to measure the worth of the architecture for the visitors of EYE. The conclusion will address the results and the answers to sub questions in relation to each other in order to answer the main question of this research.

First a literature research is done in order to distillate the different aspects of the value of architecture and how these are qualified. The first sub question is used to discover these values.

*1: What are the values of architecture according to literature?*

Research on literature about architecture, its value and measuring it resulted in the distillation of six different aspects of architecture. Exchange value focuses on the economic value of the building, Use value considers its functionality, Image value focuses on its ability to express the image of the buildings' occupier, Social value represents the ability to bring people in contact with each other, Environmental value concerns the environmental friendly aspects of the building and Cultural value considers its contribution to cultural aspects in the surrounding. The existence of these values is confirmed with several sources and researches. It shows that a building does not only have a functional sheltering value, but serves different important purposes amongst others by its visual design. It also shows the importance of well-designed buildings, as they are actually able to influence a range of different factors that might be beneficial.

The values distilled in the first part of the literature research are also applied to the case of museums and its visitors. This is done in order to answer the second sub question:

*2: What values can architecture have for museums and its visitors according to literature?*

Literature showed how all six architectural values can also be important to museums and their visitors. More tangible aspects like Use and Exchange values are important, but intangible aspects like Image and Social value also seem to have a considerable importance according to leading literature in the cultural field. Because the Cultural value is argued to be exceptionally important in the case of museums, it is divided into two aspects: the Aesthetic and the Symbolic value. The Aesthetic value considers the visual beauty of the building, which is obviously taste bonded but quite important. The Symbolic value exists out of the symbolic and inspirational meaning a building can have, which is also often very strong in the case of museum buildings. The total number values of architecture for museums distilled, is therefore seven.

Secondly, in order to discover their opinion on the importance of the architectural values, an empirical research is done with 121 visitors of the EYE Film Institute building. Their demographics showed that the respondents were a reasonable sample of population of visitors of EYE and cultural activities. The majority was highly educated and visited museums often in the last twelve months. Although the majority was relatively old, a large representation of younger respondents (18-24) was in the sample. This is explicable by the cinema-oriented museum, which in general is considered to attract relatively younger visitors. The museum also attracted more international visitors than average, which might be explained by the international exhibitions and promotion of the museum or its location near key transportation facilities. The seven values were operationalized into statements that were tested with the 121 respondents in order to answer the third sub question:

*3: Which values of architecture as defined in literature motivate visitors of the EYE Film Institute building to visit?*

A first general question showed how the respondents were relatively positive towards the ability of museum buildings to attract visitors. The mean represented their positive consideration. Then a first batch of seven items on the values of architecture was used in order to find out their motivational influences. Analyses showed that respondents scored all values of architecture scored relatively positive at their influence on visiting EYE. Most important to respondents was the aesthetic value of the building. The respondents were motivated the most to visit EYE by the buildings visual beauty in comparison to the other values. Other values that scored relatively high were the Use value of the building and its ability to express what the occupying organisation entails (Image value). Relative low scores were found on the influence of the

building to get in contact with other people and its ability to be environmental friendly. The latter two seem to be of less influence on visitor motivation despite suggestions of their importance in the literature. Regression analyses showed that Non Dutch residents are somewhat less motivated by the Use value and the Environmental value. Older respondents are more likely to be motivated by the Symbolic value.

A second batch of seven items on the values of architecture was used to find out their influence on visitor stated WTP. This was done in order to answer the fourth sub question:

*4: Which values of architecture as defined in literature influence the willingness to pay of the building visitors for exhibitions in the EYE Film Institute?*

The respondents is asked for which values of architecture they would be willing to pay an additional fee of 50 cents to visit an exhibition. Similar partitioning amongst the values is shown in the scores. The visual beauty influenced the stated WTP of the visitors mostly and the functionality is still important to the visitors. Again, relatively low scores were found on the WTP for the social influence of the building. People are less willing to pay for, and less interested in the social aspects of the architecture. An interesting higher score for the Environmental value shows that the WTP as compensation for, or the improvement of the environmental friendly value is relatively high. This does at a certain level seem important to the visitors. The other values scored average positive on their influence on perceived WTP. Analyses to see if demographic variables influenced these answers showed how Non Dutch respondents were less willing to pay for the Use and the Aesthetic value. Again the symbolic value was important to older respondents.

Afterwards an actual WTP question revealed that the actual WTP of visitors for the architectural visitors on sight was relatively lower. Only 12,4% of the respondents was prepared to hand over actual money on sight. This corresponds with literature that suggests that respondents are more likely to overstate their actual willingness to pay if liability lacked. The added question afterwards showed this problem.

The four sub questions make it possible to answer the main question. They show that the values of architecture, as derived from the literature, are all valued differently in both motivation and WTP amongst the respondents.

*Which values of architecture are appreciated the most by visitors of the building of the EYE Film Institute in Amsterdam?*

The questions on motivation and WTP do show a similar pattern in the appreciation of the values. In both cases respondents find the aesthetic value most influential. The visual beauty received the highest WTP-score and attracts respondents the most to the museum building of EYE. The Use value is in both motivational items and the WTP items second most influential. People do find it crucial to have a functional building and are even prepared to pay a little extra for it. Least important in both cases is the social value. People do not visit EYE because the architecture is able to get them in contact with other people and are less prepared to pay for this. Image value and symbolic value score relatively positive in both batches, which indicates that these two communicative functions are of importance to visitors. An implication of these results is that museum constructors should strive to make buildings visually beautiful to as many visitors as possible because it might attract them. Although beauty is quite subjective, it demonstrates that buildings are not only expected to be functional, but also beautiful. Also the Image and Symbolic value scored relatively positive which might indicate that these communicative aspects of architecture need to be kept in mind by museums. The results also show that the proclaimed Social value of architecture in getting people in contact with each other is less important to visitors than other aspects of the architecture. This might influence museums to focus less on these aspects in for instance programming. It also shows how theory does not always correspond with reality. Proclaimed positive influences of cultural products need to keep being subject of research in order to prove or refute its existence. As goes for the social values of architecture, future research should focus on the conditions that influence its effect.

Although the results can form bases for implications to museums and theorists and despite the efforts to create reliable results, this research also has its limitations. The CVM method chosen as vehicle for the measurement of visitors attached value to architecture is known to have its limitations. It has its limitations in the WTP scenario chosen, the survey design, the case study, the data gathering and its generalizability to an entire population. These limitations and arguments in favour of this method are presented in the methodology chapter but due to time and money constraints this still was the most suitable option. Also the numbers of respondents could have been higher if more days were used to collect respondents. Future research should

focus on specific additions and improvements. The scope of the research should be broadened with different museums and buildings in order to receive more comparable data that has some form of generalizability to museum visitors as an entire population. Furthermore, this research focussed solely on architecture in order to avoid influencing contingencies that might reduce the ability to measure its value. However in order to measure the relative importance of museum architecture, further research should focus on comparing architecture with the other attractive aspects of museums. Also an actual WTP question could be configured different in another setting in order to investigate if these might influence the outcomes. Inevitably the contingencies are of heavy influence on the results, as some respondents even noted themselves. With these additions, further research might give more reliable information on architectures influence on museum visitors and its worth to them.

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**Table A1: Literature on exchange values of architecture.**

Source	Study	Findings
Hough & Kratz, 1983	The quality of the building design in relation to the property rents in Chicago.	Renters pay more than equilibrium would suggest to rent a building of architectural significance (Chicago American Institute of Architecture award winners).
Vandell & Lane, 1989	An economic model to assess the influence of high quality design on the value of rents and vacancy rates.	There is a link between high quality buildings, as rated by architects, and higher rents
Droege, 1999	Research for the Property Council of Australia on financial return of investments in quality design.	Every building researched with high quality design, demonstrated high financial results.
Ahlfeldt & Maenning, 2010	Influence of historical buildings on surrounding property prices in the United States	Historical architecture influences the property prices positively in an area of 600 meters around them.
Lamb, 2010	Research of 34 Dutch real estate expert opinions on two fictive buildings with different facades.	Experts valued the external attractive building higher than the less attractive building with low architectural quality
CABE, 2002	A face-to-face survey with 1018 residents in England in 2002	Most of the people questioned agreed that well designed buildings would increase faster in value.

**Table A2: Literature on use values of architecture.**

Source	Study	Findings
Evans, Haryott, Haste & Jones, 1998; Pearce, 2003; Ive, 2006	Researches on the influence of well designed buildings on organisational outcomes.	A well-designed building can have influence on productivity and vice-versa, a bad design can have negative effects when organisations do not work at their highest capabilities
Ward & Holtham, 2000	Research on the relationship between physical space and knowledge creation including interviews in the UK and the USA	Architecture can stimulate creativity and knowledge creation.
Brill & Weidemann, 2001; CABE, 2005	BOSTI research on the relation between workplace design and productivity with 13.000 users of workplaces of different industries and 40 business units.	Workplace influences on job satisfaction, individual performance and team performance.
Lawson, 2002	Meta study on the influence of architecture on patient satisfaction, quality of life and other outcomes.	There is much evidence that support the positive influence of architecture on patients and it is therefore seen as an opportunity to improve healthcare.
CABE, 2002	A face-to-face survey with 1018 residents in England in 2002.	Most of the people questioned agreed that people work more productively in well-designed buildings.
Van den Sigtenhorst, 2003	Literature research on employee motivation and productivity.	Bad design can have negative influences on job satisfaction and motivation if it does not meet certain standards
Bjerke, Ind & De Paoli, 2007	Research at a telecommunications company in Norway on the effects of aesthetic aspects of architecture, design and art on employees.	Aesthetics positively influences job satisfaction, motivation, organisational culture, cooperation, commitment and organisational change.



**Table A3: Literature on image values of architecture.**

Source	Study	Findings
Vandell & Lane, 1989	An economic model to assess the influence of high quality design on the value of rents and vacancy rates.	Individuals can derive status from inhabiting an architectural landmark. It can serve as marketing and informing tool for the occupying organisation towards the outside.
Wineman, 1982; Van Sigtenhorst, 2003	Literature research on employee motivation and productivity.	If a surrounding does not meet the envisioned status of an employee, job satisfaction will decrease.
Collins & Porras, 2000	Research on the differences between successful and less successful businesses	Leading companies distinguish themselves by making their ideologies visible with signals in for instance office spaces or faculties.
Myerson & Ross, 2003; Wenger, et al. 2002; Ward & Holtham, 2000;	A book on office design; A book on knowledge work inside an organisation; Research on the relationship between physical space and knowledge creation including interviews in the UK and the USA.	Narrative surroundings can stimulate employees to identify and create meaning, commitment and even pride towards the organisation
Gombrich, 2005	Review of art and architectural history.	Roman superiority and battle victories were often shown in their buildings to communicate to the public. Architecture was an object of pride and status.
CABE, 2005	Research on the influence of the quality of building design at universities in the UK on the choice of students to study and staff to work there	63 % of the students and 61% of the staff agreed that the building design posed a certain message that appealed and influenced their decision to work and study there.
Bjerke, Ind & De Paoli, 2007	Research at a telecommunications company in Norway on the effects of aesthetic aspects of architecture, design and art on employees.	Employees can derive pride of office building, especially when encountering their customers
Taschen, 2010	Review of architectural history	The Nazi's adopted Roman-like, neoclassical styles in their architecture in order to express their power and superiority.

**Table A4: Literature on social values of architecture.**

Source	Study	Findings
A Crowe, 2000	A book about the prevention of crime through environmental design.	The Crime Prevention Through Environmental Design concept (CPTED), developed by Dr. C. Ray Jeffery, states that proper design can lead to a diminish in crime
CABE, 2002	A face-to-face survey with 1018 residents in England in 2002.	Most residents agree better quality buildings and street design improve quality of life, influences the way they feel and might reduce crime rates.
Dutch Audit Office, 2002	Research on policies and application of new financial instruments in public and private sector cooperation.	Dutch Audit Office advised Dutch private public partnership projects in construction to focus more on the quality for society than solely on costs and efficiency.

Gössel & Leuthäuser, 2005	Review of architectural history.	Many architects saw their well-designed neighbourhoods able to influence quality of life and improve social cohesion.
Hargreaves McIntyre, 2006	Meta-study of 195 documents from throughout the UK on the social influence of architectural design	Architectures aesthetic and visual aspects can make a difference in shaping communities
Rijksgebouwendienst, 2008	Architectuurnota 2009-2012	Recognizable buildings can add to identity of, cohesion in and experience value of an area and give dignity to its inhabitants
Feireiss, 2011	A book with architectural case studies	Architecture is able to have a social consequences and bring social changes, according to different case studies.

**Table A5: Literature on environmental values of architecture.**

Source	Study	Findings
Loftness, Hartkopf & Gurtekin, 2003	Research on the productivity of employees in green buildings in the US.	Employee productivity can improve in and as a result of green buildings.
Eichholtz, Kok, & Quigley, 2009	Research on the economic influence of green buildings in the US.	Green buildings affect rents and exchange values.
Wiley, Benefield & Johnson, 2010	Research on the occupancy rates of green buildings in the US.	Green buildings can have higher occupancy rates than non-green buildings.

**Table A6: Literature on cultural values of architecture.**

Source	Study	Findings
Gonzalez, Fernandez & Cameselle, 1997	Research on the structuring of user perceptions of University buildings at the Psychology Faculty of the University of Santiago de Compostela.	Buildings' aesthetics and pleasantness influences students and employees user satisfaction
Ward & Holtham, 2000	Research on the relationship between physical space and knowledge creation including interviews in the UK and the USA	Architecture can inspire and provoke creativity in cultures.
Bjerke, Ind & De Paoli, 2007	Research at a telecommunications company in Norway on the effects of aesthetic aspects of architecture, design and art on employees.	Buildings influence cultures.
Ghomeshi, Nikpour & Jusan, 2012	A quantitative questionnaire research on the valuation of building attributes by architects.	Building attribute have different values and some physical cues are very important for architects and some are not so much important.



Dear respondent,

Thank you in advance for your participation in this survey for the Erasmus University Rotterdam. Your participation is completely anonymous and the research independent of the EYE Film Institute.

In spite of the financial crisis, Dutch museums still invest money in renovating and constructing buildings. Estimations of the costs of the **EYE Film Institute** building lie between **30 and 38 million euro's**. Architecture indeed has many functions, but a special building also costs money. The question is whether these kinds of buildings and functions are important to (potential) visitors or not.

The following statements treat the influence of the building on your motivation to take a look at the EYE, for instance to drink a cup of coffee, see a movie or visit an exhibition etc. Please **circle the number** that fits your opinion best (1 = Strongly disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly agree).

Please fill in what applies to you:

<b>Sex</b>	<input type="checkbox"/> Male <input type="checkbox"/> Female
<b>Age</b>	_____ years
<b>Educational level</b>	<input type="checkbox"/> Lower than High School <input type="checkbox"/> High School <input type="checkbox"/> Some college <input type="checkbox"/> University <input type="checkbox"/> PhD
<b>Resident</b>	<input type="checkbox"/> Dutch <input type="checkbox"/> Not Dutch
<b>How many times have you visited a museum in the last year?</b>	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 or more

	-	AGREE			+
Generally speaking, a museum building is able to attract visitors.	1	2	3	4	5

<b>The building plays a role in my motivation to take a look at the EYE because:</b>	-	AGREE			+
1. The building looks functional and visitor-friendly.	1	2	3	4	5
2. The building represents the identity and image of the EYE.	1	2	3	4	5
3. The building looks like a place where I can get in contact with other people.	1	2	3	4	5
4. The building looks environmentally friendly (Sun panels, recycled material etc.).	1	2	3	4	5
5. The building attractive and beautiful.	1	2	3	4	5
6. The building has a symbolic meaning.	1	2	3	4	5
7. Public funds are invested wisely.	1	2	3	4	5

Now imagine the exhibitions of the EYE are free of entrance. Would you, when visiting, be willing to pay a fee of **50 eurocents** as compensation for, or to improve one of the following aspects of the building? Please circle the number that fits your opinion best. Remember: 'Agreeing' means you would be willing to pay 0,50 cents.

<b>If I would visit an exhibition in the EYE, I would be prepared to pay the amount of 50 cents if:</b>	-	AGREE			+
1. The building looks functional and visitor-friendly.	1	2	3	4	5
2. The building represents the identity and image of the EYE.	1	2	3	4	5
3. The building looks like a place where I can get in contact with other people.	1	2	3	4	5
4. The building looks environmentally friendly (Sun panels, recycled material etc.)	1	2	3	4	5
5. The building attractive and beautiful.	1	2	3	4	5
6. The building has a symbolic meaning.	1	2	3	4	5
7. Public funds are invested wisely.	1	2	3	4	5

Thank you very much for your cooperation!

Geachte respondent,

Bij voorbaat dank voor uw deelname aan deze korte enquête voor de Erasmus Universiteit Rotterdam. Deelname is volledig anoniem en het onderzoek onafhankelijk van het EYE Film Instituut.

Nederlandse musea investeren ondanks de crisis nog steeds veel geld in renovaties en constructies van **gebouwen**. Kostenschattingen voor het **EYE Film Instituut** gebouw liggen tussen de **30** en de **38 miljoen euro**. Architectuur kan veel functies hebben maar een bijzonder gebouw kost ook veel geld. De vraag is dan ook of zo'n gebouw en zulke functies voor (mogelijke) bezoekers iets uitmaken.

De volgende stellingen gaan over de invloed van het gebouw op uw motivatie om een kijkje te nemen bij het EYE door er bijvoorbeeld koffie te drinken, een film of tentoonstelling te bezoeken enz.

**Omcirkel alstublieft het getal** dat uw mening het beste weergeeft.

(1 = Helemaal oneens, 2 = Oneens, 3 = Eens noch oneens, 4 = eens, 5 = Helemaal eens)

Vul hieronder in wat van toepassing is op u:

<b>Sekse</b>	<input type="checkbox"/> Man <input type="checkbox"/> Vrouw
<b>Leeftijd</b>	_____ jaar
<b>Hoogst genoten opleiding</b>	<input type="checkbox"/> Lagere school <input type="checkbox"/> Middelbare school <input type="checkbox"/> Vervolgopleiding <input type="checkbox"/> HBO/WO <input type="checkbox"/> PhD
<b>Woonachtig</b>	<input type="checkbox"/> In Nederland <input type="checkbox"/> Buiten Nederland
<b>Aantal keer dat u een museum bezocht de afgelopen 12 maanden</b>	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 of meer

	-	EENS			+
In het algemeen is het gebouw van een museum in staat om publiek trekken	1	2	3	4	5

<b>Het gebouw van EYE is van invloed op mijn motivatie om er een kijkje te nemen omdat:</b>	-	EENS			+
1. Het gebouw er functioneel en bezoeker-vriendelijk uit ziet.	1	2	3	4	5
2. Het gebouw de identiteit en het imago van het EYE representeert.	1	2	3	4	5
3. Het gebouw eruit ziet als een plek waar ik goed met andere mensen in contact kan komen.	1	2	3	4	5
4. Het gebouw er milieuvriendelijk uit ziet (Zonnepanelen, gerecycled materiaal etc.)	1	2	3	4	5
5. Het gebouw mooi en aantrekkelijk is.	1	2	3	4	5
6. Het gebouw een symbolische betekenis heeft.	1	2	3	4	5
7. Overheidsgeld goed geïnvesteerd is.	1	2	3	4	5

Stelt u zich nu voor dat in het vervolg de tentoonstellingen in het EYE gratis zijn. Zou u dan, als u die bezoekt, bereid zijn een entreebedrag van **50 eurocent** te betalen als compensatie voor, of de verbetering van één van de onderstaande aspecten van het gebouw? Omcirkel het getal dat uw mening het beste weergeeft. Let op: Eens (4) en Helemaal eens (5) betekenen dus dat u bereid zou zijn 50 cent te betalen.

<b>Als ik een tentoonstelling zou bezoeken in het EYE dan zou ik bereid zijn het bedrag van 50 cent te betalen als:</b>	-	EENS			+
1. Het gebouw er functioneel en bezoeker-vriendelijk uit ziet.	1	2	3	4	5
2. Het gebouw de identiteit en het imago van het EYE representeert.	1	2	3	4	5
3. Het gebouw eruit ziet als een plek waar ik goed met andere mensen in contact kan komen.	1	2	3	4	5
4. Het gebouw er milieuvriendelijk uit ziet (Zonnepanelen, gerecycled materiaal etc.)	1	2	3	4	5
5. Het gebouw mooi en aantrekkelijk is.	1	2	3	4	5
6. Het gebouw een symbolische betekenis heeft.	1	2	3	4	5
7. Overheidsgeld goed geïnvesteerd is.	1	2	3	4	5

Hartelijk dank voor uw medewerking!