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The value of cultural institutions

Measurement and description

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PhD thesis

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To my brother Maximilian

Abstract

Resources are invested to maintain cultural institutions and society has an interest in the efficient allocation of these resources. To understand efficiency, the costs incurred in monetary units need to be compared to the value created. The overall question of this thesis is: *What is the value of cultural institutions*? The question is divided in two thematic topics. The first concerns, how to *measure* the value of cultural institutions in monetary units? This topic is studied in three articles. Revealed and stated preference methods are applied. The second thematic question concerns how to *describe* the measured value? Two other articles investigate how individuals perceive the value of cultural institutions.

The articles are based on survey data from 12 samples and more than 3500 interviews. The first article is based on a licentiate thesis: *Valuing the Invaluable - The Value of Cultural Institutions* (Armbrecht, 2009) and applies the contingent valuation method to measure the value of a concert hall and museum. The second article compares a stated preference method (contingent valuation method) with a revealed preference method (travel cost method). The third article applies contingent valuation method and the concepts of use and non-use value to a festival setting. The fourth article is based on interviews and aims to gain an understanding of how individuals perceive and describe the value of cultural institutions. The fifth article develops a scale for measuring the aspects of cultural institutions perceived by individuals to be valuable.

The articles indicate that the value created for the three study objects (a museum, a concert hall and a festival) exceeds the costs they incur. The results seem to be reasonable and prove to be valid when compared to the results of the travel cost method as well as real-market comparisons. A methodological advantage of contingent valuation method is the possibility to distinguish between different types of use and non-use values. Contrary to the hypothetical character of contingent valuation method, the travel cost method is based on observed behaviour. Though this involves certain pedagogical advantages, the method may not be suitable for assessing non-use values or distinguishing different types of use values.

The fourth article describes the relationship of concepts used in economic literature to those in other disciplines. The former may not encompass all benefits, but it does cover a variety of social, cultural, health related, educational, and other values. The last article develops a scale as an alternative method for measuring the perceived contribution of cultural institutions. The thesis concludes that use and non-use values need consideration when assessing the value of cultural institutions. Besides monetary descriptions of value, scales are applicable for understanding which factors determine the value of cultural institutions.

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John Armbrecht

Göteborg, West Coast, in November 2012

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1. Introduction

Individuals perceive art museums, concerts halls, opera houses and festivals as valuable, but the maintenance of cultural institutions also demands resources. Society has an interest in the efficient allocation of resources, in order to increase the value perceived by individuals, and thus welfare. Assessments of efficiency refer to the relationship between input and output. This is the core of cost-benefit analysis, which is a method to compare costs and benefits and to assess changes in welfare. The costs of cultural institutions are readily available in terms of monetary units but created value is frequently described in other than monetary terms. To assess changes in welfare, there is, however, also a need to assess and understand the value created. The overall question is therefore: *What is the value of cultural institutions?* The question is further divided into the two thematic questions elaborated below.

Assessments of value involve measurement. The value of culture is multidimensional and complex, while measurement aims to bring value down to one measurable unit (Hutter & Throsby, 2008). In a preceding licentiate thesis (Armbrecht, 2009), methods for measuring the value of two cultural institutions in monetary units were applied. The value of the cultural institutions thus became comparable to the financial costs they incurred. However, the application of these methods also yielded further methodological challenges, motivating the first thematic question: *How to measure the perceived value of cultural institutions?*

To understand the value created by cultural institutions, environmental concepts have served as guidance, and it has been assumed that these are directly transferable to a cultural context, and empirical analyses of the content of adapted concepts have been rare. However, individuals may perceive a value for many reasons. Consumption of experiences may create value, through fantasies, feelings, and fun (Holbrook & Hirschman, 1982). Furthermore, cultural institutions create value through image, social cohesion and identity (Throsby, 2001, 2010). To understand the value of cultural institutions, the value perceived by individuals needs to be described and understood. The second thematic question is therefore: *How to describe the perceived value of cultural institutions?*

The objective of this thesis project is to investigate the value of cultural institutions, by measuring the value of cultural institutions in Sweden, and by describing the value of cultural institutions as perceived by individuals.

1.1 Disposition

The first part of this thesis (chapter 1-6), provides an overview of the theoretical and methodological foundations and suggests a structure for understanding the relationship between the five articles included in this thesis project. Each article addresses one of the five research questions. The first three articles investigate the *measurement* of value, and can be summarized under the thematic question: *How to measure the perceived value of cultural institutions?* The two subsequent articles consider how to *describe* the measured value, and address the thematic question: *How to describe the perceived value of cultural institutions?*

Table 1: An overview of the articles included in this thesis related to each of the thematic questions

	Title	Authors	Methodology	Published
Measurement	(1) Culture and value creation: An economic analysis of Vara Concert Hall and the Nordic Watercolour Museum	John Armbrecht & Tommy D. Andersson	Quantitative survey, contingent valuation method	In press at Routledge
	(2) The Value of Cultural Experiences: Estimations of Use values	John Armbrecht	Quantitative survey, travel cost and contingent valuation method	To be submitted
	(3) Estimating Use and Non-Use Values of a Music Festival	Tommy D. Andersson, John Armbrecht & Erik Lundberg*	Quantitative survey, contingent valuation method	Published in Scandinavian Journal of Hospitality and Tourism
Description	(4) The Value of Cultural Institutions: A Review and Conceptual Development of Value Categories	John Armbrecht	Qualitative interviews	To be submitted
	(5) Developing a scale for measuring the perceived value of cultural institutions	John Armbrecht	Quantitative survey, exploratory and confirmatory factor analysis	To be submitted

*the authors recognize equal contribution.

In what follows, section 1.2 sets the stage and defines the two major concepts: *cultural institutions* and *value*. Thereafter, three research questions related to *measurement* are developed in Chapter 2. Chapter 3 develops two research questions related to *description* while Chapter 4 describes the *methodology* used to collect the data for the studies. Chapter 5 presents a *summary and conclusions* for each article. Chapter 6, first, offers conclusions on how the value of cultural institutions can be measured and, then, continues with conclusions on how to describe the value, and ends with some overall conclusions and reflections on the value of cultural institutions.

1.2 Setting the stage: defining major concepts

Culture has different, yet interrelated, meanings and the concepts of culture and cultural institutions therefore need clarification. Similarly, value is a central concept in many disciplines. Explaining and defining how cultural institutions and value will be used in this thesis project is the intent of the following section.

Culture and cultural institutions

From an anthropological and sociological perspective, culture embraces the attitudes, beliefs, values and codes of practice shared by a group. Casson (2009) describes culture "as shared values and beliefs relating to fundamental issues, together with the forms in which they are expressed" (p. 363).

In cultural economics, as an economic sub-discipline, culture is often used in a narrower, functional sense, to designate cultural activities' goods and services. The 'fine arts' in particular are covered by this description and are sometimes referred to as 'serious culture'. Nevertheless, architecture, music, sculpture, and creative writing may also be included in such a functional concept. To characterise cultural goods and services, Throsby (2009) proposes six characteristics:

- *Cultural goods are experience goods, the taste for which grows as they are consumed in greater quantities; they are therefore subject to rational addiction;*
- *Cultural goods have some public-good properties; in aggregate they yield positive externalities or diffused benefits that may be demanded in their own right;*
- *Cultural goods result from production processes in which human creativity is an important input;*
- *Cultural goods are the vehicles for symbolic messages to those who consume them, i.e. they are more than simply utilitarian but serve in addition some larger communicative purpose;*
- *Cultural goods contain, at least potentially, some intellectual property that is attributable to the individual or group producing the good; and*
- *Cultural goods embody or give rise to forms of value that are not fully expressible in monetary terms and that may not be revealed in either real or contingent markets*. (Throsby, 2009 p.7)

The proposed characteristics are illuminating, insofar as they describe cultural goods and services. However, the description is broad and, for the purpose of this thesis project, a limitation is applied to organizations that provide cultural goods and services. Examples include cultural institutions such as opera houses, theatres and art museums. C*ultural institutions are defined as organizations where practices and habits result in the production, distribution and consumption of cultural goods and services.* While there are

exceptions, cultural institutions are mainly non-profit organizations (Baumol & Bowen, 1993; Weisbrod, 1977).

Value

Hutter and Throsby (2008) state that some researchers may claim the existence of absolute or intrinsic value. Such a conception implies that "values are intrinsic or objective in the sense that they are independent of individual preferences" (McCain, 2009, p. 150). Similarly, van den Braembussche (1996) suggests that a cultural good or service may be "desirable or worthy of esteem for its own sake; thing or quality having INTRINSIC worth" (p. 35). This means value is not determined by individual preferences and it also has an independent existence from the evaluation of experts. This understanding is not compatible with a perspective of value as applied here.

From an economic perspective, value is related to the concept of utility. Bentham (2000) describes the meaning of utility as the "property in any object, whereby it tends to produce benefit, advantage, pleasure, good, or happiness" (p. 14). This description of utility is also referred to as *experienced utility* (Kahneman, 2000). Bentham's (2000) conception, initially published in 1781, shifted towards a consumer-oriented perspective, i.e. utility represented the benefits and pleasure that individuals derive from consuming services and products. Utility is thus used to explain choices and may be labelled *decision utility* (Kahneman, 2000). Decision utility represents aspects that influence individuals' satisfaction and can explain choices individuals make. According to Hanley and Barbier (2009), positive and negative changes in utility are referred to as benefits and costs that lead to the formation of value. Usually benefits and costs are measured in cardinal utility and often in monetary metrics (Mitchell & Carson, 1989), and may reveal something about changes in a society's state of welfare (Garrod & Willis, 2001).

In this study, the concept of value will be used to refer to utility, as is often the case. *Value may include positive and negative perceptions and can be understood as a function of both positive and negative perceptions.* On an individual level, the perceived value is reflected by an individual's willingness to pay to obtain the good or service. On an aggregated level, value is represented by the area under the demand curve. Both individual and aggregated value therefore may be measured in monetary units (Arrow et al., 1993; Mitchell & Carson, 1989).

2. Measuring the value of cultural institutions

The first thematic question concerns: *How to measure the perceived value of cultural institutions?* A cost-benefit framework, with stated and/or revealed preference methods, takes a holistic perspective in order to assess *all* major impacts for *all* members of a society (Hanley, Spash, & Cullen, 1993). Cost-benefit analysis aims to assess the efficient allocation of resources and changes in welfare and is based on a number of assumptions such as: Individuals are assumed to be confronted with a number of choices, for which they have preferences, and individuals strive to maximize their overall utility (Mitchell & Carson, 1989). Every individual is the best judge of his or her preferences. The aim is primarily to describe efficiency rather than distributional issues. It is the nature of most policy decisions that some citizens will benefit whereas others may be worse off. To measure the welfare contribution of actions, Hicks (1939) and Kaldor (1939) introduced a test to assess whether the benefits would be large enough hypothetically to compensate for the costs. Thereby the net-benefit is estimated. If the net-benefit is positive, the action can be assumed to improve welfare.

To measure the value of cultural institutions, all the members of society who could possibly be affected by its provision need to be accounted for. Whereas the consumer value (use value) of actions in well-functioning markets may be assessed, e.g. by price, values that arise despite any use are more difficult to measure (non-use value). In this chapter, the concepts of use and non-use value are introduced to describe the value of cultural institutions.

2.1 Use and non-use values

The experiential value, which cultural institutions create for consumers, may be conceptualized as *use value.* Based on the seminal work of John Krutilla (1967), Mitchell and Carson (1989) describe use value as representing the value of all direct and indirect ways in which an agent uses a good or a service. In a cultural setting, direct use value may consist of the value created by the core cultural activity, for example a museum exhibition or a theatre play. Indirect use value includes the value of additional related experiences. Having a pleasant dinner, chatting with friends, or spending time in the bar attached to a cultural institution, may create indirect use value.

While use value, in terms of experience, is one important contribution, the value of cultural institutions also needs to include the gains that are not attributable to use. The value that cultural institutions have, irrespective of any use, is referred to as *non-use value.* This concept may incorporate any social, cultural, economic, environmental, or other values (Krutilla, 1967). Individuals, for example, may attach value to the possibility of visiting a museum some day, even though they have not yet done so, and may never get around doing so. This value is referred to as *option value*. A museum may also be considered valuable, because it represents the possibility of handing down experiences to future generations. Furthermore, individuals may place value on bequeathing a culturally rich society to future generations. This value is referred to as *bequest value*. The benefit that people derive from the mere *existence* of an institution, such as an art museum – i.e. the satisfaction in knowing it is there as an element in the cultural landscape, whether the individual actually visits the institution or not, is referred to as the *existence value*. Andersson, Armbrecht and Lundberg (2012) propose categorizing the value of cultural institutions as shown in figure 1.

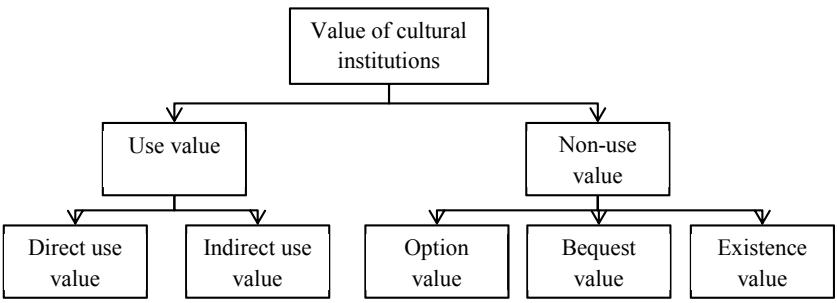

Figure 1: The value of cultural institutions (cf. Bateman and Langford, 1997; Frey, 2003; and Throsby, 2010)

2.2 Stated and revealed preference techniques

Cultural institutions create use and non-use values which makes the measurement of value, by observing market prices, difficult (Li, Lofgren, & Hanemann, 1996). Non-market valuation techniques are necessary. These are divided into two different approaches: revealed and stated preference methods (Garrod & Willis, 2001; Kahneman, Knetsch, & Thaler, 1990; Mitchell & Carson, 1989). The former approach is based on observable

behaviour, whereas the latter method is hypothetical, based on stated or 'expressed' preferences (Garrod & Willis, 2001).

The travel cost method is one revealed preference technique for measuring value. It measures value by means of the travel costs individuals will accept in order to access an experience (Clawson & Knetsch, 1966). The hedonic price method, another revealed preference method, postulates that some goods and services traded on the market might reflect the value of a cultural institution. The hedonic price method uses, for example, housing prices as an intermediate to assess the value and it assumes that, while housing offers shelter, the quality of shelter may vary depending on its location in relation to cultural institutions. Therefore, the costs of housing may depend on the distance to cultural institutions (Rosen, 1974).

Stated preference methods directly ask individuals about their preferences with respect to goods and services, by means of open-ended questions or closed-ended questions (Garrod & Willis, 2001). Open-ended questions give respondents an opportunity to state 'freely' their willingness-to-pay. Closed ended questions do not allow respondents to state their willingness-to-pay freely, but offers a pre-defined amount that may be accepted or rejected by the respondent. Closed ended questions include dichotomous choice, suggesting to the respondent a randomly chosen willingness-to-pay amount, which the respondent accepts or not. Another alternative of closed-ended questions are bidding games, which are constructed to offer ever increasing or decreasing willingness-to-pay amounts, until an offered amount is not accepted anymore. Choice experiments are a derivative of contingent valuation method (Mourato & Mazzanti, 2002), aiming to value specific characteristics of goods and services. By offering different scenarios, choice modelling allows conclusions about trade-offs and the marginal willingness-to-pay for each characteristic (Adamowicz, Boxall, Williams, & Louviere, 1998; Garrod & Willis, 2001; Tuan & Navrud, 2007).

Willingness-to-accept is used occasionally as an alternative technique for measuring willingness-to-pay (Mitchell & Carson, 1989). The conceptual differences between these methods have been analysed theoretically (Hanemann, 1991; Randall & Stoll, 1983) as well as through empirical applications (Andersson, Rustad, & Solberg, 2004; Kling, Revier, & Sable, 2004; Li et al., 1996). In many studies the willingness-to-accept amount turns out to be substantially larger than the willingness-to-pay amount (Andersson et al., 2004; Kahneman et al., 1990), which is supported by the meta-analytic study of Horowitz and McConnell (1981).

2.3 Contingent valuation method

The contingent valuation method is used to measure the value of public goods because, individuals may not be able to reveal their preferences in a real market properly (Bateman & Willis, 2001; Carson et al., 1998; Garrod & Willis, 2001; Mitchell & Carson, 1989). Ciriacy-Wantrup (1947) was early to ponder about how to measure the value of such resources, but Davis (1963) is considered to be the first to suggest the contingent valuation method as a non-market valuation technique for outdoor recreation. Ever since, the contingent valuation method has developed from being a tool for environmental valuation to become a method applicable in other areas, such as health care (Drummond, 2005), transportation (Alberini & Longo, 2006), food (Andersson & Mossberg, 2004), events (Andersson, 1985; Andersson, Larson, & Mossberg, 2009) and cultural economics (Noonan, 2003).

The method constructs a hypothetical market in which individuals reveal their preferences for a good or service (Garrod & Willis, 2001; Mmopelwa, Kgathi, & Molefhe, 2007), and is attached with strict methodological requirements, specified by the National Oceanic and Atmospheric Administration (Arrow et al., 1993). The methodological implementation criteria have been summarized in numerous handbooks and research articles (e.g. Alberini & Kahn, 2006). They include among other: 1) A clear description of the circumstances under which the respondent is able to hypothetically obtain the specific good or services. 2) Questions deemed to reveal individuals' willingness-to-pay for a good or service. 3) Questions on the socioeconomic background of respondents (Carson, 2000).

Contingent valuation is a scenario method, meaning individuals make their valuation contingent on a specific scenario. Often, the scenario is hypothetical in character, which may threaten the reliability of the method (Cummings, Elliott, Harrison, & Murphy, 1997; Cummings, Harrison, & Rutström, 1995). Studies have shown that respondents in a hypothetical market may state a higher or lower willingness-to-pay than in a real situation. Empirical applications have also shown that the information provided, during willingness-to-pay studies, is likely to alter estimates positively or negatively (Bergstrom, Stoll, & Randall, 1990). Mitchell and Carson (1989) observe that the better informed an individual is, the better the estimate will be (Venkatachalam, 2004; Whittington, Lauria, & Mu, 1991). Research has shown, that if no alternative scenarios are offered during the interview, the estimated value is likely to be overstated (Whitehead & Blomquist, 1991).

Another challenge is the strategic behaviour of respondents, namely free-riding or overpledging (Mitchell & Carson, 1989). Free-riding refers to the situation where respondents intentionally bid lower than their actual willingness-to-pay (Samuelson, 1954). Overpledging, refers to the opposite phenomenon.

Several researchers point out that embedding effects cause problems when trying to disentangle one good from the context in which it is embedded (Arrow et al., 1993; Bateman & Langford, 1997; Kahneman & Knetsch, 1992). For example, respondents may have difficulties in expressing their preferences for one of three stages in an opera house. Assessing the value of the opera house as an entity may be easier. Difficulties may also arise when trying to separate the opera house from other arts activities in the municipality.

Another possible source of error is referred to as sequencing error (Cummings, Brookshire, & Schulze, 1986; Venkatachalam, 2004). This occurs if more than one good is valued and the sequence in which the goods are presented affects the value that individuals assign to them. Mitchell and Carson (1989) suggest two alternatives for managing the problem. First, respondents need to be informed about the sequence of objects prior to answering the willingness-to-pay questions. Further, sequencing problems may also be overcome by providing an opportunity to revise bids.

Throsby and Withers (1983) were early users of contingent valuation method for assessing the value of cultural resources. Ever since, numerous applications have contributed to establishing contingent valuation method within cultural economics. Value estimates have been made for historic sites (Rolfe & Windle, 2003), theatres (Bille Hansen, 1997; Lampi & Orth, 2009), events and festivals (Andersson, 1985; Andersson et al., 2012), monuments and landmarks (Kling et al., 2004; Powe & Willis, 1996), broadcasting (Schwer & Daneshvary, 1995), cultural and world heritage (Del Saz Salazar & Montagud Marques, 2005; Kim, Wong, & Cho, 2007; Maddison & Mourato, 2001; Tuan & Navrud, 2008) and museums (Bedate, Herrero, & Sanz, 2009; Bravi, Scarpa, & Sirchia, 2002).

Despite existing methodological problems, research has shown that stated preference methods are relevant for assessing use and non-use values. In a Scandinavian context, the application of stated preference methods, however, is rare, particularly in regards of cultural institutions. Lampi and Orth (2009) applied contingent valuation to predict changes in visitor composition, after the introduction of an entrance fee at a Swedish museum. Bostedt and Lundgren (2010) used contingent valuation to estimate the value of upholding reindeer farming in northern Sweden, as part of Sami cultural heritage. In a Scandinavian context,

Bille Hansen (1997), measured the value of the Royal Theatre in Copenhagen, Denmark, while Navrud and Strand (2002) estimated the value of Nidaros Cathedral in Trondheim, Norway. Attempts to apply the contingent valuation method in Sweden, to assess the value of cultural institutions have not been found. Furthermore, the studies by Bille Hansen (1997) and Navrud and Strand (2002) both focus on major national institutions and no evaluations of cultural institutions with a regional character have been found. While Lampi and Orth (2009) apply contingent valuation in Sweden, a measurement of the value created, in terms of use and non-use value, is not reported in the study. Applying contingent valuation method, to measure the use and non-use values in terms of willingness-to-pay, to two regional cultural institutions in Sweden, will serve to answer the first question:

RQ 1: *What is the value of a cultural institution as measured by the contingent valuation method?*

2.4 Travel-cost method

Revealed preference techniques provide alternative measurement instruments to stated preference techniques, when measuring the value of cultural institutions. The travel cost method was suggested by Hotelling (1947), and developed by Clawson and Knetsch (1966), for assessing the value of environmental resources and recreational sites (Garrod & Willis, 2001; Hanley & Barbier, 2009; Poor & Smith, 2004; Tietenberg & Lewis, 2008). Recently, the technique has also gained popularity in cultural economics, especially regarding cultural heritage (Alberini & Longo, 2006; Bedate, Herrero, & Sanz, 2004; Mayor, Scott, & Tol, 2007; Poor & Smith, 2004; Ruijgrok, 2006). The method is based on the premise that individuals' preferences for experiences can be derived by observing the visitors' travel behaviour. The travel cost method uses the cost for travelling as a surrogate for inferring the benefits of a resource (Bedate et al., 2004; Hanley & Barbier, 2009).

There are two approaches to travel cost method available. The traditional or 'zonal' travel cost method divides a site's surrounding into different zones. Travel costs are analysed according to the zones of origin. This is the preferred approach, when the focus of inquiry is: *What is the non-market value of an experience at a particular cultural institution under current conditions*? (Hanley & Barbier, 2009). The second approach is the random utility site choice model (RUSC), which is used if the focus of inquiry concerns: *the determinants*

of visitors' choice of cultural institution from a group of choice alternatives (Hanley & Barbier, 2009).

One major concern, when conducting travel cost analyses, is how to value the cost of travelling. Travelling takes time and time is scarce. Therefore, the investment in time has an opportunity cost. While wage rate is one alternative for calculating the opportunity cost of time, Smith and Desvousges (1986) argue for using fractions of the wage rate. Another possibility is to use the individuals' perceived cost of time to estimate the travel costs. Not all visitors, however, will perceive travelling as a cost. Some may enjoy driving along beautiful roads to a cultural institution. Apart from time costs, other costs such as vehicle depreciation, fuel costs and ticket costs for public transport need consideration.

One reason for applying the travel cost method, in contrast to contingent valuation method, is its reliance on observable parameters. The travel cost method can be used to solve many problems where there is a bias that threatens the contingent valuation method. Particularly hypothetical bias, that is, when asking a hypothetical question one will receive a hypothetical answer (Bishop & Heberlein, 1979), is resolved.

Like contingent valuation method, the travel cost method has not been applied in a Swedish context to measure the value of cultural institutions. Introducing the method to measure the use value of two cultural institutions in a Swedish context would be a methodological challenge. Furthermore, assessing the convergent reliability of the travel cost and contingent valuation method is made possible by posing the question:

RQ 2: *Do contingent valuation method and travel cost method produce the same or at least similar measures of use values?*

2.5 Applying the contingent valuation to festivals

Measuring the value of cultural institutions is one step along the path to understanding the value of culture. Events and festivals are other cultural phenomena that deserve consideration. Festivals are activities that have "intellectual, moral and artistic aspects of human life" associated with them (Throsby, 2001). They can be described as "a sacred or profane time of celebration, marked by special observances." (Falassi, 1987, p. 2), and as a celebration of "community values, ideologies, identity and continuity" (Getz, Andersson, & Carlsen, 2010, p. 30). The literature suggests that festivals and events, by their mere existence, cause positive and negative externalities (Barget & Gouguet, 2007). Individuals

who do not attend a festival may still be affected by it, as a result of traffic congestion, littering, a positive image, etc. (Andersson et al., 2012; Andersson et al., 2004; Snowball, 2005). As such, festivals may be considered as cultural organizations, where practices and habits result in the production, distribution and consumption of cultural goods and services (Getz & Andersson, 2009).

It is, however, fair to say that festivals differ from museums in terms of durability and in regards of experiences. Festivals last for only a few days, and may provide a number of experiences during these days. Museums are designed to last for many years, and provide experiences that commonly last for a couple of hours. Occasionally, the festival experience comprises a combination of different, yet interrelated experiences, outside and inside the festival area. The core experience, i.e. direct use value, may be defined as the sum of experiences within the festival area. Additionally, experiences outside the festival area may give rise to positive and negative indirect use value.

The application of willingness-to-pay studies in a cost-benefit framework is uncommon in an event context, particularly for festivals, and researchers in this area have rarely employed estimations of use and non-use. In situations where trade-offs are necessary, an understanding of the value for one type of investment as compared to another investment is therefore desirable. To assess the value created, it is preferable that methods and techniques should be suitable for estimating the value of various types of cultural institutions.

RQ 3: *How can contingent valuation and the concepts of use and non-use value be applied in a festival setting?*

3. A description of the value of cultural institutions

Environmental and cultural resources share commonalities due to their public good characteristics. The application of use and non-use value, developed to describe the value of environmental resources, has therefore been applied straightforwardly to a cultural context. While marketing research, for example, has contributed to creating an understanding of the value derived from consumer experiences (use value), research focusing on value independent of consumption (non-use value) has developed in areas such as cultural policy, cultural studies, sociology and anthropology. However, little empirical research to describe the value of cultural institutions has appeared. It is thus unclear, how to describe the content and scope of use and non-use values, how use and non-use value relate to each other, and how these concepts relate to concepts in other disciplines. The second thematic question therefore concerns: *How to describe the perceived value of cultural institutions?*

3.1 A description of the value as derived from consumption

Compared to 'ordinary experiences', cultural goods and services are assumed to be associated with aesthetic quality (Shanahan, 1978; Shusterman, 2008). The aesthetic component of a service or product may be regarded as the stimulus for the experience. Besides the aesthetic stimulus, art experiences also have the potential to serve 'extra-aesthetic' purposes (Shanahan, 1978). Such extra-aesthetic experiences for example may include

> *"...enjoyment (even where the thoughts and music are essentially sad). Music can be recreational such as dance music; music can be educational such as using the tonal pattern and lyrical form to analyse the style of the composer or period. Music may be experienced in a moment of relaxation while driving from work; music may be experienced in period of recreation by the student who jams with friends; and music may be experienced as education by the listeners who desire to increase their appreciation of classical music - i.e. learn to enjoy it." (Shanahan, 1978, p. 23).*

Recognising the aesthetic dimension of art experiences, the purpose of the cultural experience is not necessarily focused on solving a specific problem but on engaging in experiences for the purpose of pleasure. Venkatesh and Meamber (2006) recognize Hirschman's and Holbrook's efforts to categorize and describe experiences of the arts in this

respect. The recognition concerns their contribution to understanding "the notions of the experiential (Holbrook & Hirschman, 1982), symbolic (e.g. Hirschman, 1983), and hedonic properties of artistic (aesthetic) endeavours and products" (Venkatesh & Meamber, 2006, p. 16). The latter refers to enjoyment and pleasure as an output (response) of aesthetic experience, leading to fantasies, emotive aspects and multi-sensory aspects (cf. Venkatesh & Meamber, 2006).

Holbrook (1999), in an attempt to describe experiences, defines consumer value as an "interactive relativistic preference experience" (Holbrook, 1999, p. 5). 'Interactive' implies that consumer value is created by interaction between a subject (consumer) and an object (e.g. art). The term 'relativistic' refers to the comparison of value statements from one person – I like opera better than theatre – but also the illegitimate comparison of value statements between subjects – I like opera better than you do. Relativistic implies that value statements are individualistic and situational. The term 'preferential' suggests that value statements rely on preferences. Finally, 'experience' implies that value does not reside within an object but rather in the experience of it.

Though the definition of consumer value says something about the nature of value, it provides little information about differences among various types of values. In order to understand the categories of consumer value, Holbrook (1999) proposes a framework, that distinguishes between three key dimensions; extrinsic versus intrinsic value, self-oriented versus other oriented value, and active versus reactive value. The 2x2x2 dimensions lead to eight different consumer value categories, as outlined in table 2.

Table 2: A typology of consumer value (Holbrook, 1999)

		Extrinsic	***Intrinsic***
Self-oriented	**Active**	EFFICIENCY (Output/Input, convenience)	PLAY (Fun)
	Reactive	EXCELLENCE (Quality)	AESTHETICS (Beauty)
Other-oriented	**Active**	STATUS (Success, Impression Management)	ETHICS (Virtue, Justice, Morality)
	Reactive	ESTEEM (Reputation, Materialism, Possessions)	SPIRITUALITY (Faith, Ecstasy, Sacredness, Magic)

Extrinsic value implies that goods and services have value since they serve some kind of aim (the educational effect of a museum exhibition). Intrinsic value, on the other hand refers to the value of an experience in itself (listening to a symphony). Self-oriented values

refer to values that a person regards as admirable for him- or herself. In contrast, other-oriented value refers to the value that consumption may have for someone else. In the last dimension, active value refers to the physical or mental involvement of the consumer (performances where the audience is involved), whereas reactive implies that respondents appreciate, admire or, in some other way respond to an experience (the enthusiastic analysis and admiration of paintings) (Holbrook, 1999).

The matrix proposed by Holbrook (1999) describes consumer value but leaves it unclear when an experience starts and ends i.e. the duration. Arnould et al. (2002) propose a division of the experience into four stages: pre-consumption experience, purchase experience, core consumption experience and remembered consumption experience. Direct use value refers to the core experience and indirect use values may be interpreted as including experiences before or after the core experience. The appreciation of watching a report about the opera-/play on TV a day after the event took place is thus part of the indirect use value.

3.2 Other research related to the value of cultural institutions

To describe the value of cultural institutions, Mason (2002) proposes a framework that distinguishes between socio-cultural and economic values. Socio-cultural values cover historical values, cultural/symbolic values, social values, spiritual/religious values and aesthetic values (Mason, 2002). This typology considers earlier typologies proposed by, e.g. Lipe (1984), Riegl (1996), ICOMOS (1999), and de la Torre (1997).

Throsby (2001) considers the value of cultural institutions to consist of cultural and economic value. The former involves social, historical, symbolic, spiritual and aesthetic values. The Burra Charter (1999) uses a similar classification, describing cultural significance as consisting of aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Frey (2008) observes that economic value, as used by Throsby (2001), is sometimes interpreted as representing financial value. However, Throsby (2010) refers to economic value as the value perceived by individuals. The conceptual difference is that, financial value refers to actual money transactions incurred through direct, induced and indirect economic impacts (financial flows) (Bille Hansen, 1995), while economic value refers to a holistic assessment that includes all the benefits and costs perceived by individuals.

As compared to Throsby (2001), Mykletun (2009) uses the concept of capital to describe the outcome of festivals. Capital refers to "representations of resources employed to facilitate any kind of human activity" (Mykletun, 2009 p. 148). Festivals, for example, may be valued by their contribution to social, cultural, physical, human, natural, financial and administrative capital.

A sociological perspective, also chooses to reflect single or bundles of values as capital (Bourdieu, 1973; Bourdieu & Passeron, 1990). Cultural capital is described as obtained knowledge and competence within the arts and culture (Mahar, Harker, & Wilkes, 1990). Cultural capital is the competence to decode a work of art and may be a result of repeated consumption, aesthetic education or inheritance from parents (Bourdieu, 1968). Throsby (2010) also uses the term cultural capital, but describes it as "an asset which embodies, stores or provides cultural value in addition to whatever economic value" (p.46) a cultural good or service may possess.

Mason's (2002) concept of social value is related to social capital. Cultural institutions are regarded as facilitating and catalyzing social interaction and social networks. Throsby (2001) describes social value as "the sense of connection with others" (p. 29) that a work of art or, as in this case, a cultural institution may contribute. While some researchers consider the number of contacts to be most important (Granovetter, 1983), other researchers point to the significance of the strength of the ties (Lin, 2001).

Another value of cultural institutions is their educational effect. Both knowledge and skills may be affected positively through culture. Lipe (1984) refers to the learning effect of culture as informational value, whereas The Burra Charter (1999) and English Heritage (1997) labels it as educational and academic value. Mykletun (2009), in an event context, refers to the same phenomenon as building human capital.

Historical value is primarily related to cultural heritage and significant as a connection to the past, affecting the identity of individuals. It is a representation of the past and is also significant when it comes to the arts. While historical value represents the connection to the past, symbolic value may be interpreted as the ability of a cultural institution to reflect conditions of life in the past and the extent to which they throw light on the present. The stronger the connection, the stronger is the sense of continuity. The symbolic value represents the ability of the arts to act as a vehicle "for conveying cultural meaning" (Throsby, 2001, p. 112).

Spiritual value refers to the context in which culture is perceived. Cultural heritage, for example, may be valuable as a representation of specific religious traditions, for particular tribes or cultural groupings (Throsby, 2001). Spiritual-specific outcomes may be enlightenment or deeper inner insight and/or understanding. Spiritual value particularly is linked to cultural heritage, even though songs and rhythms may be of spiritual significance.

The existing literature shows that research has been directed towards understanding the value of culture and cultural institutions. Previous research may explain use value in terms of consumer value, whereas other disciplinary concepts may be suitable for describing the value without any presupposed use. An economic understanding is governed primarily by theoretical descriptions of use and non-use value. There are few empirical accounts of how individuals describe the value of cultural institutions. Thus, there is limited knowledge on how the research as presented above relates to concepts of use and non-use value.

When measuring the value of cultural institutions from an economic perspective, it is assumed that value is determined by the individuals' perceptions. To describe this value empirically, as perceived by individuals, is desirable since it helps to understand the content and scope of economic values. Based on individuals' preferences, the measured value may eventually get a richer description and understanding. A relevant question is therefore:

RQ 4: How do individuals describe the perceived value of cultural institutions?

A description of how individuals value cultural institutions gives a preliminary understanding and qualitative assessment of the content of value. However, the results are not applicable on a general level. Developing and testing a scale for describing the factors that determine the perceived value of cultural institutions will also enrich the understanding of how cultural institutions create value. Existent research suggests that the value of cultural institutions may be determined by their contribution to positive impacts on social, cultural, educational, health, image and economic development. To build and test a scale, based on existing research, may contribute to an understanding of the value of cultural institutions from the perspective of the individual.

RQ 5: How to develop a scale to measure the perceived value of cultural institutions for individuals?

4. Methods used in the five articles

All but one (article 4) of the articles included are based on quantitative data. The methodological chapter provides an overview of the study objects, sampling procedures, response rates, samples, and the non-response analyses underlying each article.

4.1 Study objects and selection criteria

To measure an object, it has to be clearly defined. Museums and concert halls offer experiences with an identifiable start and end. The experience's beginning may be defined by the visitors entering to a physical building or an exhibition/concert hall. When measuring non-use value, the information available to respondents is important for preference formation, and, therefore, well-defined institutions are advantageous. Institutions with large audiences and proper media coverage may also facilitate the measurement of non-use values.

Many citizens have visited Vara Concert Hall and Nordic Watercolour Museum and most citizens in Västra Götaland know of these institutions through the media. Both institutions are located relatively far from large towns, which facilitates making conclusions about their attractiveness. The museum is limited to exhibiting watercolour paintings whereas the concert hall offers a wide variety of performances.

The value of private and public institutions may differ. To assess these differences, the value of a festival, organized by a private company, is investigated. Way Out West is a music festival, which is held in August in Gohenburg's centrally located city-park (Slottskogen), which involves excluding visitors who normally use the park for recreation. The festival is an annually recurring event with a variety of artists, from rock, electronic music and hip-hop, and it has established itself as one of the major events in Gothenburg.

Three other studies of visitors to the Göteborg Opera, Göteborg City Theatre, Göteborg City Museum were conducted to understand how cultural institutions are valuable to individuals. A fourth study at the Nordic Watercolour Museum was conducted to test the scale developed.

Table 3: An overview of the study objects included in the thesis project. Study (4) did not study one particular cultural institution

#	Study objects	Type	Location (Sweden)	Attendance (approximately)	Owner-ship	Time of study
(1)	Vara Concert Hall	Concert hall	Vara	50000 annually	Public	Feb-Mar 2008
(2)	Nordic Watercolour	Museum	Tjörn	150000 annually	Public	Nov 2008 Apr 2009
(3)	Way Out West	Festival	Gothenburg	25 000 in 2 days	Private	Aug 2010
(5)	Göteborg Opera Göteborg City Theatre Göteborg City Museum Nordic Watercolour	Opera Theatre Museum Museum	Gothenburg Gothenburg Gothenburg Tjörn	250000 annually 120000 annually 250000 annually 150000 annually	Public Public Public Public	Sep. 2011 Oct. 2011

4.2 Data collections

The thesis project is based on data from 12 samples and more than 3500 interviews. Article 1 is based on five samples. Two samples represent visitors to the museum and concert hall. Two other samples represent the local population where each institution is situated (Vara and Tjörn). The last sample represents the regional population of Västra Götaland (Region Västra Götaland). Article 2 re-uses two of these samples, to represent the visitors to each institution. Article 3 uses two samples, one representing visitors to the festival and the other local residents of Gothenburg. Article 4 is based on a sample of eight respondents. Article 5 is based on four random samples of visitors to the Göteborg Opera, the Göteborg City Theatre, the Göteborg City Museum and the Watercolour Museum. The sample selection and data collection process are outlined in table 5.

Table 4: Sample selection and data collection process. The table presents a summary of steps involved in the sample selection. The abbreviation (n.a.) indicates that no statistics re available.

Sample number	Article	Interviewer	Sampling method	Place of sampling	Survey mode	Number of questions
1	**1 &2**	Researcher & volunteers	Random	Ticket sale/entrances	Web survey	31
2	**1 &2**	Researcher & volunteers	Random	Ticket sale/entrances	Web survey	29
3	**1**	TNS Sifo	Random	Telephone register	Telephone survey	17
4	**1**	TNS Sifo	Random	Telephone register	Telephone survey	17
5	**1**	TNS Sifo	Random	Telephone register	Telephone survey	29
6	**3**	Researcher & volunteers	Random	Ticket sale/entrances	Web survey	31
7	**3**	Researcher & volunteers	Random	Bus stops/transport nodes/street	Web survey	29
8	**4**	Researcher	Purposive		Qualitative interviews	(n.a.)
9	**5**	Students	Random	Ticket sale/ entrances Bus stops/transport nodes/street	Web survey	19
10	**5**	Students	Random	Ticket sale/entrances Bus stops/transport nodes/street	Web survey	19
11	**5**	Students	Random	Ticket sale/entrances Bus stops/transport nodes/street	Web survey	19
12	**5**	Researcher & volunteers	Random	Ticket sale/entrances	Web survey	18

For sample 1 and 2, two reminders were sent out. Sample 3, 4 and 5 were approached up to 15 times by phone. Sample 6 and 7 received three reminders. Sample 9, 10, 11 and 12 received two reminders. Whereas participants in sample 3 were offered the possibility to win one of five tickets for next year's festival, participants in the other samples were not offered any incentives.

Table 5: Summary of samples and response rates. The table describes the population and stages of the process that caused a decrease in the number of responses departing from the total number of individuals approached. The response rate refers to the relationship between responses and individuals approached. For sample 9, 10 and 11 only the number of individuals interested in participating is known (120 each).

Sample number	Population	Individuals approached	Resp. not interested in participation	Resp. not returning contact info.	Incorrect/ unreadable e-mail addresses	Non-response	Answers	Response rate
	a	b	c	d	e	f	g (b-c-d-e-f)	(g/b)
1	Visitors to Vara Concert Hall (≈ 35 000 in 2009)	1098	150	140	125	100	583	**53.1 %**
2	Visitors to Nordic Watercolour Museum (≈ 150 000 in 2009)	1047	188	351	0	94	414	**39.5 %**
3	Citizens in Vara (16 or older - 13000)	470	220				250	**53.2 %**
4	Citizens in Tjörn (16 or older - 15000)	493	243				250	**50.7 %**
5	Citizens in Västra Götaland region (16 or older - 1320000)	797	447				350	**43.9 %**
6	Way Out West festival (26347 visitors)	1467	192	0	107	449	719	**49.0%**
7	Citizens in Gothenburg (507000)	2104	797	0	111	548	648	**30.8%**
8	Individuals with varying degrees of cultural consumption	8	0	0	0	0	8	**100 %**
9	Residents of Gothenburg (432688) – opera house	(n.a.)	(n.a.)		7		60	**50.0%***
10	Residents of Gothenburg (432688) - concert hall	(n.a.)	(n.a.)		5		67	**55.8%***
11	Residents of Gothenburg (432688) - museum	(n.a.)	(n.a.)		6		56	**46.6%***
12	visitors to Nordic Watercolour Museum (≈ 150 000 in 2009)	508	(n.a.)		25	317	166	**32.7%**

*response rate is based on 120 randomly sampled respondents indicating their willingness to participate. Response rate is calculated as g/120

Table 5 provides information on the population (a), individuals approached (b), and respondents not interested in participating (c). For those who were interested, some did not return their contact information (d), and some did not receive the questionnaire due to readability/spelling errors in their e-mail addresses (e). Another group of the respondents chose not to answer, despite reminders (f). The number of answers for each study is presented in column g. The last column presents responses rates calculated as (g/b).

Study four is based on exploratory data on individuals' perceptions of the value of cultural institutions. Eight interviews were conducted. The selection of the interviewees was based on the premise to address variation rather than representativeness.

4.3 Non-response analysis

When possible, the data collected was compared to population characteristics as described in Swedish Statistics[1] to assess the representativeness of the samples. When reading the results and conclusions, the reader should bear in mind the distributions as presented in table 6.

Table 6: Respondent characteristics compared to Swedish Statistics. The first line in each row presents the results of each study. The second line with figures in parenthesis refers to official statistics. The abbreviation (n.a.) indicates that no statistics were available.

Sample	population	Gender		Average age	Median income	Education	
		Female	Male			Sec School	University
1	Visitors to Vara Concert Hall	53.4 % (n.a.)	46.6 % (n.a.)	59 years (n.a.)	24 700 € (n.a.)	23% (n.a.)	45% (n.a.)
2	Visitors to Nordic Watercolour Museum	57 % (n.a.)	43 % (n.a.)	55 years (n.a.)	27 600 € (n.a.)	16% (n.a.)	72% (n.a.)
3	Citizens in Vara (16 +)	54.9 % (48.8 %)	45.1 % (51.2 %)	53 years (50 years)	18 630 € (19 600 €)	48 % (52 %)	19 (18%)
4	Citizens in Tjörn (16 +)	51.7 % (48.8 %)	48.3 % (51.2 %)	53 years (50 year)	21 400 € (23 700 €)	46 % (48 %)	37 % (28 %)
5	Citizens in Västra Götaland region (16 +)	44.6 % (50.1 %)	55.4 % (49.9 %)	48 years (47 years)	20 500 € (20 800 €)	46 % (43%)	35 % (31 %)
6	Way Out West festival (26347 visitors)	56% (n.a.)	44% (n.a.)	26 years (n.a.)	29 000 € (n.a.)	32% (n.a.)	64% (n.a.)
7	Citizens in Gothenburg	59% (50.3%)	41% (49.7%)	33 years (39 years)	21 000 € (24 000€)	27% (38%)	69% (41%)
8	Individuals with varying degrees of cultural consumption	62%	38%	42 years		38%	38%
9	Gothenburg Opera House	61 % (50.7%)	39 % (49.3%)	39 years (44.9 years)	31 900 € (24 000€)	(38%)	(41%)
10	Gothenburg Concert Hall	51 % (50.7%)	49 % (49.29%)	42 years (44.9 years)	33 200 € (24 000€)	(38%)	(41%)
11	Gothenburg City Museum	65 % (50.7%)	35 % (49.3%)	40 years (44.9 years)	31 600 € (24 000€)	(38%)	(41%)
12	Visitors to Nordic Watercolour Museum	61.8 % (n.a.)	38.2 % (n.a.)	59 years (51 years)	30 600 € (n.a.)	(n.a.) (n.a.)	(n.a.) (n.a.)

In all but one data collection (sample 5) slightly more female than male respondents answered the questionnaire. In the analysis, the data was weighted to conform to regional statistics. For sample 7, 11 and 12, a significantly larger proportion of females completed the questionnaire. There is variation between the mean age among respondents and the population. Differences are also noticeable when the estimated age was compared to the responses. The average income among respondents in the municipalities or the region seems reasonable when compared to the statistics. For visitors, however, some considerable differences are observed.

When possible, further information on non-respondents was collected. At the concert hall, all visitors had to pass by one of the interviewers. An assessment of the total population in terms of gender and estimated age was thus possible. Table 7 presents the gender and age distribution among visitors for each performance at the concert hall.

[1] www.scb.se

Table 7: Performances studied at the concert hall. The table presents a summary of the age and gender characteristics of the total population included in the survey. The gender distribution is based on observations and age was estimated by the interviewer.

Performance	Female Resp.	Male Resp.	Average age (estimated)
Stand up: Fyra ess	72	50	49.0 years
Puccini på storbild	112	82	59.5 years
Viktoria Tolstoy	198	195	61.3 years
Jill Jonsson	180	324	53.5 years
Jill Jonsson	270	227	55.4 years
Göteborgs Symfoniker	271	229	61.5 years
Till Kungens förnöjelse och Upplevelse + Renässansens Europa	38	45	49.5 years
Smokie	241	202	62.6 years
Sofia Karlsson Band	276	236	60.5 years
Total	**1658**	**1590**	**57** years
Percent	**51.0%**	**49.0%**	

The estimated average age of the attendees was 57 years, and the average age of respondents was 59 years. 51 % of the attendees were female and 49 % were male. This can be compared to the distribution among respondents - 53 % male and 47 % female.

For the museum no data on the population for each exhibition is available. However, as in the concert hall study, gender and estimated age among non-respondents were noted (53 % were female and 47 % were male, estimated mean age; 51 years). To be compared to the composition of respondents, where 57 % were female and 43 % were male.

TNS Sifo, a market research company, was engaged to sample and collect data at a municipal and regional level. The method for data collection was telephone interviews.

Table 8: Non-response analysis for telephone interviews conducted by TNS-Sifo

	Vara	Tjörn	Västra Götaland	Sum
Respondents who principally reject surveys	100	118	206	424
Respondents who did not want or have time to participate	117	116	221	454
Respondent not at home during survey period	3	9	4	16
No contact despite 15 attempts	0	0	16	16
Total	**220**	**243**	**447**	**910**

The reported data on non-respondents allows a distinction to be made between them in terms of their reasons for not responding. Most non-respondents did not want, or did not have time, to participate. TNS Sifo did not provide an analysis of non-respondents, according to other socioeconomic variables.

For the festival, there is no data on the total population. The gender and estimated age of non-respondents were collected. The mean age for those who did not participate was 27, while the mean age in the sample was 26 years. Just as many males as females refused to participate.

5. Brief summaries and conclusions from the articles

In what follows, a short summary and conclusions for each article will be presented. The first three sections concern the thematic question regarding the measurement of perceived value, whereas the following two sections deal with the thematic question regarding the description of perceived value.

5.1 Summary and conclusions from article 1

The underlying argument is that assessments of cultural institutions need to be based not only on costs but also on the value created. The first research question is: *What is the value of a cultural institution as measured by the contingent valuation method?* To compare costs and benefits, the value created should be preferably measured in monetary units. The contingent valuation method and willingness-to-pay were applied to assess the use and non-use value of a concert hall and a museum in monetary units. The average use value (direct and indirect) for Vara Concert Hall and the Nordic Watercolour Museum exceeds the costs incurred for visitors. There were no significant differences between local and non-local visitors, with one exception: the expenditure of those travelling to the institutions was significantly higher than the expenditure of those who lived in the municipalities. There are significant, but weak correlations, between the use value in the concert hall and age (negative), education (positive), annual income (positive) and gender (higher for men). Only age (negative) had a significant correlation with use value at the museum.

Non-use values co-vary in a significantly negative way with the distance to each cultural institution, which is comparable to earlier public good assessments (Bateman & Langford, 1997; Sutherland & Walsh, 1985). The average non-use value for Vara Concet Hall and the Nordic Watercolour Museum for the local population was significantly higher than for an average inhabitant in Västra Götaland. The option value, bequest value and existence value are also significantly higher. For an average inhabitant of Västra Götaland, there are no significant differences between the non-use value of the concert hall and the museum. Nor are there any significant differences between the option value, bequest value and existence value. Similar to a previous study by Riganti and Willis (2002), a relationship between knowledge and perceived value was observed. Individuals who have visited the cultural institutions value them significantly higher (non-use value) than those who have never visited them. Although residents of Västra Götaland showed significantly lower average

non-use value per inhabitant, the majority of region's inhabitants indicate an interest in investing tax funds to maintain the institutions. It is worth noting that the bequest value accounts for the greatest non-use value. There appears to be a great concern for future generations in Vara, and there is a strong willingness to pass on to the next generation a society with cultural assets. The same applies to Tjörn.

At the municipal level, the aggregate use value is dominant. In the case of Vara Concert Hall, use value accounts for 82% of the total annual value. This proportion is even higher for the museum. An analysis of regional visitors shows that culture is not subject to municipal boundaries, and inhabitants of other municipalities obtain profit greatly from the cultural institutions.

If use and non-use values are taken as an indicator of the yield of culture, then the yield is far greater than the financial investment. These findings are consistent with those of Noonan (2003), who in a meta-analysis of contingent valuation studies, found that the estimated value of cultural resources, on average, exceeds the operational costs by around 120%.

5.2 Summary and conclusions from article 2

The research question regarding the second article is: *Do contingent valuation and travel cost method produce the same or at least similar measures of use values?* The travel cost method (zonal) (TCM) is introduced in a Swedish context in order to measure the use value of two cultural institutions - Vara Concert Hall and the Nordic Watercolour Museum. The aim is to compare the results from the contingent valuation method (CVM) with those from the travel cost method.

The application of CVM and TCM yielded three different value estimates. CVM-direct reflects the *direct use* value of the contingent valuation assessment, CVM-total represents the *direct* plus the *indirect use* value using the same method and TCM-total represents the use value as estimated by the travel cost method at each cultural institution. CVM-direct for the concert hall and the museum are similar (the value of experiences at the museum are 10% larger). CVM-total for the museum is considerably larger than estimates for the concert hall (approximately 200% larger). Furthermore, CVM- total for the concert hall is 46% larger than CVM-direct at the same institution. At the museum, CVM-total is approximately 300% larger than CVM-direct. The TCM-total for the concert hall is

somewhat larger than CVM-direct, but smaller than CVM-total. For the museum, the difference between TCM-value and CVM-direct is large (approximately 250%), but relatively smaller when the TCM-value is compared to CVM-total.

Some conclusions can be drawn: first, the CVM-total at the museum is probably part of a bundle of experiences, including the beautiful surrounding of the archipelago, the opportunities for taking walks and visits to a nearby harbour. Thus, CVM-total may be inappropriate when considering the value of experiences at a cultural institution. Secondly, the core cultural experience at the concert hall seems to be the most important aspect. Few other experiences increase the perceived value. CVM-total is thus similar to CVM-direct.

For the museum, the travel cost method yields considerably larger estimates than contingent valuation method does for CVM-direct, but similar estimates for CVM-total. Even though only individuals whose primary reason for travel was the cultural experience were included, the results indicate that even these trips were not single purpose trips and individuals had other valuable experiences apart from the core cultural experience.

The travel cost method, as used in this study, seems to be measuring the total experience, i.e. the core cultural experience plus any other experience during the visit. The relatedness between TCM-total and CVM-total at the museum allows for another tentative conclusion: it is inappropriate to apply the travel cost method when the total experience is influenced by a large indirect use value. These conclusions are consistent with the limitations pointed out by Navrud & Ready (2002), Poor and Smith (2004) and Rizzo and Throsby (2009), who observed difficulties in ascribing travel costs to just one attraction since trips, in most cases, are multipurpose. Applications of other than the zonal-travel cost method may be more appropriate.

One issue to be considered is the assumptions made. In the analysis, travel costs were defined as vehicle costs, entrance fee costs and the opportunity cost of time. The opportunity cost of time is without doubt the most debatable. In this study, it was decided to include the opportunity cost of time. The average hourly wage was used as the basis. The time cost in its turn was calculated as 1/3 of the hourly wage, which, though contestable, has been used in earlier studies (McConnell & Strand, 1981; Navrud & Mungatana, 1994; Poor & Smith, 2004; Ward, Johnson, McConnell, & Strand, 1983). The assumption remains arbitrary since it may be argued that travelling per se is a valuable experience whereas others might experience travelling as a cost (Randall, 1994). Moreover, the individual level of income may influence the perceived costs. Therefore, both wage and rate may be contested. Another

assumption influencing the results is that the individual's behaviour, in relation to the costs of entry, is assumed to be identical to the behaviour in relation to the costs of travel. This may not necessarily be the case.

5.3 Summary and conclusions from article 3

The third article uses a cost-benefit framework to assess the value of a festival. Specifically, the article deals with the question: *How can the contingent valuation method and the concepts of use and non-use value be applied in a festival setting?*

The average use value is estimated to be €282 per visitor, divided fairly equally between direct use value €146 and indirect use value €137. Whereas the local population benefits from a considerable share of the direct use value, the indirect use value is mainly enjoyed by the visitors. The estimated direct use value seems to be related to the actual ticket price, which may reflect not only a methodological bias but probably also the intuition and developed pricing skills of the organiser.

The use value, representing the core experience, constitutes the largest value (€7.4 million) but the non-use value is also important (€3 million). A large proportion of the use value is enjoyed by non-local residents. A high proportion of the use value created for individuals living outside Gothenburg means that a large proportion of the use value (72% or €5.3 million) was 'exported' to other regions, and other countries, when visitors returned home with their memories. Furthermore, a large proportion of the use value was also reflected in financial terms by the visitors' expenditure in the city (€ 4.1 million). It is also reasonable to assume that positive experiences in Gothenburg may contribute to a positive image of Gothenburg and thus lead to possible future tourism.

Non-use value is primarily a value for the local residents, reflecting for example social, cultural and environmental implications for the local community. Including non-use value in the analysis is interesting since it indicates the attitudes of the local population towards the festival. Festivals are often used for economic development in terms of tourism. The advantage of including non-use values in the assessment is the possibility to compare the financial effects directly with the positive *and* negative effects perceived by society, as measured in monetary units (Andersson, 1985). In the present study, 3% of the sample regarded it as appropriate from them to receive a tax reduction as compensation for the inconveniences associated with the festival. The average requested compensation is

comparatively high (€-2). The net non-use value is positive and estimated to be €6 on average. The total non-use value represents almost 30% of the total value of the festival, which indicates a strong appreciation of the festival among local residents.

5.4 Summary and conclusions from article 4

The fourth study aims to understand the value of cultural institutions in terms of the value perceived by individuals. The research question concerns: *How do individuals describe the perceived value of cultural institutions?* The research question implies 1) describing and categorising the value perceived by individuals, 2) understanding the scope, and 3) enriching our understanding of the economic value concepts (use and non-use value) in a cultural context. Qualitative interviews and previous literature are used to investigate the value as perceived by individuals.

Notably, direct use value relies on several different factors, which intuitively may be thought of as related to public or non-use values. Identity, communal meaning and cultural capital may serve as examples. In combination with other effects, such as learning skills, self-efficacy and improved test scores, direct use value appears to be perceived as a broad concept, capturing many different benefits of culture. Compared to direct use value, indirect use value is not likely to contribute with the same variety of benefits. In fact, this study showed that indirect use value seems to be less multifaceted, but even that indirect use value is similar to use value.

The benefits attributable to non-use value, particularly option and bequest value overlap considerably with those of direct use value. This may suggest difficulties when it comes to defining and delimitating use from non-use values. However, direct use value, option value and bequest value refer to different time horizons. Direct use value refers to the value of current and, particularly, past experiences. Option value is the value individuals perceive when having the opportunity to access cultural institutions in near future. Option value thus refers to private consumption. Bequest value also refers to the future, but further remote in terms of time. Furthermore, the value represents the perceived benefits of preserving culture for future generations, not for one's own private consumption.

Assuming that the uncertainty, regarding value, will increase the further into the future the time is when it will be realised, it is reasonable for respondents to have less knowledge about the benefits that may accrue to themselves or other generations in the future. This

uncertainty may well be reflected in less detailed descriptions of option and in particular bequest value.

Use and non-use values seemingly overlap in terms of the aspects that are perceived as valuable. When time is introduced as another dimension, economic values may be interpreted however as referring to similar aspects, but separable in terms of time. Furthermore, economic values seem to cover many aspects described in other disciplines, such as health-related, social, economic, or cognitive aspects of culture. This study supports Mason's (2002) argument that, economic and non-economic frameworks "do not actually refer to different, discrete sets of values. Economic and cultural are two alternative ways of understanding and labelling the same, wide range of … values" (Mason, 2002, p. 11). To what extent economic values can cover non-economic values is not yet clear.

5.5 Summary and conclusions from article 5

The fifth article aims to develop a scale for measuring the factors that make cultural institutions valuable to individuals and it is partly based on the results from the fourth article. Specifically, the article aims to answer: *How to develop a scale to measure the perceived value of cultural institutions for individuals?* The study used exploratory and confirmatory factor analysis to develop a scale, which consists of six factors and 19 items that determine the perceived value of cultural institutions.

The scale proposes that six factors may be suitable to describe the value of cultural institutions. They are the perceived contribution to: image, education, health, economic development, social relationships and identity.

One issue to be considered is whether it is possible to distinguish between different kinds of values. Economic impact, at a first glance, might be rather easy to distinguish from other values. However, economic impact may also be influenced by the other values, such as education or a large number of social contacts. For example, in a survey situation, some individuals may react positively to the statement that, cultural institutions contribute to more social contacts, education and health. It may then be quite likely that when asked about the economic value of the same cultural institutions, they will also react positively. Similar scenarios could be drawn for social and identity/cultural values. In fact, these two values are often referred to as socio-cultural values, since they are difficult to distinguish.

Difficulties in theoretically and, in survey situations, separating these factors particularly draws on the dimensionality and thus co-variation in the model.

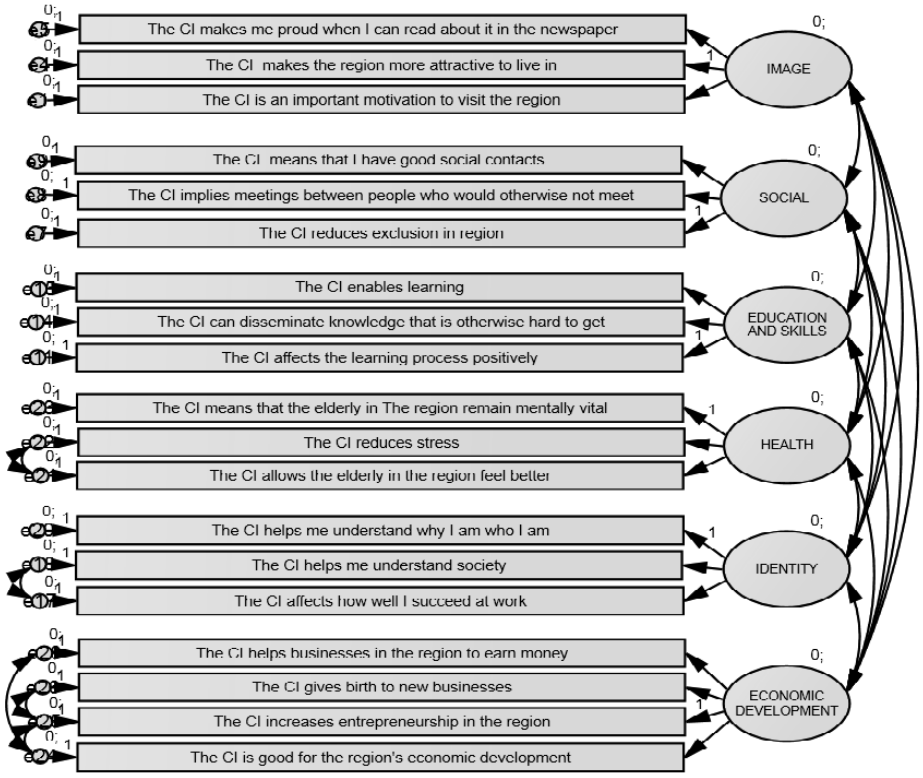

Figure 2: A six factor scale measured by 19 items

The choice to include six and not two, three, four or five factors is based mainly on earlier research (cf. article 4; McCarthy et al., 2004). While the statistical methods used in this study, did not contradict the development of a six-factor model, it may be worthwhile to analyse the dimensionality of the values further, to arrive at a better fitting model. Efforts to refine the scale certainly have good chances of increasing the predictive power of the scale.

From a cultural policy and management perspective, the scale may be used to gauge a broad variety of cultural institutions and to understand the differences in the perceived value. Developed in a 'fine arts' context, the application of the scale to 'popular culture' may be worthwhile, in order to test its appropriateness and, possibly, to compare the results to those presented in this article.

6. Conclusions and reflections

This thesis has been guided by an overall interest in understanding *the value of cultural institutions*. Two thematic questions have served to structure the articles and the thesis. The first thematic question concerned: *How to measure the perceived value of cultural institutions?* The second thematic question concerned: *How to describe the perceived value of cultural institutions?* In what follows, conclusions, limitations and suggestions for future research on each of the thematic questions will be presented. Thereafter, conclusions and reflections regarding the overall question will be provided.

6.1 How to measure the value of cultural institutions?

Applying the contingent valuation method to two regional cultural institutions in Sweden suggests the created value exceeds the resources needed to sustain the institutions. The results stress that the visitors to each of the cultural institutions derived more value from the experiences than they paid for their tickets. Individuals also regarded the value created, despite any use, to exceed the public resources invested. These results are comparable with previous studies in a Scandinavian context. Bille Hansen (1997) estimated the value of the Royal Theatre in Copenhagen to exceed considerably the public resources invested. Similar results have also been found at the international level (Nonnan, 2003). Interestingly, the analysis showed hardly any correlations between perceived value and the socioeconomic characteristics of the respondents (cf. article 1), as could have been expected (Seaman, 2009). The results can be interpreted therefore as if both institutions succeeded in attracting and providing value to different groups of people. Because previous studies have often found significant relationships between, for example, income and education and the perceived value, the results may also suggest that the samples may not accurately represent the population. The non-response analysis does, however, not support this assumption.

Applying the zonal travel cost method showed convergent validity with contingent valuation method, when assessing the total use value (direct and indirect use value). Nevertheless, as in previous research (Navrud & Ready, 2002), the results suggest that the zonal travel cost method is problematic when it comes to measuring the value of experiences that consist of more than just the core cultural experience. Assuming that the

costs of travel are solely attributable to one single experience may be incorrect in most cases (Randall, 1994) even though only visitors who mentioned the cultural experience to be the major attraction were included. Nature, culinary and other cultural experiences may affect travel behaviour. The zonal travel cost method, as part of revealed preference techniques, is therefore often likely to overestimate the value of a cultural institution as suggested by Carson et al. (1996). Another flaw is the limitation to "use values" and thus an inability to capture the total value created by cultural institutions. However, travel cost is advantageous, since it is based on observed behaviour. The strength of one method is the weakness of the other. Contingent valuation is a scenario method, which asks respondents to state their preferences hypothetically. But contingent valuation method has the advantage that it is able to assess parts of the total experience and to capture both use and non-use values, providing a more holistic picture of the value created.

Assessing the correspondence of one measure to another is one way to determine the validity of a construct. Another way to assess the validity is to compare the results with a predicted pattern, based on theory and/or observations (Mitchell & Carson, 1989). Some performances at the concert hall were organized by the private sector while others were organized by the concert hall acting as a public organization. Comparing the estimated value of privately and publicly organized performances, it turned out that the average consumer surplus for all privately organized performances was significantly lower than for those organized by a public organization (cf. article 1). This result is consistent with what would be expected, namely assuming that private organizations are eager to maximize profits whereas, for political reasons, public organizations are more concerned about creating consumer surplus for the public.

Applying a cost-benefit framework and the concepts of use and non-use value to a festival proved successful. The results indicate that use values are the primary source of value creation. But elicited non-use values suggest that an assessment of the value created also depends on positive and negative non-use values. The application of contingent valuation method to a festival setting also gave further insight into possible differences between publicly and privately managed cultural activities. Compared to the museum and the concert hall, where non-use values outweighed use values, the results of the festival study showed the opposite pattern. Use values were significantly larger than non-use values. Thus, the festival seems to be successful from a consumer perspective and traditional institutions may learn from festivals about how to create value for the consumer.

6.2 How to describe the perceived value of cultural institutions?

Use and non-use values are concepts developed primarily in an environmental setting (Garrod & Willis, 2001). Lately they have been adopted in a cultural context as well (Noonan, 2003). Empirical descriptions of their content are, however, rare. Therefore, the question why individuals perceive cultural institutions to be valuable was posed.

The value that individuals' perceive cultural institutions to contribute with covers a broad variety of social-cultural, health and education related benefits. Relating economic values to a framework, proposed by McCarthy et al. (2004), covering a multiplicity of benefits of cultural institutions, enabled conclusions to be drawn about the content and scope of economic concepts.

Use value covers aspects such as pleasure and captivation, but also benefits such as cognitive growth, expanded capacity for empathy, self-efficacy, learning skills and improved test scores. Furthermore, instrumental benefits such as social, health related and perceived economic effects were revealed as important. Intrinsic benefits, such as the perceived contribution to identity and the perceived communal meaning, were also regarded as significant. Option and bequest value cover similar aspects as use value, suggesting a relationship between the value categories, as provided in the literature (Throsby, 2001). The option value may be interpreted as a future use value. The bequest value represents the value perceived by individuals in preserving cultural assets and experiences for future generations. Option and bequest value, however, are more remote in terms of time. Existence value is the concept with the least rich description. The results suggested that this covers the perceived contribution to identity and communal meaning as well as social and economic benefits. In general, the results indicate a decreasing scope from use value to option to bequest and finally to existence value. This may suggest an increasing uncertainty among individuals about values that will arise in the future as well as for society in general.

Departing from the descriptions and categorizations, suggested in article 4, six factors were outlined in order to describe the development of a scale. These factors were: economic impact, image, social, identity, health and educational values. The scale measures the extent to which a cultural institution is perceived to contribute to one of the benefits captured by the factors. As a quantitative measure, the scale allows an understanding of the aspects individuals perceive to be valuable. While contingent valuation method allows for

comparisons of use and non-use value in monetary terms, the scale describes whether a cultural institution is perceived as contributing in financial, educational, health related, image related, social or identity related terms. The scale may be used instrumentally to judge which cultural institutions are perceived as contributing to one of the benefits. An understanding of what aspects create value for individuals may in future allow more specific questions to be framed, eliciting the value that individuals perceive. The scale can also be set in relation to the measured value of cultural institutions to understand what factors determine individuals' willingness-to-pay.

6.3 What is the value of cultural institutions?

Parts of the value of cultural institutions are measurable in terms of revealed market transactions. The turnover generated through entrance fees may, for example, be calculated using the number of visitors multiplied by the average entrance fee. If a cultural institution stimulates tourism, the share of tourism attributable to the experiences provided at the cultural institution, can also be included to assess the value of that institution. However, limiting the assessment to these measures, would be an evaluation on an incorrect basis since the evaluation has to be done in relation to the purpose of the activity, and the purpose of cultural institutions is not to attract tourists or create jobs (Bille Hansen, 1995). Furthermore, these values adhere primarily to the experiences and thus use values. Characterized by public good aspects, use values may, however, not encompass all benefits of cultural institutions (Ready & Navrud, 2002). Two aspects call for a broader assessment of the value created. First, use value may be larger than the traces that may be observed in markets. Secondly, cultural institutions may be valuable, whether or not they are used.

This thesis project has investigated the value of cultural institutions within a cost-benefit framework. Contingent valuation method has been applied to two cultural institutions of regional character in Sweden. A majority of the visitors, to any of the institutions, perceived the value derived from the experiences to exceed the financial price they paid for it. These results seem valid for at least three reasons: first, based on utility maximizing behaviour, individuals are only to be expected to consume goods and services, if the perceived (expected) value exceeds the price. Secondly, the difference between the price and created value is likely to be higher if the experience is publicly organized, compared to privately organized experiences. The thesis project was able to demonstrate this pattern in article 1

and 3. Thirdly, the application of two non-market valuation techniques supports the results showing the value created exceeded the price (article 1, 2 and 3).

Contingent valuation method, as part of cost-benefit analysis, contributes to an understanding of the fundamental economic problem of allocating scarce resources in the face of unlimited wants. Employing fully-fledged cost-benefit analyses may be attractive to society when it comes to deciding how and where to allocate scarce resources. The attention of this thesis project has not been on cost-benefit analyses and the costs imposed on society have not been taken into account. But the focus has been on how to assess the value created. Comparative assessments and inferences on efficiency are thus not possible. But the results suggest that if efficiency is of interest, then the value assessed by non-market valuations may provide useful information besides, for example, an economic impact analysis.

6.4 Reflections and speculations

A major advantage of the methods advocated in this thesis project, is that costs for society eventually can be set in relation to the benefits. Conclusions about created value are possible and assessments of value can yield input for the management of cultural institutions. From a tourism perspective, value assessment may suggest which attractions need to adapt and/or change strategies or should be promoted in order to improve the tourist destination. Using non-market valuation techniques, may also allow for conclusions about pricing strategies among different market segments. Differentiated pricing offers possibilities for decreasing exclusion of individuals with relatively low willingness-to-pay through offering the opportunity to pay more to those who are willing to do so. This may eventually lead to increase the value created by increasing the number of visitors and thus use and non-use values.

The primary focus of this thesis project has been on created value, and little has been said about distributional and equity issues. However, these aspects may also deserve consideration when discussing the value of cultural institutions. Researchers have established that the way individuals consume culture is determined by their socioeconomic characteristics. Particularly audiences of performing arts are 'elite' in respect to income, education and profession (National Endowment for the Arts, 2004; Seaman, 2009). The assumption that the value created by cultural experiences (use value) is distributed

unevenly and some groups benefit more than others cannot be excluded (Throsby, 2001). Furthermore, this study has shown significant relationships between use and non-use value (cf. article1). Non-use value therefore may also be distributed unevenly. This situation may not necessarily be axiomatic, but a reflection of consumption behaviour (Lévy-Garboua & Montmarquette, 1996, 2003). A more even distribution of the value may be attained by facilitating easy access to culture, in order to bring in and lead consumers up the 'culture career ladder' (Brito & Barros, 2005). The methods presented in this thesis are among the few suitable for assessing created value *and* how it is distributed. Further investigation of distributional inequalities is suggested as one track for future research.

Another distributional issue is how value is dispersed over geographical areas. This thesis proposes that if the municipality borders, in which the experiences are produced, are taken as the natural borders for analysis, large proportions of the use value are exported to other regions and countries. The positive memories visitors take home may influence the image of the destination positively and may possibly lead to future visits. Thus, the 'export' of use values may eventually lead to increased returns from the impact of tourism. Regarding non-use value, nor is its dissemination subject to any municipal or regional borders either (cf. article 1 and 3). While the perceived non-use value diminishes with increasing distance, the results still indicate an appreciation of the cultural institutions in remote regions as well.

On the basis of these contributions, can non-market valuation methods be recommended? Stated and revealed preference methods for assessing the value created may provide a new input to balance the established processes of assessing value of cultural institutions. Relying only on stated or revealed preference methods, however, may not provide sufficient information to take well-informed decisions. Individuals may, for example, not be able to assess all benefits of an opera house due to lack of knowledge. Non-market valuation methods to estimate the value created may thus fail if individuals do not have enough knowledge about the study object (Bergstrom et al., 1990). The value of an opera house may therefore be underestimated, if expert arguments are ignored. However, allocating public resources only based on expert assessments may also be dangerous, leading to questionable resource allocations and arbitrary decisions.

Assuming that the contingent valuation method, and under certain conditions, also the travel cost method yield valid results, a reflecting on *what* has been measured may be worthwhile. Thinking of a person experiencing a piece of art, the utility (*experienced utility*) of this person is likely to vary during the period of the experience. The assessed

value is, however, an overall assessment of observed preferences (*decision utility*), which implies that contingent valuation necessarily is a *post hoc* assessment of the experience. It is a summary of a number of 'changes in utility'. The remembered utility as elicited in this thesis project is not necessarily the same as the *experienced utility* (Kahneman, 2000). Time, context and social environment of the visitor may eventually change the value that individuals reveal in a survey situation. It may therefore be contended that despite the correct application of the contingent valuation method, the measured value is not necessarily an exact assessment of the perceived utility during the experience.

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Article 1

Culture and value creation: An economic analysis of Vara Concert Hall and the Nordic Watercolour Museum

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Abstract

The underpinning of this chapter is that rational decisions about cultural institutions cannot be based only on cost analyses but must also consider the value created. Furthermore, if value created can be measured in monetary units, as costs are, it will be possible to compare value created to the costs of producing culture. Contingent valuation method is used to assess use as well as non-use values of a concert hall and a watercolour museum. The results are consistent and provide reliable input for an economic and utilitarian truly approach to discussing efficient use of resources for cultural institutions.

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Introduction

To value and evaluate is deeply rooted in our society (Connor, 1992). This may relate to whether we think it is worth travelling into town to go to an art gallery or whether we decide to purchase an annual subscription to a concert hall. With regard to cultural policy initiatives, these are often taken after careful assessments of what investments are required in the form of financial support. But the natural follow-up question of what value is created by these financial investments is rarely answered satisfactorily. Although the value may be discussed in terms of the number of visitors, the number of performances or total ticket revenue, such indicators do not provide a satisfactory estimate of the cultural value created (Bille Hansen, 1995).

International economic research has made substantially more ambitious attempts to estimate the value created by cultural activities by means of revealed and stated preference methods (Noonan, 2003). These methods, which have rarely been tested in Sweden, are worth applying as a way of making a more accurate and nuanced assessment of the cultural yield created through cultural policy.

The intention of this chapter is to estimate the economic value of two cultural institutions - Vara Concert Hall and the Nordic Watercolour Museum. After describing these institutions, the chapter presents a more general discussion of the effects of culture and then formulates this in an economic model, which is then applied to the two cultural institutions. Finally the results are discussed in relation to similar studies and the need to value culture.

Study objects

There are several reasons why Vara Concert Hall and the Nordic Watercolour Museum were chosen as study objects. The primary reason is that both these institutions are physically well defined. Most of the population of Västra Götaland are familiar with the concert hall and the museum through the media, word-of-mouth or visits, which makes it easier for the respondents to have an opinion about them. Vara Concert Hall and the Nordic Watercolour Museum are also both located at a relatively long distance from the major towns and cities in the region, which makes it easier to draw conclusions concerning their attractiveness to visitors.

There is a difference between the cultural institutions in terms of the motives behind and initiatives that led to their establishment. In Vara it was the municipal executive board that decided to invest in culture as a strategy for improving the quality of life in the municipality. On Tjörn, the initiative was taken by the Nordic Watercolour Society, whose dream it was to create a centre for Nordic watercolour art, work, research and teaching on watercolour techniques, papers and paints. Another difference is that the Watercolour Museum is relatively specialised in what it offers, which results in less breadth but greater depth, while Vara Concert Hall attempts to offer a broad range of performances.

Vara Concert Hall

The first plans were submitted in Vara in 1996. Few people thought that anything would come of them, but on 1 January 1998 the Västra Götaland Region was born, and the Municipality of Vara gained a new position at the centre of the region. Construction of what was then still known as the "Future House", estimated to cost around SEK 80 million, started in 2002. The new centre for culture, schools and conferences was officially opened on 5 September 2003, under the name Vara Concert Hall (Vara Konserthus).

Vara Concert Hall brings together Friday clubs and Saturday chats over coffee with performances for families and for schools. Classical music meets jazz, country, pop and rock. Dance, theatre, musicals and stand-up comedy are all on offer. There is no need for everyone to go to everything, but there's guaranteed to be something for everyone!

(Vara Concert Hall 2012, our translation)[2]

The Bohuslän Big Band and the VOX vocal quartet, who perform at the concert hall as well as in other parts of Västra Götaland Region, are part of the Vara Concert Hall organization and also act as its ambassadors. The concert hall is also the second home of the Gothenburg Symphony Orchestra. The concert hall in Vara is a venture managed mainly by the municipality, but has also been supported by the Västra Götaland Region. Every year around 30.000 - 50.000 people visit the Concert Hall to enjoy one of the 100 – 150 annual performances.

[2] *Vara Concert Hall* (2012) Online. Available: http://www.vara.se/omoss.4.58aef784115b28a58298000324.html (accessed 6 August 2012).

Nordic Watercolour Museum

The Nordic Watercolour Museum opened in 2000, and the museum's website reads as follows:

The Nordic Watercolour Museum is a unique meeting place for art, set in a barren yet beautiful landscape. It is a centre for art based on water, pigments and light. Exhibitions by Nordic and international artists and courses and paint experiments for children and adults in the children's studio and experimental workshop provide many rich opportunities for anyone to actively engage with art.

(Nordic Watercolour Museum 2012, our translation)[3]

The museum has an exhibition room for permanent and temporary exhibitions, but also guest studios, children's studios, an experimental workshop with technical equipment for artistic work, teaching and research, an assembly room for dance, theatre and conferences, a restaurant ("Vatten") and a museum shop, all located in the same main building.

The exhibition rooms mostly house temporary Nordic and international exhibitions, but the Nordic Watercolour Museum also has its own permanent collection of Nordic contemporary watercolour art. The collection consists of more than 700 works, and the museum regularly acquires new pieces. The aim is to provide a broad range, to be an exciting Nordic cultural project and to be a Nordic centre for contemporary art, research and education focused on watercolour techniques. Between 150,000 and 230,000 people visit the Watercolour Museum annually.

The operational activity of the Nordic Watercolour Museum is funded by the Swedish Government, the Cultural Committee of Västra Götaland Region, the Development Committee of Västra Götaland Region and the Municipality of Tjörn, but also through the museum's ticket sales and sponsorship.

Effects of culture on individuals and society

Social science research has devoted great interest to studying the significance of culture. Areas that have been the object of research include the impact of culture on education and knowledge (Catterall, 2002), mental and physical health (Konlaan, Bygren, & Johansson,

[3] Nordic Watercolour Museum (2012) Online. Available at: http://akvarellmuseet.org/Kultur_Default.aspx?id=47012 (accessed 6 August 2012)

2000), attitudes and behaviour (Deasy, 2002) and social relationships (McCarthy, Ondaatje, Laura, & Brooks, 2004) and networks.

Art and cultural experiences can be regarded as a form of communication between the artist and audience intended to appeal to the *individual's* emotional, intellectual and aesthetic senses. Cultural institutions offer quality experiences rather than an ordinary experience (Shusterman, 2008). Cultural experiences capture our thoughts and contribute to shifting our focus away from the present to other places and times. We interpret art with existing knowledge and in the process we develop new knowledge (Deasy, 2002). Art challenges and develops our thinking, which contributes to *learning and cognitive development.* By being forced to relate the expressions and images of art to our own lives, we are constantly challenged to face new experiences.

Art can also facilitate communication by offering people a different language that enables them to understand one another better. Art also enables us to project ourselves into new, unfamiliar situations. Eisner (2002) studied children and students and found that positive effects occur after repeated occasions of consuming art. Some of the most important lessons that art can convey, according to Eisner (2002), are that:

- Art teaches individuals that problems can have more than one solution.
- Art promotes individuals having more and greater perspectives.
- Art clarifies that not everything can be expressed through words and language.
- Art teaches individuals to think in and through different materials.
- Art gives us experiences that we cannot gain from other sources.

According to Longley (1999), art instruction combined with traditional school teaching leads to pupils achieving a higher level of academic education than pupils who do not receive art instruction.

Culture is also considered to have effects on *attitudes and behaviour.* Research in this area shows, that changes in behaviour are a process that begins with individuals gaining belief in something. These beliefs turn into attitudes, intentions and finally actual behaviour. A change in attitudes affects ways of thinking, which then has an impact on behaviour. Art that communicates and convinces individuals about the benefits of a multicultural society can, for example, influence their behaviour (Deasy, 2002; Fiske, 1999; Wright, Lindsay, Alaggia, & Sheel, 2006).

Health-related effects of art are an area of research that has attracted attention, particularly in the past decade. The approach to analysing the impact of culture on health is

interdisciplinary, and research is undertaken in various areas such as psychology, medicine, public health, humanities and artistic research. Both general wellbeing and mental, physical, intellectual, emotional, social and spiritual health has been the object of scientific analysis in this area of research (Fiske, 1999; Folkhälsoinstitutet, 2005).

The social effects of arts for *society* created by culture are explained by theories on *social capital.* According to Bourdieu, social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group through social networks (Bourdieu & Wacquant, 1992, p. 119). Social capital can thus generally be said to mean that effects such as networks and social contacts arise, but it can also lead to effects such as improved municipal infrastructure, employment and increased range of services (Cavaye, 2004). Improvements to the infrastructure and other functions of society can, in turn, lead to improved social interaction, municipal organization and increased trust. Studies conducted by the "Australian Expert Group on Industry Studies" show that cultural institutions reduce social exclusion, improve self-esteem and self-confidence and contribute to community health (AEGIS, 2003).

The term *cultural capital* has been used in several areas of research. The term has probably been most widely used in sociology, where Bourdieu (1973) considers cultural capital to be a personal asset that inherited, acquired and is present among individuals in different groups (networks). Bourdieu's definition of cultural capital means that groups (often with a specific socio-economic background) differ from other groups in their aesthetics and knowledge of art and culture. Studies of cultural capital and education strengthen the hypothesis that high cultural capital and socio-economic status are positively correlated to study results (Dumais, 2002).

In contrast to Bourdieu, Throsby (1999) suggests that cultural capital also has a physical dimension. In a cultural heritage building, for example, the cultural value of the building supplements it physical. Certain objects like paintings are predominantly of cultural value, while their physical value is negligible. Their cultural value accounts for virtually the whole of their economic value.

A number of researchers consider cultural capital to be of significance to the economic performance of municipalities and regions (Barro, 1999; Barro & Sala-i-Martin, 2004; Becker, 1974; Sala-I-Martin, 1997). Hayami and Ruttan (1985) studied the correlations between existing resources, cultural capital, technology and institutions, and found that the correlation between resources and technology and between cultural capital and

technology/institutions is relatively strong. The creative industry has become something of a buzzword, and Ache (Ache, 2000) believes that cultural institutions contribute to developing *creativity* and a *creative environment.*

Two dimensions will be used to summarise the discussion above on the effects of cultural institutions on *individual* and *society*. Culture has *instrumental* effects (i.e. relatively concrete and often measurable effects) both on the individual and on society. Culture has effects for example on health and behaviour. Culture also enriches the individual and society through *intrinsic* values that are more introspective and difficult to measure. The pleasure and happiness an individual can gain from cultural experiences are intrinsic, like the cultural capital of society.

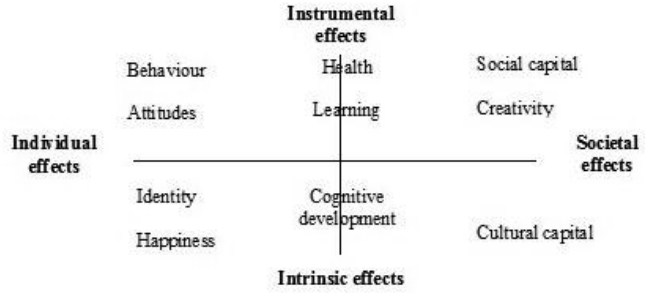

Figure 1: Effects of culture on the individual and on society (cf. McCarthy et al., 2004)

The effects of cultural institutions can therefore be classified according to whether they principally affect either the *individual* or *society*. The second dimension describes whether the effect is *instrumental* or *intrinsic.* The model is shown in figure 1.

Value of cultural institutions – an economic model

In line with the model in figure 1, the economic model will differentiate between the value that culture creates for the visitor at the individual level and the value created at the level of society. The individual value to a visitor who experiences a performance or art exhibition is called *use value*. Great societal value is also created that is not necessarily associated with all citizens taking part in cultural activity. Instead, the value may consist in society developing positively as a result of the existence of culture, thereby increasing cultural and social capital. This economic value is termed *non-use value.*

Use value

The use of culture creates *direct use value* for the visitor. This value may, for example, consist of the pleasure in having seen an interesting play, a good feeling because the performance has set an individual on a different train of thought or given him or her a sense of relaxation after a day at work. Different performances create different values for different individuals. Use value also includes *indirect use value* generated by experiences that do not directly have anything to do with art. This may, for example, be the satisfaction of having been able to spend an evening with one's friends and family at a performance or exhibition, or a sense of boosting one's identity by meeting people and being seen in cultural contexts.

Non-use value

An evident form of economic value created by a museum or concert hall is the value of monitoring and developing art and music, but several altruistic values that are less self-evident are also created. These altruistic motives can apply both to those who are alive today and coming generations.

Altruistic motives for future generations create value that corresponds well to the term *bequest value.* Mitchell and Carson (1989) describe *bequest value* as that which arises when someone sees a value in preserving access, for example to a cultural resource, so that it can be experienced by future generations (Mitchell and Carson 1989). Hansen (1997) notes that the Danish population is prepared to pay tax to preserve the Royal Theatre in Copenhagen for future generations. Ruijgrok (2006) describes bequest value in his study, in which a cultural area in the Netherlands consisting of fortresses, churches and other buildings is partially preserved.

Another term that describes an economic value of cultural institutions is *existence value.* Throsby (2001) believes that people regard the mere existence of a cultural resource as valuable to themselves and to society even if they do not themselves utilise this cultural resource. Throsby gives the example of the pyramids in Egypt, which most people consider to be worth preserving even if they themselves have not seen them or do not plan to see them. The existence value of culture in a region also affects its image and the sense of pride the inhabitants feel in living in a region containing cultural assets (Throsby, 2001).

Similarly to bequest and existence value, *option value* is regarded as a third type of non-use value. In relation to culture, Throsby (2001, 2010) believes that option value can be defined as a desire to preserve the possibility of visiting the cultural institution oneself one day in the future and making use of the experiences it offers.

It should be pointed out that non-use value exists both among people who have visited the cultural institution and among those who have not. The valuations of all individuals must therefore be included to determine the existence, option and bequest values of culture.

The economic model describes the economic value by adding *use* and *non-use values* (Bateman & Willis, 2001). The value of culture can therefore be defined in an economic model as:

Table 1: An economic model based on use and non-use value (Bateman & Langford, 1997; Garrod & Willis, 2001).

DUV	+	IUV	+	OV + EV + BV	
use value				non-use value	
				OV =	option value
DUV =	direct use value			EV =	existence value
IUV =	indirect use value			BV =	bequest value

Using the economic values as described above we can now link back to the previous model (figure 1) on the effects of culture. Figure 2 shows approximately which parts the economic values may cover. Figure 2 also indicates that we do not anticipate being successful in fully covering the value of culture.

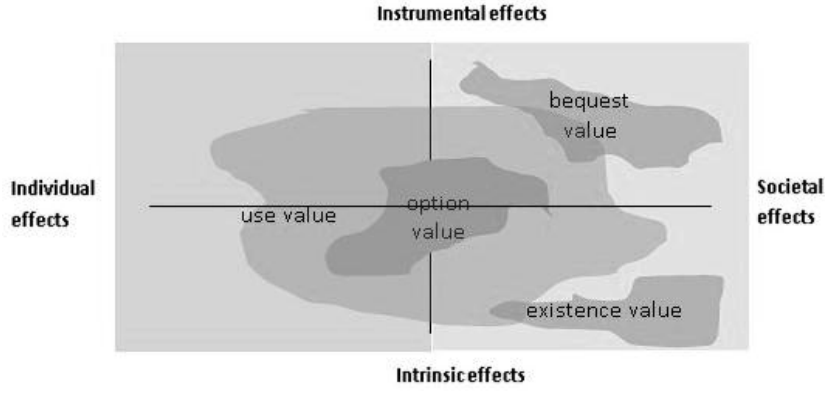

Figure 2: A synthesis of economic and non-economic terms (cf. Garrod and Willis 2001; McCarthy et al. 2004). Source: Armbrecht (2009)

Economic values and financial flows

The above discussion of economic values may appear confusing as the link to cash flow is not clearly mentioned. The focus, however, in this study is on estimating an economic value as accurately as possible, which may differ substantially from a financial value (i.e. cash flow) (Bille Hansen, 1995). On the other hand, it is naturally the case that, when economic values are created these are also, in most cases, linked to financial flows. This applies, for example, when a concert visitor experiences use value during a concert for which he or she has paid and travelled for (incurred financial expenditure). If he or she additionally has an enjoyable time with friends at a restaurant or concert (indirect use value), this is also associated with financial outlay (e.g. the restaurant bill).

Regarding non-use values, the link in a shorter time perspective is to tax payments and public financial grants for culture. There might also be a greater willingness to pay tax, and citizens experience great non-use value through access to cultural value. In a long-term perspective, the link consists in the region becoming a more attractive place to live and work (Myerscough, 1988). This results in higher economic activity in the region and consequently higher tax payments.

Measurement of economic value

The description of the study method here will be very brief. For further details, see the licentiate thesis (Armbrecht, 2009).

The survey questions

The c*ontingent valuation method* (Mitchell and Carson 1989) was used to estimate use values and non-use values, and *willingness-to-pay* was estimated using two types of questions:

1) Use value:

"What is the highest amount you can imagine paying for ....

a) … the ticket? (Direct use value)

b) … the whole experience from leaving home until you get back home? (Direct + Indirect use value)

2) Non-use value:

"What is the maximum amount you can imagine paying in tax per year to ...

a) ... have an opportunity in the present situation to enjoy cultural experiences in the museum/concert hall? (Option value)

b) ... preserve the museum/concert hall and its value for future generations? (Bequest value)

c) ... preserve the museum/concert hall when you consider all aspects? (Total value including existence value)

In addition to the above questions on the valuation of culture, a number of questions were asked that provided insight into what factors influence the valuation of cultural experiences and cultural institutions.

The interviews

The data presented in this chapter consists of 1,847 responses to interviews. A total of 997 interviews were conducted to estimate use value (583 in Vara and 414 at the Nordic Watercolour Museum). The study consists of another 500 telephone interviews with residents from both municipalities (250 each). Additionally 350 residents from the region were interviewed using telephone. The regional residents were asked about the concert house and the watercolour museum.

Results of the studies

Use value will first be presented for the average visitor, with comments based on a deeper statistical analysis which is not shown here in detail (see Armbrecht 2009). A similar examination is then made of non-use value. Use and non-use value are finally aggregated to calculate the total economic value generated by Vara Concert Hall and the Nordic Watercolour Museum.

Use value for Vara Concert Hall

Table 2 shows the average experienced use value (i.e. direct + indirect) for one visit (including any peripheral activities such as food and drink in connection with a visit). Visitors consider the value of the experience to be greater than the price. The willingness-to-pay for the visit to the Concert Hall averages SEK 534 for *local visitors* (i.e. visitors who live in Vara or Tjörn respectively) while the average expenditure is SEK 208. Local visitors thus have an average *consumer surplus* of SEK 326 (the difference between 534 and 208) per performance.

Table 2: The visitors' average willingness-to-pay and consumer surplus for a visit to the Concert Hall.

		Willingness-to-pay	Total expenditure	Consumer surplus
Local visitors (Vara)	**Mean value**	**SEK 534**	**SEK 208**	**SEK 326**
Regional visitors	**Mean value**	**SEK 526**	**SEK 243**	**SEK 283**

Regional visitors (i.e. all visitors not living in Vara or Tjörn) value the experience on average somewhat lower, at SEK 526, while spending somewhat more, SEK 243. The average consumer surplus for regional visitors is SEK 526–243 = 283.

Use values for the Nordic Watercolour Museum

The willingness-to-pay for an experience at the Nordic Watercolour Museum averages SEK 389 for visitors from Tjörn and SEK 480 for regional visitors, while the expenditure is SEK 202 and 301 respectively. The average consumer surplus for visitors from Tjörn is SEK 187, and for regional visitors it is SEK 179.

Table 3: The visitors' average willingness-to-pay and consumer surplus for a visit to the Watercolour Museum.

		Willingness-to-pay	Total expenditure	Consumer surplus
Local visitors (Tjörn)	Mean value	**SEK 389**	**SEK 202**	**SEK 187**
Regional visitors	Mean value	**SEK 480**	**SEK 301**	**SEK 179**

The three columns describe:

1. "economic value of the whole experience" (willingness-to-pay for the whole experience);
2. "financial outlay generated by the visit" (total expenditure for the whole experience); 3.

"the economic surplus that is the part of the economic value not revealed in financial effects in terms of business economics" (consumer surplus). The consumer surplus remains in the "visitor's heart" but is a complete and important part of the economic value of the experience.

Comments on use values from the concert hall and the watercolour museum

- The differences that exist between locals and non-locals are not significant, with one exception: The expenditure of those travelling to Tjörn is significantly higher than the expenditure of those who live on the island of Tjörn.
- There are weak but significant correlations between use value in Vara Concert Hall and age (negative), education (positive), annual income (positive) and gender (higher for men).
- In the case of the watercolour museum, there is only significant correlation between use valuation and age (negative).
- The consumer surplus among inhabitants of the municipality is found to be greater (although not significantly greater) than among regional visitors for both the cultural institutions. This is fair, in a way, as the inhabitants of the municipality also pay for the cultural institutions through their taxes.

Non-use value for Vara Concert Hall and the Nordic Watercolour Museum

The population of Vara has a willingness-to-pay for the non-use value of Vara Concert Hall of SEK 309. The population of Tjörn makes an equivalent valuation of SEK 314 for the Nordic Watercolour Museum (see table 4). The average option value is SEK 136 for the Nordic Watercolour Museum and SEK 122 for Vara Concert Hall. The average existence value is SEK 70 for the Nordic Watercolour Museum and SEK 38 for Vara Concert Hall. The average bequest valuation is SEK 108 for the Nordic Watercolour Museum and SEK 149 for Vara Concert Hall.

Table 4: Willingness-to-pay of municipal inhabitants for Vara Concert Hall (VCH) and the Nordic Watercolour Museum (NWM).

	VCH valued by inhabitants of Vara				NWM valued by inhabitants of Tjörn			
Type of value	Option	Bequest	Existence	Sum	Option	Bequest	Existence	Sum
Mean value	**SEK 122**	**SEK 149**	**SEK 38**	**SEK 309**	**SEK 136**	**SEK 108**	**SEK 70**	**SEK 314**

In addition to the inhabitants of the municipalities of Vara and Tjörn, a stratified random selection of the population in Västra Götaland Region was interviewed (see table 5).

Table 5: The willingness-to-pay of the population of Västra Götaland for Vara Concert Hall (VCH) and the Nordic Watercolour Museum (NWM) does not show any significant differences between the cultural institutions.

	Population of Västra Götaland values VCH				Population of Västra Götaland values NWM			
Type of value	Option	Bequest	Existence	Sum	Option	Bequest	Existence	Sum
Mean value	**SEK 84**	**SEK 90**	**SEK 29**	**SEK 203**	**SEK 68**	**SEK 61**	**SEK 29**	**SEK 158**

The value ascribed by the population of Västra Götaland to the non-use value of Vara Concert Hall is SEK 203 per individual, while the value ascribed by the population of Vara to the concert hall is SEK 309. Similar values were also estimated for the Nordic Watercolour Museum, where the non-use value of the museum for the population of Västra Götaland is SEK 158 per individual, compared with the population of Tjörn, where each individual values it at SEK 314.

Comments on non-use values from the concert hall and the watercolour museum

- The average non-use value of Vara Concert Hall for an inhabitant of Vara is significantly higher than for an average inhabitant of Västra Götaland. The option value and bequest value are also significantly higher.
- The average non-use value of the Nordic Watercolour Museum for an inhabitant of Tjörn is significantly higher than for an average inhabitant of Västra Götaland. The option value, bequest value and existence value are also significantly higher.
- Non-use values thus co-vary in a significantly negative way with distance between place of residence and cultural institution.
- The differences between the non-use value of Vara Concert Hall and the Nordic Watercolour Museum for an average inhabitant of Västra Götaland are not statistically

significant. Nor are there any significant differences between option value, bequest value and existence value.

- Individuals who have visited the cultural institutions ascribe significantly higher non-use value to them than those who have never visited them.
- Non-use value co-varies in a significantly positive way with other leisure interests: "Going to the theatre" and "Going to classical music concerts".

Aggregate values for Vara and Tjörn

The average willingness-to-pay for use and non-use value for Vara Concert Hall and the Nordic Watercolour Museum can be added together at municipal and regional levels to provide an insight into the value created by the cultural institutions. This is done using relatively simple mathematical operations: average use value, as described above, is multiplied by the number of visitors during the year, and average non-use value, also discussed above, is multiplied by the number of inhabitants over the age of 16 in the municipalities of Vara, Tjörn and in the region of Västra Götaland.

Table 6: Aggregate use value for Vara Concert Hall.

	Willingness-to-pay *	**Total expenditure ***	**Consumer surplus ***
Local visitors (Vara)	SEK 3,900,000	SEK 1,500,000	SEK 2,400,000
Regional visitors	SEK 14,600,000	SEK 6,700,000	SEK 7,900,000
Total	SEK 18,500,000	SEK 8,200,000	SEK 10,300,000

*The aggregate value is based on average value and 27,800 regional visitors, as well as 6,700 visitors from the municipality during the year.

Table 6 shows that the aggregate use value is greater for regional visitors (regional visitors: SEK 14.6m; local visitors: SEK 3.9m). Visitors who do not come from Vara also benefit from the consumer surplus to a greater extent than the population of Vara. The difference is not due to a greater willingness-to-pay per visitor but to the number of regional visitors being four times greater than the number of visitors from Vara.

The same picture is found for the Nordic Watercolour Museum in table 7. Compared with regional visitors, the total use value for the local population is smaller.

Table 7: Aggregate use value for the Nordic Watercolour Museum.

	Willingness-to-pay *	Total expenditure *	Consumer surplus *
Local visitors (Tjörn)	SEK 11,781,000	SEK 7,777,000	SEK 3,388,000
Regional visitors	SEK 44,712,000	SEK 33,567,000	SEK 13,050,000
Total	SEK 56,493,000	SEK 41,344,000	SEK 16,433,000

*The aggregate value is based on average value and 111,500 regional visitors, as well as 38,500 visitors from the municipality during the year.

Non-use value can also be aggregated for the populations of Vara, Tjörn and Västra Götaland. The aggregate willingness-to-pay for the non-use values of the Concert Hall and the Watercolour Museum is shown in table 8.

Table 8: Average and aggregate non-use values for Vara Concert Hall (VCH) and the Nordic Watercolour Museum (NWM).

	Average for Västra Götaland	Average for municip. of Vara	Average for municip. of Tjörn	Aggregate for the municipality	Aggregate for the region	Sum
VCH	SEK 203	SEK 309		SEK 4,084,290	SEK 261,360,000	SEK 265,444,290
NWM	SEK 158		SEK 314	SEK 3,831,520	SEK 199,320,000	SEK 203,151,520

The aggregate values at municipal and regional levels are obtained by multiplying the values in the first three columns in table 8 by the number of inhabitants over the age of 16 in Vara (13,000), on Tjörn (15,000) and in Västra Götaland (1,320,000). The number of inhabitants in Västra Götaland explains the high non-use values obtained for the region.

Comments on aggregate values for the concert hall and the watercolour museum;

- Total expenditures for the experience (tables 6 & 7) show the direct financial effects the cultural institutions have generated, i.e. SEK 8m for Vara and SEK 41m for Tjörn. More than 80 per cent of these financial effects come from regional visitors.
- The use value and consumer surplus for regional visitors (totalling around SEK 59m and 21m respectively) should be regarded as a goodwill gift from the municipalities of Vara and Tjörn to visitors. This goodwill is materialised for example as tourism in the region and as an advantageous favourable image for the destination.
- The inhabitants of the municipalities of Vara and Tjörn value their cultural institution in both cases at around SEK 4m per year. This means that it is felt that the municipality's budget should include a substantial sum to support the cultural institutions.

- The inhabitants of Västra Götaland have a significantly lower non-use value per inhabitant (mainly explained by distance away from the cultural institution). However, because of the large number of inhabitants in the region, the total sums of non-use value show that there is a willingness to invest tax funds equivalent to more than SEK 200m for Vara Concert Hall as well as for the Nordic Watercolour Museum (table 8).
- It is important to bear in mind that the value measured by this study does not include non-use value at national and international level (the Watercolour Museum also has explicit *Nordic* objectives). Both institutions particularly, the Nordic Watercolour Museum, are likely to have both national and Nordic significance.

Analysis and discussion

When the analysis is done at municipal level, the use value is found to be the dominant type of value. In the case of Vara Concert Hall, use value accounts for 82 per cent of the total annual economic value (figure 3). This proportion is higher still in the case of the Nordic Watercolour Museum.

It is worth noting that the bequest value accounts for the greatest non-use value. There appears to be great concern for future generations in Vara, and there is a strong willingness to offer a society containing culture to the next generation. The same applies to Tjörn.

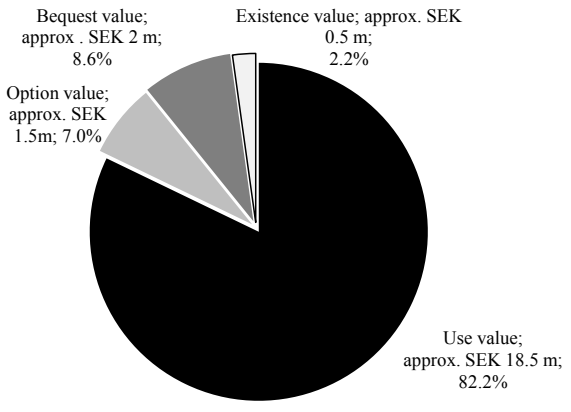

Figure 3: Breakdown of the total annual economic value of SEK 22.6m for the municipality of Vara of the concert hall in Vara.

Of the total annual economic value of SEK 22.6m created in the municipality of Vara by the concert hall, regional visitors take a use value of SEK 14.6m "away with them". However, they leave SEK 7.9m behind in expenditures related to the visit, for example in terms of ticket purchases. Analyses of regional visitors clearly show that culture is not subject to any municipal boundaries, and inhabitants of other municipalities obtain a greater yield from the cultural institutions than the inhabitants of the municipality concerned.

The cultural institutions thus also create considerable economic value in adjacent municipalities, which is revealed in non-use values which are, conversely, greater the closer someone lives to the cultural institution. This is in stark contrast to public funding, which is largely provided by the cultural institution's own municipality with, at best, small contributions from neighbouring municipalities.

If the perspective is broadened to the whole of the Västra Götaland Region, the inhabitants of the region show a high non-use value and consequently also a very strong willingness to support the cultural institutions, as is apparent in figure 4, showing the breakdown of the total annual regional economic value of SEK 269m for the Nordic Watercolour Museum.

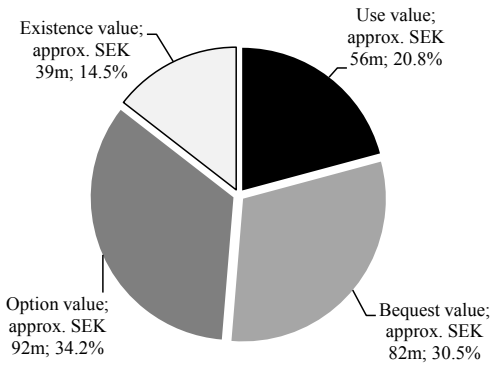

Figure 4: Breakdown of the total annual economic value of SEK 269m for Västra Götaland Region of the Nordic Watercolour Museum.

The use value is high (SEK 56m per year), depending on how many visitors experience great value from the visit. In addition, the "option value", i.e. the possibility of getting there and having access to an outstanding watercolour museum, is valued highly. The option value is estimated at SEK 92m per year by the population of Västra Götaland. The bequest value reflects a desire to offer future generations a society that provides art and culture.

Conclusions

A comparison with other international research shows that the non-use value in these studies from Tjörn and Vara is consistent with previous similar studies. Hansen (1997) found that the average non-use value per Danish citizen for the Royal Theatre in Copenhagen was DKK 101. As in this study, the values in the study by Hansen (1997) are estimated using the *contingent valuation* method. As the aggregate value is measured at national level (and is therefore multiplied by the number of inhabitants in Denmark), it is not surprising that the aggregate non-use value for "The Royal Theatre" is greater.

Santagata and Sigorello (2000) studied the willingness-to-pay for maintenance of a network of cultural and historical monuments in the central parts of Naples. Although the maintenance in reality only cost just over SEK 24 per inhabitant each year, the willingness-to-pay on average was between SEK 85 and SEK 130. The willingness-to-pay to preserve the cultural heritage town of Fés Medina in Morocco from falling into disrepair was found to be SEK 294 for non-users and SEK 686 for users (Carson, Mitchell, & Conaway, 2002).

All three study objects have an economic value that exceeds the financial resources invested. This is consistent with the analysis by Noonan (2003) of most *contingent valuation* studies in cultural economics. Noonan (2003) found that the estimated value of a cultural resource on average exceeds the operational costs by around 120 per cent. The annual operational costs for Vara Concert Hall were around SEK 20m and for the Nordic Watercolour Museum around SEK 16m, which is significantly less than the socio-economic value created in the municipality and only a fraction of the value created in the region. To summarise, it is apparent from the comparisons that the results and the aggregate values for Vara and Tjörn are reasonable.

An interesting difference between the results of this study and other international results is that both Schulze and Ursprung (2000) and Hansen (1997), in the studies of the "Zurich Opera House" and "The Royal Theatre" in Copenhagen, found that specific factors such as education and annual income influenced the amounts of money people would be willing to contribute to the tax funding of cultural institutions. The results from Vara Concert Hall and the Nordic Watercolour Museum do not show any correlation between these variables and non-use value.

There were weak correlations between the variables of annual income, gender, education and use value, i.e. although these values appear to influence how valuable a performance or

exhibition is experienced as being, willingness to support the cultural institutions, i.e. the non-use value, is not affected.

The results can therefore be interpreted as showing that both Vara Concert Hall and the Nordic Watercolour Museum succeed in appealing to a broad public, and it is apparent from the results of the study that individuals from different socio-economic strata value these cultural institutions in society. It is also evident that there is a great willingness among the population of Västra Götaland to financially support culture. Of the sub-values analysed, *bequest value*, i.e. concern that future generations should be allowed to grow up in a society with culture, is prominent.

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Article 2

The Value of Cultural Experiences: Estimations of Use values

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Abstract

Comparisons of revealed preference methods and stated preference methods suggest that the latter valuation method yields somewhat, but not grossly, smaller estimates (Carson, Flores, Martin, & Wright, 1996). In Sweden, few applications of the travel cost method (TCM) and contingent valuation method (CVM) have been found in a cultural context, and no studies have been found that apply these methods to assess the value of cultural institutions. The first objective of this study is to apply both of the non-market valuation techniques in a Swedish context. The second objective is to compare the results at two cultural institutions.

The results showed that, at one cultural institution, the value estimated by the TCM was similar to the value of the core cultural experience as measured by the CVM. For the other institution the value estimated by the TCM was similar to the value of the total experience measured by the CVM.

The results therefore only support convergent validity when the cultural experience in the institution is the single or dominant experience. If, however, the cultural experience is only one component in a bundle of experiences, then the TCM may be inappropriate for assessing the value of the core cultural experience.

Keywords: cultural institution, contingent valuation method, willingness to pay, travel cost method, non-market valuation, public good

Introduction

Cultural institutions, such as museums and concert halls, create experiences but the market in which the experiences are traded may not work efficiently (Throsby, 2003). Entrance fees are therefore seldom an appropriate measure of value (Peacock, 2009). Non-market valuation techniques, separable into revealed and stated preference techniques, are considered to assess the value of these experiences better (Choi, 2009; Navrud & Ready, 2002; Noonan, 2003; Throsby, 2003).

Stated preference techniques are often criticised for being unreliable, due to their hypothetical scenarios that, it is argued, contribute to biases leading to errors in the estimates. However, it may be claimed that, if applied carefully, stated preference techniques produce valid and reliable results (Arrow et al., 1993). Numerous studies have contributed to methodological refinement and increased the legitimacy (Noonan, 2003). While stated preference techniques measure value through stated behaviour, revealed preference techniques allow researchers to assess the value through actual behaviour, such as trips to cultural institutions.

In a context where public resources are limited, assessments of benefits are useful for understanding the value originating from cultural institutions. The revealed preference method, however, is limited to the assessment of use values. Stated preference, on the other hand, allows use and non-use values to be calculated. In the case where the methods produce the same or similar results, the use of stated preference methods would render the application of revealed preference techniques needless, when assessing use values. However, the research results are ambiguous as to the extent stated and revealed preference techniques really demonstrate convergent validity. Carson, Flores, Martin and Wright (1996) found that contingent valuation method may generate smaller estimates, though not grossly smaller estimates in environmental settings. Clarke (2002), on the other hand, concluded in a health care setting that the stated preference method yielded considerably larger estimates than a revealed preference technique. The aim of this study is to investigate the appropriateness and convergent validity of these two techniques in a cultural setting. The research question is: *Do contingent valuation and travel cost method produce the same or at least similar measures of use values?* The former represents a stated and the latter a revealed preference method. The purpose of this study is to measure and compare the estimated use values at two cultural institutions, and discuss the differences in the value estimates.

Study sites

Two cultural institutions were studied. The first, located in the centre of the province of Västra Götaland, in the west of Sweden, is 'Vara Konserthus', a concert hall in a rural area. On 5 September 2003, the concert hall was inaugurated as a meeting place for culture, school pupils and conferences. The operational costs are covered partly by the municipality and partly by the regional government. On average, there are 35,000 visitors and 100 – 150 performances annually. The average entrance fee to the concert hall is equivalent to 15 euros.

The Nordic Watercolour Museum, which is the second cultural institution, is located on the west coast of Sweden and it is surrounded by unspoiled nature. Watercolour exhibitions from Nordic and international artists, as well as courses for adults and children, provide plenty of opportunities for experiencing arts.[4] Permanent and temporary exhibitions are combined at the museum. Visitors have the opportunity to use technical equipment, such as DVDs and computers, to learn more about the art of painting, but they also have access to workshops, conference premises, a small theatre etc. A museum shop and restaurant are located within the main building. Between 150,000 and 230,000 people, visit the museum annually. The location of the museum, on an island in the archipelago, also offers visitors the opportunity to experience nearby fishing villages and the coastline. The entrance fee, at the time of the study, for a one-time visit to the museum was 6.3 euros. This was also the cost for a season ticket. The *average* entrance fee per visit to the museum was 2.8 euros.

Economic methods to measure value

Contingent valuation, method as part of stated preference methods, has been a preferred method within environmental and, more recently, cultural settings, since its application to the oil spill caused by the Exxon Valdez (Arrow et al., 1993; Carson et al., 1992; Noonan, 2003). Revealed preference methods, particularly the travel cost method, have also received increasing attention (Alberini & Longo, 2006; Bedate, Herrero, & Sanz, 2004; Herrero, Sanz, Devesa, Bedate, & del Barrio, 2006; Poor & Smith, 2004; Sanz, Herrero, & Bedate, 2003). Both the contingent valuation method and the travel cost method will be introduced briefly.

[4] Homepage for the Nordic Watercolour Museum – September 2009. (http://akvarellmuseet.org/sewden/images/2009/Kalender20095.pdf)

Contingent valuation method

The contingent valuation method assesses individuals' willingness-to-pay for a specific scenario (Mitchell & Carson, 1989). The underlying assumption is that individuals have preferences concerning cultural institutions that can be elicited by creating a hypothetical market (Mmopelwa, Kgathi, & Molefhe, 2007). By eliciting the preferences, conclusions can be drawn about the utility perceived by individuals.

Measuring the willingness-to-pay requires value statements from respondents, usually elicited through face-to-face interviews. Self-completed questionnaires, mail and telephone surveys, however, are also common (Garrod & Willis, 2001). The principle behind a willingness-to-pay survey is to use open-ended questions, dichotomous choice questions, bidding games or choice modelling. Open-ended questions, give respondents an opportunity to state their maximum willingness-to-pay amount freely. Dichotomous choice, offers respondents one willingness-to-pay amount, which the respondent then may accept, or reject. Bidding games are constructed so they offer ever-increasing or decreasing willingness-to-pay amounts, until an offered amount is accepted (Mitchell & Carson, 1989), in order to assess the maximum willingness-to-pay.

Since its first application by Davis (1963), to the value of outdoor recreation, contingent valuation method has received increasing attention in cultural settings (Noonan, 2003). Throsby and Withers (1983) were early pioneers in applying contingent valuation. Since then, willingness-to-pay assessments have been carried out in settings such as historic sites (Rolfe & Windle, 2003), theatres (Bille Hansen, 1997), monuments and landmarks (Kling, Revier, & Sable, 2004; Powe & Willis, 1996), broadcasting (Schwer & Daneshvary, 1995), world heritage sites (Del Saz Salazar & Montagud Marques, 2005; Kim, Wong, & Cho, 2007; Maddison & Mourato, 2001; Tuan & Navrud, 2008), museums (Bedate, Herrero, & Sanz, 2009) and festivals (Andersson, Armbrecht, & Lundberg, 2012; Snowball, 2005).

Despite its popularity, the contingent valuation method is disputed, since it is based on hypothetical and not actual behaviour. The hypothetical character of the method may lead to biases affecting its reliability and validity (Arrow et al., 1993; Bedate et al., 2009). Venkatachalam (2004) lists the following biases: embedding effects, sequencing effects, information effects, elicitation effects, hypothetical bias effects and strategic effects . The endorsement and guidelines proposed by the National Oceanic and Atmospheric Administration have contributed to methodological refinement, supporting the method (Mmopelwa et al., 2007).

Choice modelling, a derivative of contingent valuation method, also seeks to estimate the utility of individuals (Mourato & Mazzanti, 2002). Whereas contingent valuation method is used to estimate the total willingness-to-pay in a specific context, choice modelling allows for the assessment of the value of specific characteristics within one project. By offering different scenarios, choice modelling allows for conclusions about trade-offs and marginal willingness-to-pay for each characteristic (Tuan & Navrud, 2008). Choice modelling has advantages in reducing strategic behaviour, but entails the risk of the respondents' exhaustion and irritation due to complicated questions with marginal changes (Adamowicz, Boxall, Williams, & Louviere, 1998).

Travel cost method

Because cultural institutions often have low or no entrance fees, the travel cost method assumes that the travel costs represent the *price* visitors have to pay to obtain access to a site. Therefore, the travel cost method uses the cost of travelling as a proxy for inferring the benefits provided by a resource (Driml, 2002). The travel cost method is based on the assumption that the price paid to access a cultural institution increases with increasing distance (Hotelling, 1947). A key concept in the travel cost method is the visitation rate, reflecting the number of visits in relation to the population. The increase in distance and travel costs results in the visitation rate falling the farther away people live. The method constitutes an indirect, so-called Clawson-Knetsch method (Cesario, 1976), and measures individuals' consumer surplus (Garrod & Willis, 2001; Hanley & Barbier, 2009; Tietenberg & Lewis, 2008).

Similar to stated preference methods, revealed preference methods have been developed in environmental economics (Poor & Smith, 2004). However several researchers regard the travel cost method to be suitable for the assessment of cultural sites as well. Lately, the technique has gained popularity, particularly in a cultural heritage context (Alberini & Longo, 2006; Bedate et al., 2004; Mayor, Scott, & Tol, 2007; Ruijgrok, 2006).

This study uses the *zonal* travel cost method (Clawson & Knetsch, 1966), a technique which has been shown in the past to produce results similar to other revealed preference techniques (Hellerstein, 1995). The zonal travel cost method categorises visitors depending on their zone of origin and the costs they incur for travel from each zone (Tietenberg & Lewis, 2008). The further away from cultural institutions individuals live, the less likely

they are to visit a cultural institution. On average, the visitation rate is therefore likely to fall for zones farther away (Bergstrom & Cordell, 1991).

Study design

To collect data, both methods usually use surveys. The sample, data collection method and survey questions are presented below. A detailed description of the contingent valuation method and travel cost method as well as their specification is presented in the following sections together with the estimates.

Sampling procedure

The study consists of two samples, one for each cultural institution. Respondents answered both the contingent valuation and travel cost questions. All respondents were 16 years or older and selected randomly. Both a researcher and trained personnel took part in the data collection. Respondents, who were interested in participating, were asked to give their e-mail address. If respondents did not use the Internet, their mail address or telephone number and a suitable time for contact were requested. The locations, where respondents were approached, were limited to areas where it was possible for all visitors to be chosen as respondents. In particular, ticket sale/exchange points and entrances were regarded as appropriate.

Two to three days after the recruitment process, an e-mail including a link to the web-based questionnaire was sent to the respondent. The web questionnaire was constructed in Webropol. On receiving the e-mail, and the link to the web questionnaire, respondents first had to read a set of general instructions concerning the aim and purpose of the study. Contact details to a responsible researcher were included. Thereafter, the respondent went on to answer the questions. After completing the questionnaire, the data was automatically stored in a database.

Willingness-to-pay questions

Willingness-to-pay was elicited using open-ended questions. A few considerations were made. An open-ended format was preferred, due to its level of efficiency. Other formats, such as dichotomous choice and bidding games may be good alternatives, but they require

more resources (Garrod & Willis, 2001; Mitchell & Carson, 1989), especially during the data collection process. Furthermore, the open-ended format is preferred as it is able to provide more information about the individuals' preferences, compared to a dichotomous layout (Mitchell & Carson, 1989). An open-ended format may be risky, if respondents have no idea about the study object and its current costs.

As recommended by the NOAA panel (Arrow et al., 1993), actions were taken to minimize bias. The respondents were first asked if the value of the experience was above or below the entrance fee. Respondents were then given an introduction to the study object and an explanation about the willingness-to-pay question and the open-ended format. Furthermore, they were made aware of their restricted budgets. Thereafter, the payment vehicle, the entrance fee, was introduced. The last part of the question elicited the maximum willingness-to-pay for the experience. The willingness-to-pay question, for the cultural experience (direct use value), was formulated as follows:

Disregarding what you actually paid for your ticket for the performance/exhibition, what is the maximum amount you would be willing to pay for the experience at the performance/exhibition?

In addition to direct use value, the study aims to estimate the value of other experiences before and after the core cultural experience. Therefore, the following question was asked:

Disregarding what you actually paid for the trip to the cultural institution (museum/concert hall), what is the maximum amount you would be willing to pay for the whole experience? (Think of the whole experience, from leaving your place of abode until returning home)

Respondents could answer the questions either by revealing a certain amount of money, which they were willing to pay, or by answering, "I don't know".

Travel costs questions

The questionnaire also included questions for calculating the travel costs. First, the respondents had to answer whether they travelled by car or used another type of transport. If no car was used, type, duration and costs of transport were requested. Since public transport to both institutions is limited, the visitors travel mainly by car. Thereafter, the home addresses for the respondents were requested, to calculate return travel distances and time (using an online road trip calculator[5]). Furthermore, the number of passengers in each car was requested. The questions relating to the travel costs were:

[5] www.eniro.se

- *Where do you live (please enter your postcode)?*
- *How often have you visited the Nordic Watercolour Museum / Vara Concert Hall during the last 12 months?*
- *How many persons travelled in the same vehicle as you and belonged to your party?*

Furthermore, a number of socioeconomic questions such as age, income, gender, education, etc., were posed in order to understand any factors that may influence the willingness-to-pay and the travel behaviour[6].

Table 1: Respondents' demographic and socioeconomic characteristics

	Museum	**Concert hall**
Gender		
Male	43.0%	46.6%
Female	57.0%	53.4%
Civil status		
single without children	10 %	14%
single with child/children under the age of 18	3 %	6%[7]
single with child/children over the age of 18	8 %	
partner/married/registered partnership without children	15 %	15%
partner/married/registered partnership with children under the age of 18	18 %	
partner/married/registered partnership with children over the age of 18	42 %	62%
Widow/widower	3 %	0%
other	1 %	3%
Highest completed level of education		
elementary school	3.5%	10.8%
junior secondary school	8.1%	21.5%
upper secondary/high school	16.2%	23.2%
college/university	72.2%	44.5%
Income in €[8]		
0-10,053	6 %	6%
between 10,053 and 21,053	13 %	20%
between 21,054 and 31,579	29 %	36%
between 31,580 and 42,105	30 %	22%
between 42,106 and 52,632	12 %	9%
between 52,633 and 63,158	4 %	4%
more than 63,159	6 %	3%
Age		
Mean for the sample (16 or older)	**55**	**59**

[6] For all survey questions, please contact the author

[7] For the Concert house no distinction was made concerning the age of children (or whether the respondent was widow/er or not)

[8] All values have been recalculated from Swedish Kronor to Euro (€) using 9,5 kr/€ as exchange rate

The sample

The study consists of two samples and 997 responses in total. 414 responded to the survey at the museum and 583 responded to the survey at the concert hall. Descriptive statistics are presented in table 1. The response rate for the concert hall study is 39.5 % and 53.1 % for the museum. The majority of respondents were women, both in Vara (53%) and in Tjörn (57%). Most visitors to the museum and the concert hall had a partner/registered partnership or were married. The respondents' mean age was 55 (museum) and 59 (concert hall) respectively. The relatively high mean age is explained partly by the exclusion of visitors under the age of 16. The mean age in west Sweden for residents older than 16 is 56 years[9].

Estimates based on the contingent valuation method

Average willingness-to-pay among locals and non-locals is estimated for both institutions. 'Locals' refers to respondents who live within the municipality where the cultural institution is situated, whereas 'non-locals' refers to respondents who live outside the municipality where the cultural institution is situated. Direct use value, as measured by the contingent valuation method (CVM-direct), refers to the value respondents ascribe the core cultural experience. CVM-direct, for the museum, represents the value of experiences within the museum, particularly the art exhibition. For the concert hall, CVM-direct refers to the value of a performance.

The CVM-total includes CVM-direct and the value of other experiences before and after, such as dining, socialising, going for a walk, having a drink, etc. CVM-total is defined as direct plus indirect use value.

Table 2: Mean willingness-to-pay at the concert hall and museum

		CVM-direct	***CVM-total***
Concert hall	**Locals**	43.1 €	58.8 €
	Non-locals	38.0 €	56.4 €
	Sample mean	**38.8 €**	**56.7 €**
Museum	**Locals**	9.2 €	32.3 €
	Non-locals	10.1 €	42.3 €
	Sample mean	**9.9 €**	**39.7 €**

[9] www.scb.se

Whereas the concert hall is located in a rural area with very few extra activities and experiences to offer, the museum is located in an environment offering plenty of additional experiences. In particular, its proximity to the sea and archipelago, old fishing villages and other cultural sites offer opportunities for other experiences. Other significant providers of experience are nearby cafés and restaurants.

The mean values estimated using the contingent valuation method are aggregated for locals and non-locals[10] (concert hall: 6,700 locals and 27,800 non-locals; museum: 38,500 locals and 111,500 non-locals).

Table 3: Aggregated willingness-to-pay using contingent valuation method

		CVM-direct	*CVM-total*
Concert Hall	**Locals**	288,770 €	393,960 €
	Non-locals	1,056,400 €	1,567,920 €
	Total	**1,334,170 €**	**1,961,150 €**
Museum	**Locals**	354,200 €	1,243,550 €
	Non-locals	1,126,150 €	4,716,450 €
	Total	**1,480,350 €**	**5,960,000 €**

** Aggregated values are based on mean values and number of visits

For both the museum and the concert hall, non-locals benefit significantly more in terms of use values. With regard to CVM-direct, the value created by the concert hall is similar to that created by the museum. However, CVM-total for the museum significantly exceeds CVM-total for the concert hall. CVM-total is 46% greater than CVM-direct for the concert hall, whereas CVM-total is four times greater than CVM-direct for the museum.

Estimates based on the travel cost method

The travel cost method is based on travel distances and most respondents provided the postcode for their place of abode, allowing travel distances to be calculated. Travel distances are plotted in figure 1 to show their distribution.

Figure 1 shows two lines. The solid line represents visitors to the museum. The dotted line represents the travel distances for visitors to the concert hall. Comparing the graphs suggests that visitors are willing to travel farther to visit the museum than the concert hall. Descriptive statistics show that the mean travel distance to the concert hall is 42 km and 89 km to the museum.

[10] The total number of visitors was estimated to be 34.500 at the concert hall and 150.000 at the museum. The total number of visitors is distributed among locals and non-locals according to how they answered in the survey.

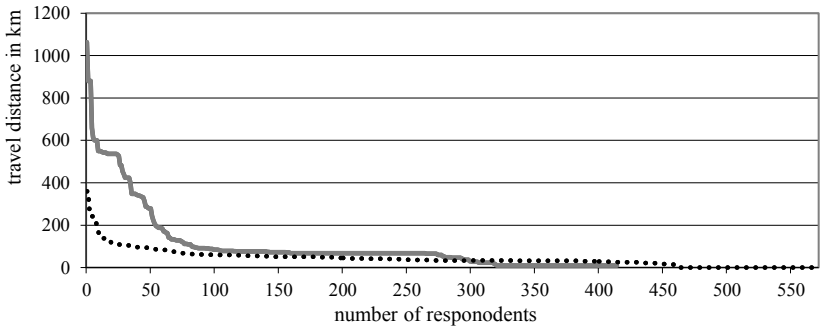

Figure 1: Travel distances to the museum and the concert hall in the sample (upper solid line = museum (N = 414), lower dotted line = concert hall (N = 572))

For calculating the travel costs, the area surrounding the museum and concert hall was divided tentatively into concentric circles (zones), based on postcode areas. For the concert hall, each circle represents approximately an increase in mean travel distance to the concert hall (one way) of 20 km, starting at a distance of 10 km (circle 1: 10 km, circle 2: 30 km, circle 3: 50 and so on to circle 8: more than 13 km). For the museum, larger metropolitan areas affected the size of the circles. To attain acceptable distributions of zonal populations, circle distances (one way) to the museum were drawn roughly as follows: circle 1: 10 km; circle 2: 30 km; circle 3: 60 km; circle 4: 90 km; circle 5: 110 km; circle 6: 130 km; circle 7 more than 140 km. A provisional outline of the geographical location of the circles is presented in figure 2.

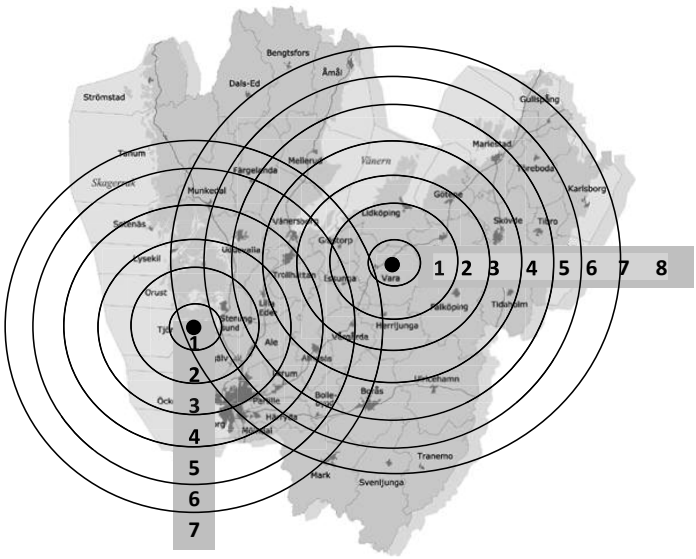

Figure 2: An approximate outline of the zones used for the analysis

Trip generating function

Having defined the zones, the next step is to describe the total per-capita cost (C_i) of a return trip for the average visitor from each zone *i* to the cultural institution, as a combination of km-cost, time-cost and average entrance fee at the time of the study.

$$C_i = k_i + m \cdot t_i + f \quad \text{with} \tag{1a}$$

$$k_i = \frac{(2 \cdot \delta_i \cdot b)}{g_i} \quad \text{and} \tag{1b}$$

$$m = w \cdot \frac{1}{3} \tag{1c}$$

C_i	total per-capita cost of a return trip for the average visitor from zone *i*
k_i	per-capita vehicle cost for the average visitor from zone *i*
m	per-capita time cost per minute for all visitors
t_i	travel time in minutes for a return trip from zone *i*
f	average entrance fee for all visitors
δ_i	the one way distance, in km from zone *i* to the cultural institution
b	average vehicle cost per km
g_i	the average number of passengers travelling in the same vehicle from the zone *i*
w	average per minute income, based on the average annual income in the sample

C_i is the total per-capita cost of a return trip for the average visitor from zone *i*, k_i are per-capita km vehicle costs based on a vehicle operating expense (*b*) of 0.195 €/km (which agrees with data from the Swedish Tax Agency[11]), δ_i is the one way distance, in km, for the average visitor from zone *i*, and g_i is the average number of passengers travelling in the same vehicle from the zone. The per-capita time cost for all visitors is *m* and it is based on 1/3 of the average per minute income, based on the average annual income (app 33,800 €) in the sample (*w*), to capture the opportunity cost of time. This approach is consistent with previous studies (McConnell & Strand, 1981; Navrud & Mungatana, 1994; Poor & Smith, 2004; Ward, Johnson, McConnell, & Strand, 1983). The per capita time spent (in minutes) for a return trip is represented by t_i. Travel distance and time were calculated using a route planner on the Internet[12]. The average entrance fee (*f*) was 2.8 € per visitor for the museum and 15 € for the concert hall.

[11] www.Skatteverket.se
[12] www.eniro.se

The travel costs (C_i) are then included in an equation labelled "the trip generating function". In the current study, the trip generating function takes the form outlined in equation (2) and predicts the number of visits (V_i) per zone *i* in relation to the population (P_i).

$$V_i/P_i = f(C_i) \qquad (2)$$

V_i = Total number of visits from zone *i*, P_i is the population in zone *i* and C_i is the travel cost from zone *i* to the site. As suggested in earlier applications (cf. Driml, 2002; Poor & Smith, 2004; Smith, 1975), three functional forms for the trip generating function are considered[13]: linear, semi-log and log-log

$$V_i/P_i = \beta_\circ + \beta_1 \cdot C_i + \varepsilon_i \qquad (linear) \qquad (3a)$$

$$\ln(V_i/P_i) = \beta_\circ + \beta_1 \cdot C_i + \varepsilon_i \qquad (semi-\log) \qquad (3b)$$

$$\ln(V_i/P_i) = \beta_\circ + \beta_1 \cdot \ln(C_i) + \varepsilon_i \qquad (\log-\log) \qquad (3c)$$

V_i/P_i is the visitation rate (x 1000) and reflects the number of visits per thousand inhabitants in each zone. C_i is the total return trip cost per capita as outlined in (1a). Driml (2002) suggests "best fit" as measured by (adjusted) R^2 to decide on the functional form, which is supported by Tabachnick and Fidell (2006). A direct comparison of R^2 between semi-log and log-log is legitimate (Smith, 1975). For the concert hall, the semi-log and, for the museum, the log-log form yielded the best fit[14]. Another premise that is satisfied, is that β_1 is negative (Driml, 2002). The regression summaries and adjusted R^2 is given below, for the semi-log and log-log function:

concert hall (semi-log) adjusted R^2 0.939
(log-log) adjusted R^2 0.817

museum (semi-log) adjusted R^2 0.804
(log-log) adjusted R^2 0.818

Table 4: Regression summaries (Ordinary Least Squares) for the trip generating function with best fit based on adj. R^2

	functional form	N	F	Sign	β_0	β_1	Adjusted R square
museum	**log-log**	7	28.016	0.003	17,991	-2.543	0.818
concert hall	**semi-log**	8	109.45	0.001	8.844	-0,18	0.939

[13] Even though no theoretical justification for any particular functional form exists (Smith, 1975), previous research has shown that the relationship between costs and number of trips may be expected to be non-linear (McConnell & Strand, 1981; Ribaudo & Epp, 1984).

[14] The log-log for the museum and semi-log for the concert hall were also compared to the linear form. A direct comparison of the adjusted R^2 from log functions was possible, by predicting values and converting them to exponent form. Thereafter, they were regressed against the actual visits (c.f. Gujarti and Porter (2009)). The resulting adj. R^2 is directly comparable with the R^2 from a linear function. The semi-log function for the concert hall (adj. R^2 0.939) has a better fit than the linear form, with an *adj. R^2 of 0.648.* The log-log function for the museum is superior *(adj.* R^2 *0.818)* to the linear form *(adj.* R^2 *0.365)*

Generating a demand function

Having obtained a trip generating function with a satisfactory fit, the next step is to generate a demand function using hypothetical increasing entrance fees. Several steps may be necessary to calculate the number of visits from different zones at varying entrance fees. The travel cost is increased by the amount of a hypothetical additional entry fee (1€, 2€, 3€ and so on, up to 40€), and the number of visits V_{xi} from each zone *i* under consideration of hypothetical additional entry fee *x* is then predicted using equation 4. A basic assumption is that behaviour in relation to the cost of entry (F_x) is the same as the behaviour in relation to the cost of travel (C_i) (Driml, 2002). As suggested by Driml (2002), the calculation of V_{xi} includes converting back from logarithms to the original scale (raising to a power), and recalculating from per capita to aggregate values, multiplying by P_i. The log-log function for the museum, for example, can be rewritten as outlined in equation 4

$$V_{xi} = \beta_0' (C_i + F_x)^{\beta 1} P_i \qquad (4)$$

where β_0' is the antilog of β_0 and F_x is the additional hypothetical entry fee. A table of predicted visits from consideration of the increasing hypothetical additional entry fee levels is constructed. The approximate distribution of visits at each fee level is plotted in figure 3. 41 different values for F_x were used for each of the zones to generate observations for the regression. Thereby, the total demanded visits, V_x, can be calculated for each fee level, F_x.

$$V_x = \sum_{i=1}^{n} V_{xi} \qquad (5)$$

where n = 7 for the museum and n = 8 for the concert hall, and x = 0 … 40

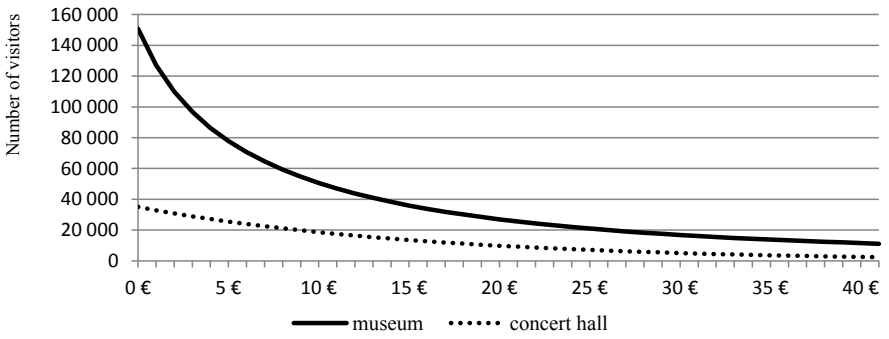

Figure 3: Estimated number of visitors at the museum and the concert hall for increasing hypothetical additional entrance fee levels

To describe the relationship between the dependent variable, number of visits (V_x), and the independent variable, additional entry fee level (F_x), a new demand function is estimated, in order to calculate total consumer surplus. Similar to the trip generating function, the best functional form for the demand function is looked for. A linear, semi-log and log-log form are considered.

Linear:	$V_x = \beta_0 + \beta_1 F_x + \varepsilon$	(6a)
Semi-log:	$\ln(V_x) = \beta_0 + \beta_1 F_x + \varepsilon$	(6b)
Log-log:	$\ln(V_x) = \beta_0 + \beta_1 \ln(F_x) + \varepsilon.$	(6c)

Based on adj. R^2, the semi-log model shows the best fit for the museum (**0.969** vs. 0.935 for the log-log) and the concert hall (**0.972** vs. 0.924 for the log-log model). The regression results are presented in table 5 below.

Table 5: Regression summaries (Ordinary Least Squares) for the demand functions with best fit based on adj. R^2

	functional form	N	F	Sign	β_0	β_1	Adjusted R square
museum	**semi-log**	41	1247.9	0	11.565	-0.006	0.969
concert hall	**semi-log**	41	1365.1	0	9.547	-0.0003	0.972

The decreasing number of visitors at hypothetically increasing additional entrance fees creates a downward sloping demand curve for each cultural institution. In order to calculate the total consumer surplus, a Y-intercept is imposed, since the semi-log function approaches this axis asymptotically (cf. Driml, 2002). A cut off at 40 € is chosen.

In both cases, the area under the graph (cf. figure 3) constitutes the consumer surplus and was calculated to be 552,000 € for the concert hall and 1,681,000 € for the museum respectively. Adding the costs for entrance and travel to the consumer surplus gives an indication of the value created at each cultural institution. The calculation is outlined below.

Willingness-to-pay = Consumer Surplus + travel costs and entrance fee:

Concert hall: 552,000 € + 1,006,000 € = 1,558,000 €

Museum 1,681,000 € + 3,372,000 € = 5,053,000 €

Using the travel cost method, the total value created by the concert hall is equivalent to 1,558,000 euros, whereas the Nordic Watercolour Museum creates a value of 5,053,000 euros.

Comparing results from contingent valuation and travel cost method

The aggregated values for the museum and concert hall, estimated using the contingent valuation method and the travel cost method are presented. CVM-direct, in the table 6, reflects the value (willingness-to-pay) for the cultural experience using the contingent valuation method. For the concert hall, the cultural experience is the performance for which the entrance fee was charged. At the museum, the cultural experience is the exhibition for which the entrance fee is paid. CVM-total reflects a bundle of experiences including CVM-direct and complementary experiences at each cultural institution before and after. CVM-total is also measured using the contingent valuation method. TCM-total reflects the value measured using the travel cost method.

Table 6: Comparison of the contingent valuation and the travel cost method estimates

	CVM-direct	***CVM-total***	***TCM-total***
Concert hall	1,330,000 €	1,960,000 €	1,558,000 €
Museum	1,480,000 €	5,960,000 €	5,053,000 €

First, CVM-direct estimates are presented. The estimates for the concert hall are similar to those for the museum (the museum creates 10% more value). The CVM-total for the museum is considerably greater than estimates for the concert hall (approximately 200% greater). Furthermore, the CVM-total for the concert hall is 46% greater than CVM-direct. At the museum, CVM-total is approximately 300% greater than CVM-direct. The TCM-total for the concert hall is greater than CVM-direct, but less than CVM-total. The same is true for the museum. The difference between TCM-total and CVM-direct is approximately 250%. For the concert hall, the equivalent is 16%.

Conclusion

Three different use values have been estimated. First of all, contingent valuation method was used to assess the core cultural experience at each cultural institution. The use value per year for the concert hall was 1,330,000 euros and 1,480,000 euros for the museum. The estimated total values are similar, though the mean use value per individual was lower at the museum. A large number of visitors compensates for the low mean values.

The second measure of value was CVM-total, which consisted of the core cultural experience (CVM-direct) plus all other experiences before and after. Whereas CVM-direct is similar for the museum and the concert hall, CVM-total is considerably larger for the museum. The CVM-total for the museum is also considerably larger than CVM-direct. This is not the case for the concert hall. Two provisional conclusions may be drawn:

1. The core cultural experience at the museum is only one part of a bundle of experiences, including the beautiful environment on the island in the archipelago, opportunities for taking walks, visits to a port nearby and in particular, restaurants and cafes. CVM-total, therefore, is an inappropriate measure for direct use value (core cultural experience) at the museum.

2. On the other hand, the core cultural experience at the concert hall is the most important one. Few other experiences increased the value of the experience. CVM-total therefore is similar to CVM-direct.

A third measure of value was attained using the travel cost method. For the concert hall, the estimates are 1,558,000 euros and greater (16%) than CVM-direct. CVM-total is 26% greater than estimates using the travel cost method.

For the museum, the travel cost method yields considerably larger estimates than contingent valuation method does for CVM-direct, but similar estimates for CVM-total. Even though only individuals whose primary reason for travel was the cultural experience were included in the survey, the results indicate that most visitors might have had other valuable experiences. The zonal travel cost method is limited to measuring the total experience. A third provisional conclusion is therefore that:

3. Applying the travel cost method is inappropriate when the total experience consists of multiple experiences, since not only the core cultural experience but also a bundle of experiences may motivate the trip. These conclusions are consistent with those of Navrud & Ready (2002) and Throsby (2001) who observe difficulties in disentangling the travel cost for just one resource, since trips, in most cases, are multipurpose.

One issue to be considered is the assumptions made. In the analysis above, travel costs were defined as vehicle costs, entrance fee costs and the opportunity cost of time. The opportunity cost of time, is certainly the most debatable. For some, travelling may be a valuable experience whereas others might experience travelling as a cost (Randall, 1994).

In this study, it was decided to include the opportunity cost of travel time, based on the average hourly wage of the sample. The time cost, in turn, was multiplied by 1/3, which is contestable though the same as applied in earlier studies (McConnell & Strand, 1981; Navrud & Mungatana, 1994; Poor & Smith, 2004; Ward et al., 1983). Nonetheless, it is arbitrary since we cannot say whether travel per se is perceived as a cost or a benefit. Moreover, individuals' level of income may influence the perceived costs. Therefore, both the wage and the percentage may be disputed. The former could be solved by adjusting the wage for the mean zonal income. Further investigation into individuals' perceptions of the costs of travel may shed light on this area of concern. Another assumption influencing the results is that the individuals' behaviour in relation to the costs of entry is assumed to be identical to the behaviour in relation to the costs of travel. This may not necessarily be the case.

The results can be interpreted as showing that the concert hall and the museum generate large use values on a local and regional basis. Both of the cultural institutions create more use value than visitors pay for in terms of entrance fees and travel costs. From a local perspective, aggregated consumer surplus for visitors can be regarded as a goodwill gift from the municipalities to non-locals in the region. Goodwill, in turn, may materialize in increased tourism spending and a positive image for the destination.

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Article 3

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Estimating Use and Non-use Values of a Music Festival

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ABSTRACT *Impacts of a music festival may appear in many forms and research in the area of impact assessments is at present developing wider perspectives than being limited to economic impact assessments. Concepts like social, cultural and environmental impacts are now appropriate and traditional cost–benefit analysis is regaining momentum. The purpose of this study was first, to discuss how the value of a festival can be assessed and understood within a cost–benefit framework. Second, it was to evaluate a Scandinavian music festival in terms of Use and Non-use values by the contingent valuation method. The results illustrate the implications of a wider perspective regarding the impacts of a festival. Use value, representing the core experience, is the largest value (€7.4 million) but Non-use value is also important (€3 million). The latter includes the perceived value of externalities such as socio-cultural and environmental impacts which are highly relevant from a sustainability perspective. One conclusion is that Use and Non-use values within a cost–benefit framework can help managers and researchers understand value creation of festivals better.*

KEY WORDS: cost–benefit analysis, externalities, festivals, events, Sweden

Introduction

The scope of event impact analysis has been expanded to include more than just a description of direct expenditure related to an event. Indirect economic impacts and multiplier effects were introduced early through input–output analysis in tourism studies (Archer, 1973; Wanhill, 1983) and the economic methodology has been used in event studies where it has been refined and developed along various paths such as computed general equilibrium (Dwyer, Forsyth, & Spurr, 2005), cost–benefit analysis (CBA) (Burgan & Mules, 2000; Mules & Dwyer, 2005) and *ex post* econometric analysis (Baade & Matheson, 2004).

The need for a description of event impacts on society, apart from revenues, particularly for the tourism industry, has stimulated an increased use of CBAs. This type of analysis has the objective of describing, and measuring in monetary units, all major impacts for all impacted members of a society. Although it is difficult to produce a perfect CBA of an

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event, this type of event impact analysis is nevertheless able to give a more holistic assessment than an impact analysis based only on financial data (Rosentraub & Brennan, 2011). A CBA includes the evaluation of all perceptions that spectators experience during an event. Measured in terms of "willingness-to-pay" (WTP), the value of created experiences typically represents the output in a CBA of an event.

Apart from people participating in the event, there are local residents who do not take part in the event, but who may have both negative and positive experiences related to the event. The value of these experiences, positive as well as negative, should also be included in a CBA. These experiences are usually measured through descriptions of the attitudes of local residents (Deery & Jago, 2010; Delamere, 2001; Delamere, Wankel, & Hinch, 2001; Fredline & Faulkner, 2001). The methodology for measuring, in monetary terms, the impact that an event has on local residents can, however, benefit from contrasting value created for event participants against value (positive and negative) created for non-participating local residents (Crompton, 2004; Herrero, Sanz, & Devesa, 2011; Pasanen, Taskinen, & Mikkonen, 2009).

Environmental economists have been assessing the value of natural resources not only in terms of *Use value* that accrue to people who actively use, for example, a natural park for an invigorating walk. There is also a *Non-use value* of the park since most citizens put a positive value to having parks in the city even if most of these citizens never use this specific park and have no intention of ever using it. One reason why citizens attach *Non-use values* to natural resources is that it is a beautiful part of a city or a country that people wish to preserve, another reason is that citizens still have a possibility to one day visit the resource and enjoy *Use value* as long as the natural resource is preserved. A third reason is a long-term concern about the environment and the natural beauty that we preserve and will be able to hand over to future generations. These three types of *Non-use values* are known as *existence value, option value* and *bequest value,* respectively (Frey, 2003). This approach, developed in environmental economics, has also been successfully applied to culture, particularly to cultural heritage and to cultural institutions (Armbrecht, 2009; Noonan, 2003) where the concepts *Use* and *Non-use values* fit the empirical field well.

The objective of this study is to assess the total value of a music festival, from a cost–benefit perspective, by introducing the concepts of Use and Non-use values to the festival context.

Theoretical Background

Falassi (1987, p. 2) defines festivals as: "a sacred or profane time of celebration, marked by special observances", whereas Getz, Andersson, and Carlsen (2010, p. 30) describe festivals as a celebration of "community values, ideologies, identity and continuity". While most festivals are publicly organized and owned, the number of private, themed festivals increases (Andersson & Getz, 2009; Jaeger & Mykletun, 2009). The growing interest in using festivals for destination marketing, destination development and social change has lately been referred to as "festivalization" (Richards, 2007). Getz and Andersson (2009) suggest that events can be categorized according to their form as: festivals and sports, meetings and exhibitions, private functions and commercial entertainment.

CBAs in Tourism and in Festival and Event Studies

A CBA encapsulates all costs and benefits to society. The primary interest is economic efficiency, that is, the welfare contribution (Hicks, 1946). In a CBA, both tangible and intangible costs and benefits should be assigned a value. Examples of intangible benefits can be a cleaner environment or better working conditions. Intangible costs may be lost access to public areas or the degradation of working conditions due to the festival (cf. Andersson, Rustad, & Solberg, 2004; Mules & Dwyer, 2005).

The major difficulty with a CBA is to assign a monetary value to intangible costs and benefits (Getz, 2005). Not all activities have a market price and therefore it is necessary to evaluate these activities using other methods. One solution has been to use contingent valuation methods (CVMs) (Mitchell & Carson, 1989) to measure and understand those elements that are intangible but important to a CBA. Thus, citizens affected by the festival are asked to state their maximum *WTP* for or, alternatively, their *willingness-to-accept* (WTA) specific intangible benefits and costs. The aggregated WTP and WTA provide an estimate of the citizens' perceived value of the intangible benefit and cost. In a CBA, the WTP for the project as a whole should balance the opportunity cost in order to be efficient and to enhance welfare. If not, resources should be used differently (Burgan & Mules, 2000).

Mules and Dwyer (2005) argue for the use of CBA in event evaluation since a mere economic impact evaluation does not take all benefits and costs into account. Instead of relying solely on visitor expenditure, the economic impact analysis should be a part of a greater whole, that is, a CBA. One obstacle is the time-consuming and costly effort required to collect all the data needed for a CBA. This problem has also been highlighted by other researchers (Getz, 2005; Jackson, Houghton, Russell, & Triandos, 2005).

CBA has been applied in festival and event contexts. One of the first examples is found in the study of the Adelaide Grand Prix by Burns, Hatch, and Mules (1986). Several CBA-studies have followed, looking at such phenomena as televised events (Fleischer & Felsenstein, 2002), sport events (Black, 1994; Noll & Zimbalist, 1997) and festivals, events and conventions in general (Andersson et al., 2004; Armbrecht & Lundberg, 2006; Dwyer, Mellor, Mistilis, & Mules, 2000). There have been several *ex ante* studies on the 2012 London Olympics (Atkinson, Mourato, Szymanski, & Ozdemiroglu, 2008; Blake, 2005; Walton, Longo, & Dawson, 2008). In particular, Atkinson et al. (2008) and Walton et al. (2008) use a refined CBA measuring intangible costs and benefits with the help of WTP.

The difference between WTP and actual price paid for the experience is called the *consumer surplus* (Hicks, 1946). The surplus can be used as an indicator of consumers' satisfaction (Andersson, Armbrecht, & Lundberg, 2008), that is, when the consumer's perceived value of the festival experience is higher than the monetary costs of attending the festival. Barget and Gouguet (2007), in their study of a sport event, also use the CBA-framework including Use and Non-use values in order to internalize external effects and calculate net social benefit for the local community.

The intensifying discussion on sustainability issues in tourism research calls for an inclusion of intangible costs and benefits. A sustainable tourism development demands impact assessments that include other dimensions than the purely financial

such as socio-cultural impacts and environmental impacts. These impacts are often intangible and are included in the CBA-framework albeit, in most cases, only implicitly.

The Value of Festivals

The primary aim of the CVM is to measure the welfare contribution in monetary units, rather than to describe and characterize the impacts that lead to the welfare contribution. However, there are many studies that also investigate the qualitative characteristics of impacts, particularly in relation to culture festivals and cultural institutions. Getz (2005) mentions increased local entrepreneurship, interest in investment and improved attitudes of residents towards local products as potential impacts (cf. Mykletun, 2009), while Burns et al. (1986) conclude that local businessmen and workers experience increased pride and confidence in their abilities.

Festivals can be regarded as activities or products which have "intellectual, moral and artistic aspects of human life" attached to them (Throsby, 2001), which make them similar to cultural institutions in a more traditional sense. Mason (2002) distinguishes between the socio-cultural value and the economic value of cultural institutions. Socio-cultural value covers historical value, cultural/symbolic value, social value, spiritual/religious value and aesthetic value. Many of these values are relevant also in a festival setting.

McCarthy, Ondaatje, Laura, and Brooks (2004) distinguish between private and public benefits and the extrinsic and intrinsic value dimensions. Intrinsic value is caused by intellectual, emotional and spiritual experiences (McCarthy et al., 2004) and relate to the notion that something is valuable in itself. This perception differs significantly from an economic logic and also from theories arguing that value is socially constructed (Mirowski, 1990). Intrinsic experiences lead to personal satisfaction, dissatisfaction and positive or negative attitudes according to Hewison and Holden (2004). From this stance, intrinsic benefits can be interpreted as inherent in an experience adding value to the experience (McCarthy et al., 2004, p. 37).

Extrinsic benefits reflect value that is in focus for governments and policy decisions. Extrinsic value is commonly expressed in figures or statistics. An example is financial effects. Social, educational (Deasy, 2002) and health-related effects (Fiske, 1999) are other measurable benefits of culture (Holden, 2006; McCarthy et al., 2004).

A variety of impacts is illustrated in Figure 1. Extrinsic impacts affect individuals or the society and manifest themselves in often quite measurable impacts whereas intrinsic impacts rather go inside individuals or the society to become an internalized part of the personal or social value.

The horizontal axis from individual to the society is to a large extent a reflection of how impacts on the individual level are aggregated into concepts on the society level such as when health, identity, attitudes and conduct on the individual level are reflected in concepts such as public welfare, cultural capital and social capital. This axis also points at the need for a clearly defined subject of analysis meaning: from whose perspective is an analysis being made, that is, is the focus of impacts on the individual, the company, the region, the state or the entire society?

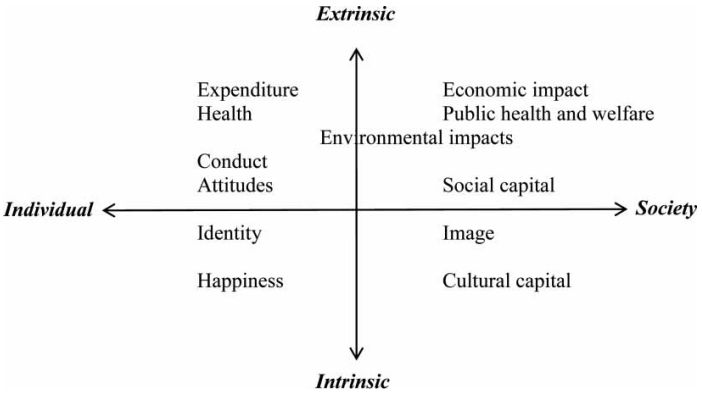

Figure 1. A two-dimensional illustration of major festival impacts (cf. Armbrecht, 2009; McCarthy et al., 2004).

Use Value and Non-use Value

From a marketing perspective, the value that festival and event experiences create can be defined as "the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1988, p. 14). Since experiences are a major "utility" of a festival, a CBA has to capture the value of those experiences. Use value takes into account the totality of benefits during the festival. Concert experiences generate an obvious Use value during a music festival, but social and other cultural experiences during the festival may be equally important for some visitors.

The concept of Use value has been analysed and developed in cultural and environmental economics. Garrod and Willis (2001) suggest differentiating between Direct Use value and Indirect Use value. Direct Use value relates to experiences that arise during the festival (e.g. within the festival area) and represents the value of the core experience. Indirect Use value refers to experiential values outside the festival area before, during and after the festival taking place.

Economic literature also suggests that festivals and events cause positive and negative externalities (Barget & Gouguet, 2007) by the mere existence of a festival. Externalities describe impacts that are not accounted for in traditional financial assessments. People who do not attend an event may still be affected by it through, for example, traffic congestion, littering, a positive image, etc. (Bateman & Langford, 1997; Hansen, 1997; Mitchell & Carson, 1985; Ruijgrok, 2006). In order to assess the total costs and benefits of a festival, externalities have to be accounted for. This is commonly done through Non-use values.

Mitchell and Carson (1989) propose a dichotomy of Non-use values in terms of vicarious consumption and stewardship. Vicarious consumption implies that individuals experience a positive value if they know that people other than themselves have access to, and can consume, for example, the festival experience. Stewardship implies that individuals wish to see public resources, that is, resources that belong to

the community, used and preserved in order to benefit family and future generations (Mitchell & Carson, 1989). Stewardship covers similar values as the concept known as *bequest values* which entails the benefit of being able to maintain a festival for future generations even if they do not attend the festival themselves (Frey, 2003).

Throsby (2001) suggests that resources like the Giza pyramids in Egypt are valuable since they are part of humanity and human identity. *Existence value* refers to the satisfactory feeling of knowing that these resources exist. In particular, "Hallmark" institutions such as the Giza pyramids are valuable for the public as they symbolize an era, contributing to the formation of identity. The attractiveness and pride of living in an area with cultural assets is therefore valuable (Throsby, 2001, pp. 78–79). This perception follows the logic of Boyle and Bishop (1985) who argue that existence value reflects the value that a cultural institution has within a complex society.

Option value is a third category of Non-use values revealed when decisions with irreversible effects are considered (Fisher & Hanemann, 1990). Imagine a discussion about whether to continue hosting a festival or not. Option value in this occasion reflects the value that individuals perceive for knowing they will have, also in future, the possibility of experiencing a festival even if they have not used the option yet (Weisbrod, 1964). Throsby (1999) describes option value as a desire to preserve the option to, at some instance, use a resource.

Model

In line with the objective of this article, to introduce Use and Non-use values to festival studies, a measurement model is needed to assess the economic value of a festival. Therefore a model, which is already extensively used in environmental (Garrod & Willis, 2001), and lately also cultural economics (Frey, 2003), is proposed.

Measurement Model

The proposed measurement model suggests that the total economic value of a festival from a cost–benefit perspective can be divided into Use value and Non-use value.

Use value is experienced by the festival visitors and can be further divided into:

- Direct Use value created primarily by the festival entertainment is a reflection of the appreciation of experiences at the festival premises.
- Indirect Use value is also experienced by festival participants but not within the festival area. Indirect Use value is an important concept for the tourism industry since it comprises tourism activities at the destination apart from the direct activities within the festival premises.

Non-use value is a reflection of externalities and will be estimated in monetary terms as a value that accrues to all local residents, also residents who do not participate in the festival. This value can be further analysed in terms of:

- Option value that represents the value residents attach to the fact that they have an opportunity to visit the festival.

- Bequest value describes the value residents ascribe to providing culture and entertainment for younger generations.
- Existence value is related to the value residents attach to the effect that the festival has on the image and on the developmental direction of the city.

Method

The study is based on empirical data from the music festival Way Out West (WOW) where a sample of festival visitors as well as a sample of local residents from the host city have been interviewed. CVM was used to estimate Use values as well as Non-use values.

Contingent Valuation Method

All Use and Non-use values were measured in terms of WTP using different payment vehicles and the CVM. To assess Use values, festival goers were asked to state their WTP for the festival experience itself (Direct Use value) and also the experiences outside of the festival gates (Indirect Use value). Direct Use value was elicited using ticket price as payment vehicle in the question: "How high do you value your experience at WOW? What is the maximum amount you would pay for your festival ticket and still think it was worth the money spent?" For the Indirect Use value, the total expenditure was used as payment vehicle in the question: "How high do you value your total experience in Gothenburg during WOW? What is the maximum amount you would pay for all the experiences that you have had in Gothenburg and still think it was worth the money spent?". Having information regarding the total WTP for their stay in Gothenburg the Direct Use value was subtracted in order to estimate the Indirect Use value, that is, a monetary value for the experience outside of the festival gates. Questions asked to assess the Non-use values are illustrated in Figure 2.

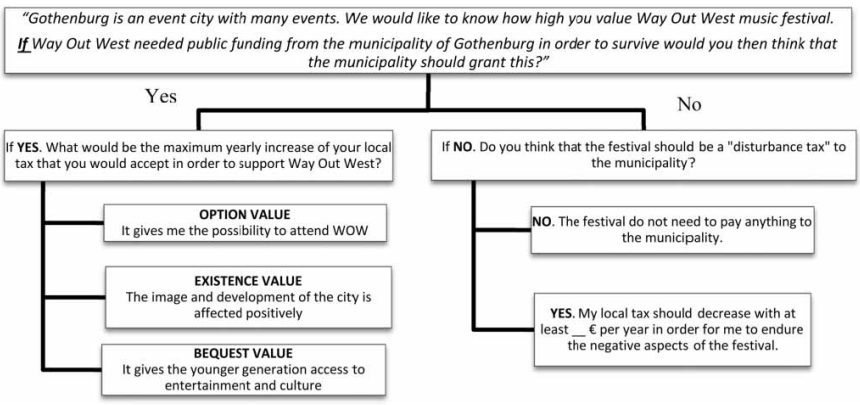

Figure 2. Questions asked to assess Non-use value as stated by the local residents.

In this way, it is possible to assess the positive Non-use value (left column) both in total value and divided into the categories of option value, existence value and bequest value. The negative Non-use value is also assessed (right column) in terms of a tax cut due to perceived negative impacts of the festival. There are problematic issues with contingent valuation elicitation that have been discussed in the literature (Bateman & Langford, 1997). However, as Throsby (2003) argues, if researchers are aware of the prevailing limitations of CVMs, that is, the hypothetical nature of the methodology, it is still very useful in order to understand the size of values attached to intangible costs and benefits for comparative and resource allocation reasons.

Data Collection Method

A web-survey approach was chosen for this study. Two questionnaires were constructed. One for festival visitors with questions concerning Direct and Indirect Use values and one aimed at local residents concentrating on perceived Non-use values. Both surveys also contained questions on socio-demographic characteristics. The data collection was completed in August 2010 during the fourth WOW-festival. In the sampling for the survey of festival goers, respondents were randomly targeted (every fifth visitor) at the entrance gate during the festival. In the sampling for the survey of local residents, randomly selected respondents were screened through the question "Are you aware of the music festival WOW taking place in Gothenburg these days?" Respondents that were not aware of this were excluded from the survey and the "recruitment interview" was terminated, whereas those who did know about the festival were asked to participate in the survey.

These "recruitment interviews" were designed to be short (1–2 min). The purpose and method of the surveys were introduced before contact information (mainly e-mail addresses) was collected. A few days after the interview an e-mail with a link to the web-based surveys was sent to respondents. When receiving the e-mail, respondents only had to read the instructions and click on the attached link redirecting him/her to either survey depending on if they were local residents or festival goers. The recruitment interviews were carried out by volunteers and by the authors. Prior to the survey, meetings and a lecture served to inform and educate volunteers in the sampling procedure and interview techniques. Information on the purpose of the survey was provided to enable interviewers to explain the aim of the study to respondents.

Samples

Two samples represent two populations. First, 1467 respondents were randomly selected at the entrance to the festival, which resulted in 719 answers (49%) to represent the festival visitors. Second, 2104 respondents were randomly sampled in the city at the public transport nodes, shopping streets and parking places to represent the population of Gothenburg. This sample generated 648 answers (31%). Table 1 describes some variables for the two samples. Only people over 13 years of age were included, since it is the age limit for the festival and the same age limit was used for the sample of local residents.

Whereas the sample of festival visitors is consistent with visitor surveys carried out at this festival in previous years, the sample of local residents seems to be biased towards

Table 1. Socio-economic characteristics of the two samples and official statistics.

Sample	Sample size	Gender	Average age	Median income	Education	Employment
Festival visitors	719	Female 56% Male 44%	26 years	€29,000	32% Secondary school 64% University	Student 43% Employee 47%
Local residents	648	Female 59% Male 41%	33 years	€21,000	27% Secondary school 69% University	Student 32% Employee 49%
Official statistics	N/A	Female 50.3% Male 49.7%	39 years	€24,000 (mean)	38% Secondary school 41% University	Student 20% Employee 48%

young well-educated female citizens. Local official statistics (Statistics Sweden) describe the average citizen of Gothenburg as 39 years old with an average annual income of €24,000 and an equal gender distribution. Apparently, our assumption that local residents have an equal non-zero probability to be encountered in public transport nodes, shopping streets and parking places seems to be incorrect. Part of an explanation to this bias could, however, be the screening question asked before the recruitment interview, that is, if respondents were aware of the music festival WOW taking place in Gothenburg, but the non-response analysis shows that only 1.7% of the sampled respondents answered "no" to the screening question. Their average age was, however, 46 years, that is, considerably higher than in the sample.

The sampling was mainly conducted in the city centre and probably citizens in the city centre are on average younger than the average inhabitant. On the other hand, one may argue that the citizens sampled in the city centre are also the citizens that will notice and be affected, positively as well as negatively, by a festival which is taking place near the city centre.

Study Object

The music festival WOW lasts 3 days and is held in Gothenburg (507,000 inhabitants). The festival takes place in the city park *Slottsskogen* during August, drawing crowds of up to 32,000. It has been held annually since 2007 and hosts a wide range of artists, mainly within rock, electronic music and hip-hop. The large park features three stages, sponsor activities and temporary bar and restaurant areas. During the festival bands perform all over the city's rock clubs as well and also in churches and other cultural institutions. This part of the festival is called *Stay Out West*. The festival is organized by Luger, a private Swedish promoter and booking agency focusing on new and upcoming bands as well as organizing tours for well-established foreign bands in Scandinavia. Luger is part of the world-wide Live Nation group.

WOW has a strong environmental focus, being the first environmentally certified music festival in Sweden and has differentiated itself from other large Swedish music festivals by not having a camping area for visitors. They are also cooperating with Roskilde music festival in Denmark and Øja music festival in Norway on

environmental and sustainability issues. More information is available at the web pages: www.wayoutwest.se; and www.facebook.com/wayoutwestfestival.

Results

Two concepts will be analysed in detail following the model outlined in Figure 3. Use values will be described in terms of Direct as well as Indirect Use values based on the survey of festival visitors. Non-use values will be described in terms of option, bequest, existence and negative Use values based on the survey of local residents. Taken together, these values will represent the total value created by the music festival measured in terms of WTP consistent with a CBA approach.

Use Values

The average total Use value is estimated to €282 per visitor, fairly equally divided between Direct Use value €146 and Indirect Use value €137. The estimate of Direct Use value seems to be related to the average ticket price which may reflect not only a methodological bias but probably also a good gut feeling and developed pricing skills of the organizer. The standard deviation (46.0) and a coefficient of variance of only 0.32 (46/145.6) demonstrate that festival visitors made rather homogeneous evaluations of the experiences related to activities inside the festival area.

The Indirect Use value is, however, much more heterogeneous with a coefficient of variation equal to 1.4 (194.4/136.8). This variation is interesting. Part of the explanation may be tourist experiences apart from the music festival as Table 2 seems to indicate with a significantly larger Indirect Use value for Swedes coming from other parts of Sweden than Gothenburg and even larger Indirect Use values for visitors coming from other countries. Most visitors (62%) came from other parts of Sweden, 36% from Gothenburg and only 2% were international visitors. However, very large variations remain within each group of visitors with coefficients of variation larger than 1.

Non-use Values

Tax was used as payment vehicles to elicit the value that local residents attach to having the music festival in town. It turned out that 42% were unwilling and 58% were willing

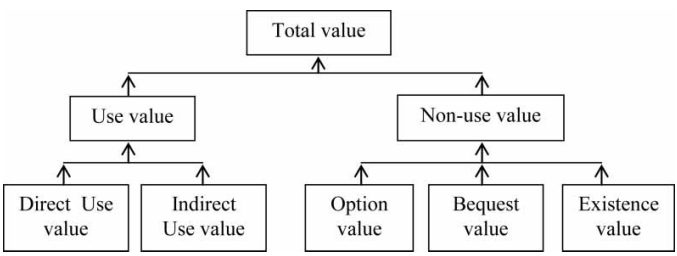

Figure 3. A model describing the components of Use and Non-use value.

Table 2. Estimates of Use values (€) by festival visitors coming from different areas.

	Gothenburg		Rest of Sweden		Other country		Total value	
Where do you live?	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Direct Use value	139.2	34.9	149.5	51.6	146.1	38.5	145.6	46.0
Indirect Use value	82.7	101.0	162.6	197.8	269.4	586.7	136.8	194.4
Total Use value	221.9	114.7	312.1	220.1	415.5	592.8	282.4	212.4

to support the festival if needed. The 42% unwilling were then asked whether they thought it appropriate to have a tax reduction to compensate for the disturbances created by the festival and 3% thought so, while 39% considered that inappropriate. The answers given thus provide an estimate of negative residents' WTA. Respondents positive towards public financial support for the festival were asked what amount of annual tax increase they were prepared to accept in order to (hypothetically) rescue a festival from financial failure. Table 3 describes the Non-use values calculated in Euro as averages for the whole sample to be able to draw inferences for the total population of residents in Gothenburg.

As indicated in Table 3, bequest (€3) and option (€3) values are both slightly higher than the existence (€2) value which indicates that respondents attach a higher value to having the festival in town as an opportunity to visit one day either for oneself or for coming generations. The sample bias towards young citizens may have an impact on these differences. Existence value interpreted as the value of, for example, giving the city an image of being a music hub is comparatively less important.

Respondents estimated the total Non-use value created by the festival to be on average €8. Of the answers given, 40% were €1 or less and the mode (most frequent) answer given by 24% of the respondents was €10. Four values were deleted as outliers (all of them €100,000).

Table 3. Non-use values among local residents.

Non-use values (€)	*N*	Minimum	Maximum	Mean (€)
Bequest value	628	0	211	3
Existence value	633	0	211	2
Option value	625	0	395	3
Negative value (WTA)	625	−316	−1	−2
Non-use value net	648	−316	526	6

Although only 3% of the sample thought it appropriate to have a tax reduction as compensation for the inconveniences the festival created for them, the average of these negative estimates is comparatively high (€−2) since the few respondents gave relatively high negative estimates. It is common that estimates of WTA are large compared to estimates of WTP (Andersson et al., 2004).

The net Use value, taking into consideration positive as well as negative experiences among local residents, is thus positive and estimated to be €6, which indicates a positive attitude on average as well as the fact that 58% of the respondents were prepared to support the festival with public money if this hypothetically would be necessary.

Total Use and Non-use Value

Use value (€282) seems out of proportion compared with Non-use value (€6), but this reflects that users are much more affected when they experience several days immersed in an intensive music experience. Non-use value, on the other hand, affects a large number of citizens although the value per average citizen is comparatively small. Calculated in terms of total values, as appropriate in, for example, a CBA, the average Use value has to be put in relation to the total number of festival visitors (26,347), and the Non-use value must be put in relation to the total population of Gothenburg (507,000). The 1.7% of the sample population that had not heard of WOW is deducted from the total population of Gothenburg (leaving 498,381).

Since negative Non-use values were not specified as option, existence or bequest values, they are not included in these categories but accounted for as a separate value which differentiates Figure 4 from the proposed model in Figure 3.

It is clear that festival visitors reap most value and that the festival experience proper, that is, the music performances create more value than other aspects. But from a cost–benefit perspective where all affected and all externalities, positive as well as negative,

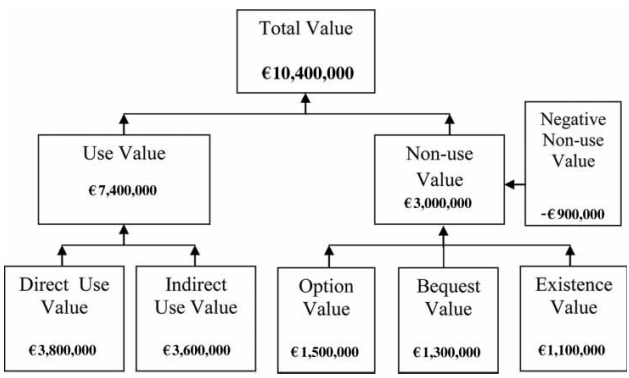

Figure 4. An approximate assessment of total value created by a music festival.

must be included, the value created by a music festival is clearly much higher than the value of only the core activities.

Conclusions and Implications for Management as well as Future Research

The objective of this study was to introduce the concepts Use and Non-use values to festival studies and see how these concepts can estimate the total value of a music festival from a cost–benefit perspective. Use value turned out to be more than twice as high as Non-use value illustrating that most value accrues to festival participants. Direct Use value is slightly higher than Indirect Use value. Whereas the local population benefits from a considerable share of the Direct Use value, the Indirect Use value is mainly enjoyed by visitors (cf. Table 2) and thus an indication of tourism generated by festivals. An interesting comparison is that the gross total expenditure generated by the music festival was estimated at €6.5 million (including travel cost) in a conventional expenditure survey (Andersson & Lundberg, 2011). This can be compared to the sum of Direct and Indirect Use value (€7.4 million) and consequently also an estimated €0.9 million in consumer surplus.

An important issue in CBA is to define the society being analysed and in this study, the city of Gothenburg seems to be a natural limit. This means that a large share of the Use value (72% or €5.3 million) will be "exported" to other regions and other countries as the visitors go home with their memories. One can, however, argue that this value is a long-term benefit for Gothenburg as a positive image and also possibly in the form of future repeat tourism by these visitors. Furthermore, a large share of the Use value was also reflected in financial terms by the expenditure of the visitors in the city (€4.1 million).

Whereas a large share of the Use value is enjoyed by visitors to the city, the Non-use value is, however, purely a value for the local residents and reflects, for example, social, cultural and environmental implications for the local community. It is a value that is highly interesting in relation to a discussion about sustainable tourism and sustainable festivals since it gives an estimate both of negative socio-cultural and environmental effects (−€0.9 million) and positive effects (€3.9 million). The advantage of including Non-use values in an assessment of sustainability is of course that social, cultural and environmental impacts will be assessed in monetary terms and are comparable to economic impacts. Commensurability has been a concern in, for example, a Triple Bottom Line approach (Getz, 2009; Lundberg, 2011) and an estimate of the Non-use value thus seems to present an opportunity to resolve this issue.

Non-use value represents almost 30% of the total value of the festival, which indicates a strong appreciation of the festival among local residents who are prepared to annually contribute €3 million to keep the festival. WOW puts a lot of effort into advertising and communication and has achieved a strong "green" image. The success of this campaign is quite remarkable considering that the festival takes place in one of the most cherished public spaces *Slottsskogen* (which is for Gothenburg what Central Park is for New York) and there is, in all honesty, a noticeable wear and tear of the lawn every year. Although environmental impacts are implicitly included in Non-use values, there is a need to quantify and put a monetary value on these predominantly negative effects in order to create a more precise total value within the CBA-framework. It is also

interesting from a managerial and political perspective since WOW has been environmentally certified by the city.

Other explanations for the positive Non-use values can be the utilization of several existing music institutions across the city under the concept of *Stay out West*. It makes the festival more visible among non-users and probably creates positive (and negative) perceptions of the festival in other ways. Gothenburg's long running campaign to market itself as an outstanding city for festivals and events has generated a social legitimation process. More research is needed on this topic, but social acceptance of negative tourist impacts has been found to be much higher where a social legitimation process influence peoples' perceptions of tourism (see Mantecón, 2010). In the case of WOW it is linked to peoples' perceptions of festivals and events as being fundamentally good for the development of Gothenburg.

Indirect Use value is the second highest value and indicates a potential for the tourism industry. The major part of this value accrues to visitors from other parts of Sweden that put a high positive value on visiting Gothenburg. The value is measured by "WTP", which to a certain extent can be literally understood as if visitors that have positive anticipated experiences also anticipate expenditure during their visit. This anticipated expenditure thus represents opportunities for the local tourism industry to provide products and services for visitors that primarily came for the music event.

Successful festival politics needs to recognize all stakeholders involved in and affected by a festival. Values in Figure 4 such as the net Non-use value of €3,000,000, as well as the negative non-use value of −€900,000, can certainly be influenced by politicians as well as by festival managers. Non-use values depend on information available for local residents and a successful communication strategy is likely to increase Non-use value. The festival WOW, being the object of this study, has put a lot of communication efforts into creating a positive image, which may explain the favourable evaluation it received by local residents.

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Article 4

The Value of Cultural Institutions: A Review and Conceptual Development of Value Categories

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Abstract

An economic assessment of value is based on the perceptions of individuals and applies concepts such as use and non-use value. "Non-economic" disciplines may use concepts such as historic, social, cultural, spiritual and aesthetic value to describe similar benefits of cultural institutions.

Despite different conceptualizations of value, one assumption in this article is that these conceptions partly overlap. There is, however, little empirical evidence to support such an assumption. The aim of this study is therefore to; 1) empirically describe, and categorize 2) understand the scope, and 3) enrich our understanding of use and non-use value in a cultural context. A richer understanding may eventually also improve the comparability of economic concepts with concepts used in other disciplines.

Qualitative methods are used to understand how individuals perceive cultural institutions. The interview data is interpreted in relation to economic and non-economic concepts.

Introduction

This study acknowledges that there are differences between an economic approach and value concepts in other disciplines, which may lead to misunderstandings and hinder dialogue and transfer of knowledge. While a complete consensus may not be one of the aims, this article argues that a common understanding of the value of cultural resources facilitates comparisons, discussions on a common basis and the judgement of efficiency and welfare estimations (Throsby, 2010).

In environmental settings, stated and revealed preference methods are often used to assess the value of environmental resources in terms of use and non-use value. Use value refers to the benefits individuals derive from experiencing a resource, whereas non-use value reflects the benefits perceived, regardless of use. In a cultural context, use and non-use values have been applied to assessing the value of cultural institutions[15] (Bille Hansen, 1997; Noonan, 2003). These types of value assessments, however, have been criticised. One obstacle may be the straightforward application of use and non-use value, concepts initially developed in an environmental context. While cultural and environmental resources have much in common, little empirical research has been conducted to describe and understand the content of these concepts in a cultural context.

Another critique against the economic assessment of value is the reduction of complex value systems to one common unit – monetary value (Klamer & Zuidhof, 1999). Throsby (2003) argues that cultural value derived from properties such as aesthetic, spiritual, symbolic, authenticity, integrity, uniqueness, "cannot be easily expressed according to any quantitative or qualitative scale" (p. 280). Attempts have been made to find common ground between an economic and other disciplinary approaches (Avrami, Mason, & De la Torre, 2000).

This study aims to enrich the understanding of the value of cultural institutions by describing them in terms of the value perceived by individuals. The research question is therefore: *How do individuals describe the perceived value of cultural institutions?* Describing the value perceived by individuals as the basis for economic value, may also contribute to understanding the scope and content of an economic value assessment. Three underlying questions are derived from this:

[15] This study considers cultural institutions as physically well-demarcated institutions. Particularly, the performing and visual arts will be in focus, e.g. museums, theatres, concert halls and opera houses.

1. How can the value of cultural institutions, as perceived by individuals, be described and categorised?
2. What is the scope of economic values?
3. How can the understanding of economic values be enriched with the help of individuals' perceptions?

Qualitative interviews are used to describe and categorise the value perceived by individuals. Thereafter, the interview data is analysed to understand the content and scope of use and non-use values, which may enrich our understanding of them. Eventually a better understanding of the value as perceived by individuals may allow for better insight into the aspects that underlie the economic value, enriching the conception of use and non-use value.

Method

To explore the value of cultural institutions as perceived by individuals, qualitative interviews are employed. Byrne (2004) suggests that "qualitative interviewing is particularly useful as a research method for accessing individuals' attitudes and values – things that cannot be observed or accommodated in formal questionnaires." (p. 182). She continues by asserting that qualitative interviews "get a more considered response than closed questions and therefore provide better access to interviewees' views, interpretation of events, understandings, experiences and opinions…" (p. 182). Even though the data may not reveal exactly the value individuals ascribe to cultural institutions, when they think of them, it is more likely that individuals will construct their views on the value of cultural institutions during the interview. Although the situation and the interviewer may influence this construction, this is not to say that individuals would construct value in a totally different way when outside the interview situation (Silverman, 2006).

As proposed by Glaser and Strauss (1967), diversity in the selection process may sometimes be more important than representativeness. Purposive sampling is guided by reflections upon important parameters to be considered, in order to attain diversity (Silverman, 2006). In the present study, the degree of interest and frequency of visits to cultural institutions are regarded as important.

Initially five people were interviewed. Two respondents (Respondents 3 and 6) were less interested in the arts and only visited cultural institutions occasionally. Three respondents

visited cultural institutions regularly (Respondents 1, 4 and 5). Respondent 5 had previously worked at a cultural institution. After the interviews, a group interview was used to take advantage of the insights generated from the positive dynamics arising in the discussion (Respondents 2, 7 and 8). The group consisted of two people who regarded themselves as being very interested in cultural activities and one person who was less interested. The discussion between frequent and less frequent consumers was expected to elicit values that become more pertinent in active argumentation. The question that was posed in all the interviews was as follows:

I would like you to take some time and think of values, benefits and effects that cultural institutions have. I would like you to think of both positive and negative values, benefits and effects that you ascribe to cultural institutions. I would also like you to distinguish between values that accrue to you and the public.

The complexity of the question demanded further questions investigating each statement given by respondents and clarifications were requested continuously. The interviews took between 30 and 50 minutes. All interviews were held in Swedish, digitally recorded and transcribed directly after the interview. An interview-diary was kept for the interviews. All respondents were asked where they would like the interview to take place. Some interviews took place at a research institute, whereas others took place in public or private areas selected by the respondents. None of the respondents refused to participate.

The analysis of the transcribed material involves disaggregating the mass of text into meaningful and related value categories. To structure the categories, an analytical model was used, presented in figure 1. The texts were analysed and rearranged systematically into themes. The thematic categorization was done first in an Excel sheet, which was later printed out and put on a wall to obtain an overview of the statements and categories. Any reference to a value of cultural institution made by respondents is regarded as a statement. The printed version of the model provided the possibility to check the correctness and, if necessary, reassess their appropriate location with a colleague. Having a printed version of all statements, each statement was re-interpreted from an economic perspective. The researcher made the judgement whether a statement represented use or non-use values.

Previous research on the value of cultural institutions

The arts and culture give rise to values due to their aesthetic, spiritual, symbolic, historic, artistic or unique authentic character (Throsby, 2003). An economic perspective suggests that individuals' preferences for cultural goods and services "are likely to be formed by many of the same attributes" (Throsby, 2003, p. 280), suggesting that the economic value is likely to be related to the cultural value (Klamer & Zuidhof, 1999; Throsby & Hutter, 2008). In the following section, the value of cultural institutions will be discussed from an economic, as well as from other disciplinary approaches.

A culture-economic perspective

Economic theory asserts that the value of objects is determined by stable, well-behaved and ordered preferences. In well-functioning markets, price may be considered an appropriate measure of value. Though useful for private goods, cultural institutions require separate consideration because they comply with some public good characteristics. Samuelson (1954) refers to public goods when the resource can be used by a number of individuals simultaneously without impairing on other's possibility to use the same resource (non-rivalry) and the characteristics of the goods renders excluding people from their use impossible (non-exclusion). Cultural goods and services thus create externalities, rendering the assessment of use and non-use values necessary (Frey, 2003; Throsby, 2001, 2010).

Use values: Cultural institutions produce experiences that create values for consumers. The value to the consumer can be defined as an "interactive relativistic preference experience" (Holbrook, 1999, p. 5). "*Interactive"* implies that consumer value is created through an interaction between a subject (consumer) and an object (e.g. art). "*Relativistic"* refers to the comparison of value statements originating from one person – I like opera better than theatre – but also the illegitimate comparison of value statement between subjects – I like opera better than you do. Furthermore, relativistic implies that value statements are individualistic and situational. The term "*preferential"* suggests that value statements rely on preferences. Finally "*experience"* states that value does not reside in the possession of an object but rather in the experience of it (Holbrook, 1999).

Two types of use values can be distinguished: 1) direct use value and 2) indirect use value (Mitchell & Carson, 1989). The former refers to experiential values during a play or an

exhibition. They reflect the value created through the core cultural experience. Indirect use value concerns experiences that arise before or after the main event. An opera creates direct use values during the performance (e.g. pleasure, wellbeing and captivation) but also indirect use values when visitors socialize, interact, have a cup of tea etc.

Non-use value: There are numerous discussions and surveys on non-use values in cultural settings (Aabo & Audunson, 2002; Bille Hansen, 1997; Dutta, Banerjee, & Husain, 2007; Ruijgrok, 2006; Tohmo, 2004). Compared to use values, non-use values involve the notion that individuals do not necessarily have to use (experience) a resource in order to give it value. Frey (2003) and Throsby (2001) propose a typology of non-use values covering: 1) bequest values, 2) existence values and 3) option values.

Mitchell and Carson (1989), in a similar way to Frey (2003) and Navrud & Ready (2002) propose that goods with public good characteristics (such as cultural institutions) are valued by individuals, not for their own sake, but for other, altruistic reasons. Mitchell and Carson (1989) distinguish between vicarious consumption and stewardship. In the case of vicarious consumption, individuals gain benefits because they know that people other than themselves have access and can consume a resource. Benefits may arise because individuals are either motivated by the perceived obligation to provide a good or because individuals experience a shared and interdependent utility.

Stewardship implies that individuals desire public resources to be used in a manner that ensures they are conserved for future generations (Mitchell & Carson, 1989). Two main motives for stewardship can be identified. The first type of stewardship value involves altruistic motives for future generations. Even though an individual is uninterested in heritage, and knows that most objects in museums will never be on display, since they are too fragile, they could still be valuable to him/her. The second type of stewardship value accrues because individuals perceive benefits in preserving resources (to use them) for future generations (Mitchell & Carson, 1989). Vicarious consumption and stewardship are summarized as bequest values (Brookshire, Eubanks, & Sorg, 1986), representing the perceived value of preserving cultural and cultural institutions for future generations.

Existence value is another dimension of non-use value (Frey, 2003; Throsby, 2010). Throsby (2001) gives the example of the pyramids, which are valuable to the public since they constitute part of humanity and human identity. Once destroyed, they may never be rebuilt. Furthermore, they would not be authentic to individuals even if rebuilt. Existence

values refer to the satisfactory feeling of knowing that a resource is preserved. In particular, "hallmark" institutions are valuable to the public as they symbolize an era or region, contributing to the formation of identity. The attractiveness and pride derived from living in an area with cultural assets is therefore valuable (Throsby, 2001). Boyle and Bishop (1987) argue that existence values reflect the value a cultural institution has within society.

The option value of cultural institutions constitutes another non-use value (Frey, 2003; Throsby, 2001) and reflects the worth individuals perceive when knowing they have the possibility to access a resource, even though they do not exercise this option (Weisbrod, 1964). If plans exist to close down a theatre, the option value may well not be observable in the market, but should play a role in the decision-making process. Throsby (1999) describes option value as a desire to preserve the option to use the resource at some point in the future.

An analytical frame of reference

McCarthy, Ondaatje, Laura, & Brooks (2004) attempt to map the value of culture activity. They discuss whether an aspect is valuable primarily to an individual or to the public. Furthermore, a distinction is made between instrumental or intrinsic values. Intrinsic values comply with Taylor's (1989) perception that art is "a bit of 'frozen' potential communication" (Taylor, 1989, p. 526) that can lead to (valuable) experiences. Intrinsic benefits thus accrue due to "the fact that there are people who have sense organs and understanding to appreciate its colors and the forms and meanings to which the colors contribute" (Shusterman, 2008, p. 57). This perception is similar to an understanding that value is individually and/or socially constructed (Mirowski, 1990). Intrinsic value however does not refer to value in "isolated things in their internal autonomy" (Shusterman, 2008, p. 57), which would conform with a notion of absolute value. Compared to intrinsic, instrumental benefits of the arts relate to the

> *...means of achieving broad social and economic goals that have nothing to do with art per se. [An instrumental approach implies]… an increasingly output-oriented, quantitative approach to public sector management. And underlying the argument is the belief that there is a clear distinction between private benefits, which accrue to individuals, and public benefits, which accrue to society as a whole.* (McCarthy et al., 2004, p. xi)

Instrumental effects are commonly expressed in figures or statistics even though textual descriptions occur. A prominent example is the economic (financial) effects. Social,

educational and health-related effects are other measurable outcomes (Holden, 2006; McCarthy et al., 2004). The model proposed by McCarthy et al. (2004) is an attempt to classify benefits according to their instrumental and intrinsic character and the extent to which they affect individuals or the public.

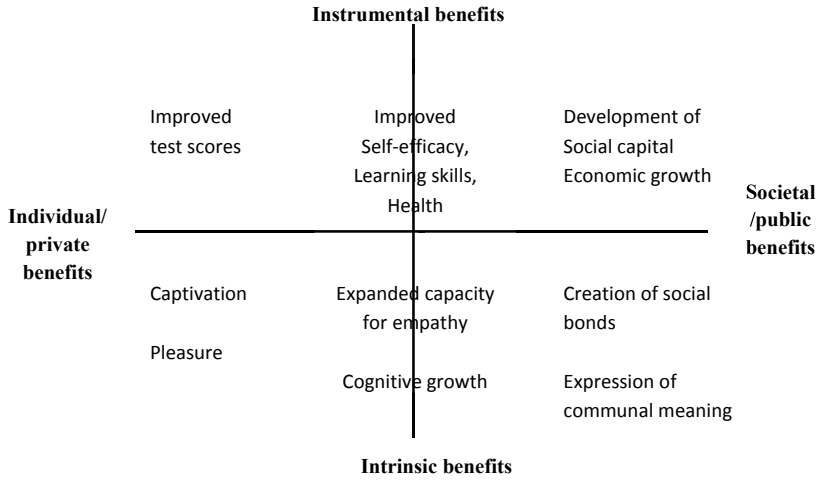

Figure 1: The benefits of cultural institutions – an analytical framework proposed by McCarthy et al. (2004)

The two axes create a matrix with four squares: 1) individual and instrumental, 2) public and instrumental, 3) individual and intrinsic and 4) public and intrinsic. Some benefits, such as *self-efficacy, learning skills, health, expanded capacity for empathy and cognitive growth* may accrue to the individual but they also affect others and are thus publicly beneficial. These benefits are presented between individual and public benefits. In the following discussion, they will be discussed under individual benefits.

Individual and instrumental benefits

Research supports the idea that learning through the arts has positive effects "beyond the exact conditions of initial learning" (Bransford & Schwartz, 1999, p. 61). Longley (1999), while studying the effects of the arts on academic careers, found that the arts combined with traditional education lead to higher academic degrees and *improved test scores*. The report "Champions of change: the impact of the arts on learning" underlines the potential of the arts to contribute to education and academic proficiency (Fiske, 1999). Deasy (2002) analysed results of studies on different art forms to investigate the possible impacts of the arts on social and academic performance and suggests several relationships. Consumption,

and especially involvement in the arts, enhances not only test scores but also *learning skills* (Deasy, 2002). It is worth noting that these effects have been mainly observed among children and school-classes and may not be directly transferable to other groups. Both knowledge and skills may be positively affected through culture. Lipe (1984) calls the learning effect informational value, whereas The Burra Charter (1999) and English Heritage (1997) label it as educational and academic value. There is evidence that learning combined with the arts may benefit the personal, social and emotional development of people at various ages (Catterall, 2002; Deasy, 2002; McCarthy et al., 2004). Positive effects were also found regarding academic skills such as reading readiness, spatial reasoning, *self-efficacy*, conflict resolution skills and creativity. In particular, self-efficacy plays a key role in accomplishing a variety of tasks, such as improving learning skills, confidence in problem resolution and improvement of pro-social behaviour (McCarthy et al., 2004).

Researchers in areas such as psychology, medicine and the humanities (Fiske, 1999; Oreck, Baum, & McCartney, 1999; Rauscher, Shaw, & Ky, 1995) emphasize the ability of cultural experiences to contribute to positive effects on *health*. Findings reveal that general wellbeing and mental, physical, intellectual, emotional, social and spiritual health are affected by cultural consumption (Bygren, Konlaan, & Johansson, 1996; Fiske, 1999). Other disciplines have investigated the effect of the arts on 1) clinical outcomes 2) staff outcomes, 3) education and training of practitioners, 4) mental health and 5) mechanisms of art perception (Staricoff, 2004).

Public and instrumental benefits

Apart from their values for individuals, cultural institutions create public instrumental values. *Social capital* is an instrumental benefit that reduces social exclusion, improves self-esteem, enhances self-confidence and contributes to social health (AEGIS, 2004). Bourdieu (2008) describes social capital as the "aggregate of the actual or potential resources which are linked to the possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (p. 286). Social capital concerns knowing the right people and having access to the right networks (Woolcock & Narayan, 2000). Matarasso (1997) brings up different, yet interrelated social effects, of participation in the arts. They are: 1) a reduced degree of experienced personal isolation, 2) the potential to bring people together and bridge social differences, 3) the

contribution to increased sociability, 4) increased tolerance and conflict resolution and 5) help in bringing about social change and multiculturalism. The World Bank defines social capital as

> *...the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions….Social capital is not just the sum of the institutions which underpin a society – it is the glue that holds them together.* (Worldbank, 2011)

In a wider sense, cultural institutions influence the social structures of a population as well as how these social structures are perceived.

The economic impacts of cultural institutions can also be characterized as instrumental, public benefits. Commonly, these are analysed by surveying the direct, induced and indirect economic impacts (Bille Hansen, 1995), sometimes, also by input-output analyses and the aim is to understand the contribution of a cultural activity to the economy (Crompton, 2006).

Individual and intrinsic benefits

The *pleasure* individuals derive from aesthetic and creative experiences triggers the consumption of art (McCarthy et al., 2004). Pleasure in this respect refers to something appreciable, also including at times disturbing, unpleasant experiences. Related to the concept of pleasure is *captivation,* which is an individual's response to a piece of art. Citing McCarty, et al. (2004): "Upon encountering the work, one is stuck by something unprecedented and extraordinary in it, and one is often amazed by the feat of the creating artist – and, as in music and drama, the performing artist as well – who unleashes the expressive power of that medium." (p. 45).

Whereas pleasure and captivation are examples of the immediate outcomes of cultural consumption, artistic and aesthetic experiences also teach individuals to interpret known and unknown phenomena. Cultural experiences draw the attention of consumers to different settings, implying new references that may lead to a higher degree of receptivity to unfamiliar people, attitudes and cultures (McCarthy et al., 2004). Thus, the arts help expand individuals' and on an aggregated level, society's *capacities*. The arts have proven to be beneficial, as they place individuals in unfamiliar and sometimes even unrealistic situations. Similar to travelling, the arts take visitors to places and problems that widen their

perspectives. Reflections that may arise in relation to experiences can cover any topic, and force individuals to think from new and different perspectives. According to Nussbaum (1998), this is what the world needs – individuals who can reflect independently and see themselves as part of a wider system.

While learning skills, self-efficacy and improved test scores touch upon the cognitive abilities in an instrumental sense, culture may also affect consumers' *cognitive growth* positively when discovering some novelty. Cultural experiences often place demands on the consumer, to make sense of a work of art. This challenging process of relating abstract experiences to one's own knowledge of the world also increases the ability to recognise such relations and associations in everyday life (Eisner, 2002). This notion is similar to Deasy's (2002) findings that the arts affect the individual's engagement, conflict resolution skills, tolerance and empathy for others.

Public and intrinsic benefits

Social interaction may be valuable for society in more than purely functional ways (social capital). *Social bonds* may be the result of powerful and widely shared experiences, expressing community order and unity (Dewey, 2005) and thus improve ethical sensibility (Hutter & Shusterman, 2009). Art communities, for example, affect social cohesion and attitudes towards other cultures (Hewison & Holden, 2004). Social relations may be valuable as something ethically desirable. One explanation for the emergence of social interaction and eventually social bonds could be the safe, equitable and non-market social space offered by the arts (Jeannotte, 2003). Cultural institutions are platforms enabling the creation of social contacts and networks, by offering a marketplace for interaction. This in turn leads to better distribution of resources, community infrastructure, employment and other services (Cavaye, 2004). An improvement in the social infrastructure and community functions also leads to better social organization and trust (Woolcock & Narayan, 2000).

Cultural institutions provide experiences that allow for an understanding of the present and past. In particular, museums provide the opportunity to experience commemorative cultural artefacts representing a legacy from history. Cultural experiences thus contribute to *communal meaning*, through cultural experiences. Developing individuals' understanding of the context in which art was produced contributes to building cultural capital among consumers. Cultural capital is widely discussed in sociology, following Bourdieu (2008), who describes cultural capital as obtained knowledge and competence within the arts

(Mahar, Harker, & Wilkes, 1990). Bourdieu (2008) describes cultural capital as reflecting the cultural skills and abilities of the individual in the interpretation of the arts. Cultural capital is a personal asset that affects pride, identity and the formation of communal meaning (Bourdieu, 1973). Snowball and Webb (2008) interpret cultural capital "as a stock of knowledge" that helps to make sense of the world and reflect upon today's society.

Results and analysis

The model proposed by McCarthy et al. (2004) is recognised as an attempt to give a holistic perspective to the benefits of cultural institutions. As described above, cultural institutions may be regarded as beneficial for private and/or public reasons. Similarly, an economic perspective distinguishes between use and non-use value. Nevertheless, contrary to many existing categorizations which either focus on the instrumental or intrinsic benefits, McCarthy et al. (2004) provide one of few frameworks incorporating both aspects. The intrinsic dimension refers to benefits arising as a result of the interaction between individuals and cultural phenomena. They are thus a result of interaction and are not easily assessable. Instrumental benefits are considered to be easier to measure and to be a 'by-product' of cultural activity. This model will be used later to analyse and categorise the data and to understand the economic value of cultural institutions.

To present the results from the interviews, value statements are categorized into two sections. First, individually perceived values will be presented. Thereafter, statements that may be beneficial to the public are presented.

Perceived benefits for the individual

Some respondents started out by mentioning the value of the cultural *experience (Resp. 1-5, 7, 8)*. One respondent said "*one can become fascinated by how gifted the ensemble is and by seeing how competent and skilful [the artists are…" (Resp. 3)*. The respondent may be stirred by the quality or beauty of the performance and the perceived value rising from the interaction with the artists (even though not directly), in a manner similar to that arising when watching sporting events. The statements conform to pleasure and captivation.

Other experience-related descriptions are: "*for fun*" (Resp. 1, 2), "*fascination*" (Resp. 1, 4), "*pleasure*" (Resp. 3, 6), "*excitement*" (Resp. 8), "*satisfying my wants, needs*" (Resp. 7, 8), "*sense of happiness*" (Resp. 2-5), "*captured*" (Resp. 6, 8) and "*become fascinated*" (Resp. 1,

4, 7). The statements characterize experiences mainly in a positive sense. This is also true if a play or exhibition evokes sad or depressive feelings. In the latter case, respondents focused on the positive outcomes from negative experiences, i.e. the encapsulated useful message and learning effects. The outcome, rather than the experience, may be regarded as positive. Experiences of "*beauty*" (Resp. 7, 8) were referred to when explaining the melody of an opera, or how colours and painting techniques represent aesthetic experiences.

Besides the cultural experience, surrounding factors were valuable to respondents. "*[T]he opera is a great example…I think its architecture is fantastic*" (Resp. 5) and the "*beautiful, impressive building with all the light coming into the foyer*" (Resp. 6) constitute two examples. Cultural institutions offer aesthetic and spiritual experiences before and after the cultural experience. Another example of this is when visitors come to Gothenburg to "*combine the visit to the cultural institution with a dinner, which to us is like a rite and increases the enjoyment and quality of the stay*" (Resp 2). From an economic perspective, these represent indirect use values.

In addition to experiential values, respondents emphasized values usually indirectly related to an exhibition or play: *"In addition to it [the experience] making you open-minded it [culture] might contribute to making better citizens" (Resp. 5)*. Visitors to the institution further tend to "*…feel a spirit of community*" (Resp. 5) and "*understand other cultures*" (Resp. 5). Thus, cultural institutions are regarded as important, for social reasons, for families and individuals in general, as well as for different ethnic groups, who felt a reduced degree of personal isolation ("*it is a way for me to keep in contact with some old friends, who I would not meet otherwise*" (Resp. 6)), or an increased experience of integration. From a public point of view, social interaction may also lead to increased tolerance and multiculturalism. "*I recently visited a museum with an exhibition of German painters, and as far as I understood, they had a massive influence on today's artists in Sweden*" (Resp. 8) and thus on Swedish culture. This statement is an example of how cultural experiences may impact on individual perceptions of a multicultural society. Another example of the social effects of cultural experiences was given by Resp. 5 who asked rhetorically: *"how would Swedish artists have developed without influences from countries like Italy, France, Germany or Spain?"* The above statement also suggests opportunities for attitudinal and behavioural changes among individuals. Arguably, open-mindedness influences general life skills.

Perceived benefits for the public

As suggested in the literature, respondents also derived value from experiencing art together with others. Respondent 1 mentioned, for example, that "*It is nice to go out* [visit a cultural institution] *and maybe share it* [the experience] *with friends or a partner*"…"*we* [the visitors] *somehow feel connected during the visit*"…"*And it is interesting to see who visits the theatre!*". It is reasonable to assume that from an economic perspective, indirect use values such as *reputation* and *to impress* others may be significant. These values are also referred to as status and esteem. Another reason for value creation is the appreciation of having the possibility to deepen social bonds with existing friends and family and to establish new social bonds with other people: "*my daughter and I visit the concert house once a month to share some time*"…"*I hope that we can continue doing so for many years to come*" (Resp. 4). From an economic perspective, the former describes indirect use values, whereas the latter refers to the option value. According to Jeannotte (2003), the institution can be regarded as a marketplace for social gatherings, a public space; "*we always meet friends or colleagues when my husband and I visit the theatre*" (Resp. 3).

Another value of culture might be the possibility of expressing one's status and capabilities (attainment) within a social setting. The notion of culture and cultural participation, or consumption, might be used to signify social inclusion and distinction. An example containing both inclusion and exclusion is: "*We in West Sweden feel pride in having the opera as an institution*" (Resp. 2). When referring to West Sweden, the respondent talks about "*we*" (Resp. 2), indicating a sense of community and also identity. At the same time, a distinction is made between West Sweden and other parts of Sweden. When the opera is used as an example that ties a region together, and distinguishes it from other regions, it is reasonable to assume that the opera affects the sense of identity. From an economic perspective, a sense of community "we" (Resp. 2) (i.e. identity), may relate to consumptive experiences that lead to reputation and status, but also to the fact that the opera may be valuable to people who don't visit it, since the mere knowledge of the opera's existence in a region can strengthen identity.

While cultural institutions may form identity within and among groups, they may also be a signifier for social, economic and cultural development. *"...it is a huge gain for Gothenburg as a city" "...where we can keep up on an international level, and not just be farmers from the countryside". "And it is not only that we might export good artists, but we attract a lot of visitors…"* (Resp. 7). The statement adds weight to commercial value of

cultural institutions. It also reflects a sense of pride related to personal or societal development, which may arise during an experience when visitors feel virtue or success. Non-users and users perceive similar values when comparing the current state of development with a former state of development. Institutions help *"*increase our city's status in some manner*" (Resp. 3).* Obviously, culture has influence on self-perception, e.g. pride. People *"in West Sweden feel proud of having Göteborgsoperan…I think it is good that we have such an opera here in Gothenburg; it can create a good reputation and image of the city and thus also a feeling of pride"* (Resp. 5). Reasons for a sense of pride may be that *"we have exported great artists"* (Resp. 1) and that "*Gothenburg can compare with other cities like Stockholm and Copenhagen, and not stand out as undeveloped"* (Resp. 3). Cultural institutions influence the inhabitants' self-perception (identity), which in turn has effects on the city's image from an external perspective. *"...status, possibilities of development, implying that I can develop culturally…I think it is important to emphasize the possibilities. Closing down the opera implies abolishing the whole base for a cultural area…then you would have to go to Stockholm or to Skara [Vara] or to Copenhagen or somewhere else [if the opera were to close down]. And it would not be good for Gothenburg, from a competitive perspective"* (Resp. 4). The attractiveness and image in turn influence the flow of tourism. An increasing inflow of tourists in its turn affects the economic situation of an area. *"I mean, you attract people and increase the status. We are able to serve not only citizens of Gothenburg, but also citizens from surrounding municipalities, and wherever else they might come from, with great productions that would never have been put on otherwise... and they [the tourists] spend a lot of money here"* (Resp. 2).

From a local perspective, cultural institutions seem to serve a function in terms of making it possible to experience culture. Respondent 3 stated that *"I feel good if I have the possibility to go to an opera or theatre in Gothenburg. It is something that makes me feel happy…and while I may not watch all performances, I think it is valuable to have the possibility to do so"*. This statement, from an economic perspective, can be interpreted as showing that the respondent perceives the option value. The mere possibility of experiences is valuable, including direct and indirect use values. A similar statement, referring to non-use values, was given by Respondent 2 who said that *"Bohusläns museum, located near where I live in Uddevalla, is a fantastic establishment…even though I don't visit it often enough…I am proud of it!"*.

Without attempting to present all of the aspects mentioned as beneficial, the results reveal a broad variety of benefits. Some are valued for private reasons, whereas others are valuable because they have positive effects for the public. In the following chapter, the data will be discussed in relation to the analytical model and the three underlying questions.

Discussion

The discussion is structured according to the research questions and divided into three sections. The first section (question 1) presents where the statements made by the respondents are located in the analytical framework. The second part (question 2) of the discussion concerns the scope of the use and non-use values in relation to the model proposed by McCarthy et al. (2004). The final section (question 3) investigates how economic value categories can be enriched through the data and the relationships the benefits describe in the analytical framework.

Discussion of question 1

Many comments reflect one or more of the distinct values referred to by McCarty et al. (2004). Each statement was fitted into the model at the approximate location for the corresponding value described by McCarthy et al. (2004). Figure 2 shows the number of statements that could be assigned to one of the squares.

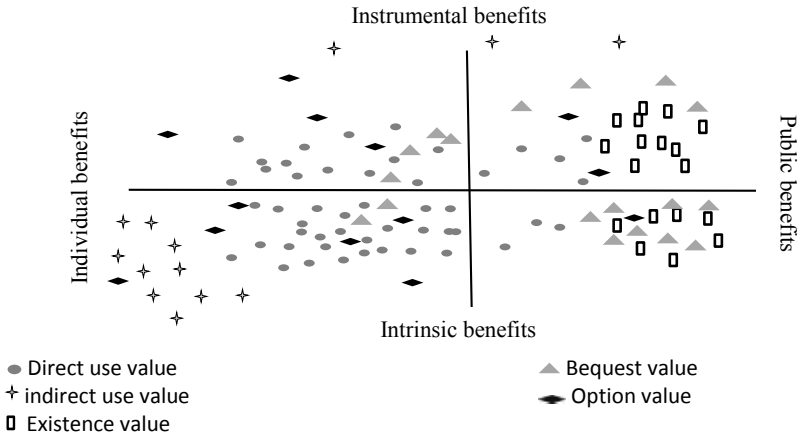

Figure 2: The distribution of statements made by respondents in relation to the two dimensions proposed by McCarthy et al. (2004)

Figure 2 shows the distribution of the statements and indicates a larger density in the lower left and possibly, also in the upper right square. The large number of comments assigned to intrinsic-private benefits may reflect the relative value ascribed by individuals. This result may also suggest the importance of benefits derived from experiences. It is, however, also likely that the individuals are more familiar with these values. Private intrinsic benefits may be well-known through personal experiences, whereas the economic and social effects of cultural institutions are aspects frequently discussed in public policy arenas. The degree of information available to the individuals may therefore have influenced the distribution in figure 2.

Discussion of question 2

When each statement was entered into the model, the researcher interpreted each in terms of use and non-use value. Thereby, each statement could also be attributed an economic value. In this way, not only the location of the statement in the model, but also a classification from an economic stance was obtained. To give an example, one respondent stated that he was "…fascinated by how gifted the ensemble is and how competent and skilful [the artists are]…". This statement was interpreted as a pleasurable experience and assigned intrinsic and private benefits. From an economic perspective the statement is associated with direct use value. The intention of assigning economic values to each statement is to understand the distribution and scope of the economic values in relation to the model proposed by McCarthy et al. (2004) and the extent to which economic values overlap. Departing from the previous analysis, the 'coordinates' for each of the statements in figure 2 were known. By drawing a line around the statements representing each economic value, the areas that could be covered by each value were formed. Figure 3 shows the areas in the model and their scope in relation to the proposed model.

Figure 3 visualises seven areas. Each area represents a number of perceived values that are attributable to an economic value. The locations and sizes of the areas are tentative and not exact, but some cautious conclusions are possible. Obviously, the individuals' perceived value has no total fit with the model described by McCarthy et al. (2004). Some areas remain uncovered. The shapes seem, for example, not to cover private-instrumental and public-intrinsic benefits entirely.

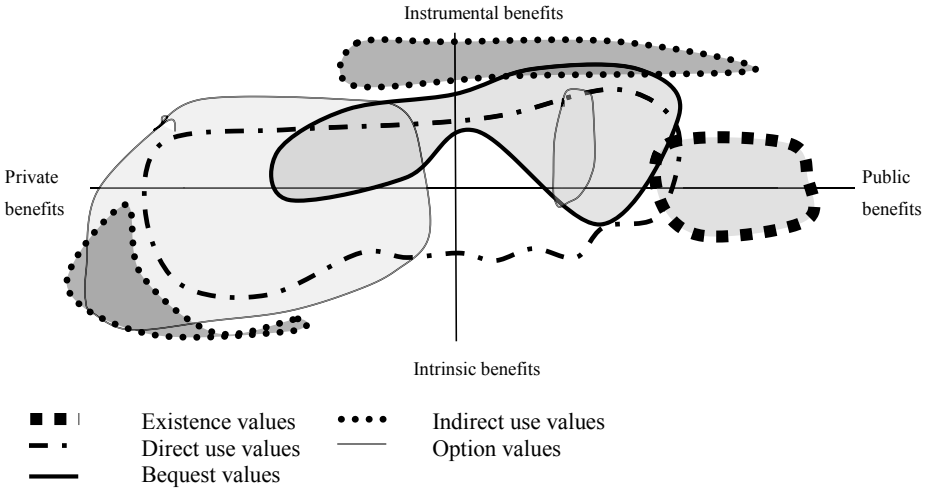

Figure 3: Tentative visual synthesis of use and non-use value with the model (and the aspects contained in the model)

Figure 3 not only shows how aspects, as described in the model, relate to an economic conception, but also how economic values relate to each other. The overlaps in economic values suggest problems when applying mutually exclusive definitions of economic values. Direct use value, option and bequest value, for example, show considerable overlap. However, these values refer to different time horizons. Direct use value refers to the value of current or past consumption. The option value is the value an individual perceives from having access to a cultural institution *in the near future*. The option value thus refers to latent values in the future. Bequest values also refer to values in the future. The perceived value represents, however, the benefits of preserving culture for future generations, not for people living today. In terms of time, bequest values are further away than option values. By adding time as another dimension, economic values represent similar values but at different times.

Figure 3 also stresses that existence and bequest value refer primarily to public benefits. This indicates that individuals perceive cultural institutions to be valuable, not for private reasons, but for the benefits that arise for the public. Another observation is that the bequest value and existence value seem to cover relatively less than the use and option value. Furthermore, the bequest value refers primarily to instrumental benefits, whereas the existence value refers to intrinsic benefits. Noteworthy from an economic perspective is the

fact that these values represent aspects that are valued by individuals because they are beneficial for the public.

Discussion of question 3

The third question aimed to enrich the understanding of the content of economic value. Economic values need to be described empirically in terms of individuals' perceptions and the aspects they cover in the model. Table 1 presents the aspects that may be suitable for describing each of the economic values.

Table 1: Economic values of cultural institutions described in terms of related literature and the respondent statements

Direct use value	Indirect use value	Option value	Bequest value	Existence value
improved test scores		improved test scores		
improved self-efficacy				
learning skills	learning skills	learning skills	learning skills	
health	health		health	health
social bonds/capital	social bonds		social capital	social bonds/capital
economic effects		economic effects		
pleasure	pleasure	pleasure	pleasure	
captivation		captivation	captivation	
cognitive growth		cognitive growth		
expanded capacity for empathy		expanded capacity for empathy		
identity		identity	identity	identity
communal meaning			communal meaning	communal meaning
			economic impacts	economic impacts

Notably, direct use value covers a variety of benefits which may be intuitively thought of as public or non-use values. On an aggregated level, identity and a sense of community are examples of these. Nonetheless, visitors genuinely perceive them as related to the experiences. Aspects that are seemingly unconscious are also mentioned as important effects. Cognitive growth and expanded capacity for empathy are examples of this. When combined with other benefits, such as learning skills, self-efficacy and improved test scores, the direct use value appears to be a broad concept, capable of measuring many different benefits arising from the arts. This strength, however, comes with the drawback of a lack of precision.

Compared to direct use value, we may conclude that indirect use value is not likely to contribute with the same variety of benefits. In fact, table 1 indicates that the indirect use value seems to be less multifaceted, but also that the indirect use value represents similar aspects as use value. This might imply that the respondents have difficulties in disentangling the two experiences from each other.

Another issue to be considered is the similarity between option and use value. As mentioned, this may be a result from the of use and option value being closely linked, with the major difference that the option value refers to 'a not yet realized experience' further away in time.

The option and bequest values show a similar conceptual overlap as the use and option values. Though both option and bequest value refer to the future, bequest values are further away in terms of time. Assuming that the uncertainty regarding value increases the further into the future it will be realised, it is reasonable for respondents to have less knowledge about benefits that may accrue to themselves or other generations in the future. This uncertainty may be reflected in table 1, where the bequest value is not described as distinctly as use values are.

Conclusion and reflections

This study aimed to answer the research question: *How do individuals describe the perceived value of cultural institutions?* The first underlying question concerned the *categorization of perceived values*. An analytical framework proposed by McCarthy et al. (2004) was used to understand the value that individuals perceive cultural institutions to create. The framework served to categorize the perceived value according to intrinsic-instrumental and individual-public benefits. The perceived values were spread across the model. A somewhat higher density of statements was observed in the individual-intrinsic and public-instrumental squares of the model, which may suggest that these aspects are of particular importance to individuals. However, the results may also reflect the fact that the individuals are well informed about these aspects due to personal experiences. Familiarity with specific aspects, such as the attractiveness of an institution to tourists, may also facilitate the expression of their benefits in interview situations. On the contrary, public-intrinsic and private-instrumental values may be perceived as relatively abstract by individuals.

The second underlying question concerned the *scope of economic values.* Assuming that individuals' perceptions underlie an economic assessment of use and non-use values, conclusions may be drawn about their scope in relation to the benefits described in the framework. Figure 3 shows that individuals perceive many of the benefits discussed in earlier research. However, figure 3 also indicates that the economic value may not be entirely capable of encompassing all of the positive aspects. To what extent economic values cover the aspects contained in the framework, is not yet clear. The analysis also provides empirical evidence that use and non-use values are related, as indicated in earlier research (cf. article 1). Mason (2002) is supported, as he also finds that economic and 'non-economic' frameworks "do not actually refer to different, discrete sets of values. They rather constitute two alternative ways of understanding and labelling the same, wide range of heritage values" (Mason, 2002, p. 11).

The results from this study provide empirical evidence that use and non-use value are related to other value concepts. The results are based on the answers of eight respondents. Including more respondents may have altered the number and distribution of the statements presented in figure 2. A representative study assessing the weight of each aspect may be the object for future research. Considering more profiled groups, such as artists, people who never consume art and very young/old respondents, may also affect the results. In fact, such a procedure may have revealed aspects not accounted for by the analytical framework.

The third underlying question considered *how the understanding of economic values, based on individuals' perceptions, can be enriched?* Table 1 offers a description of economic values, in terms of the value as perceived by individuals. The overlaps between use, option and bequest value were identified. From an economic perspective, these overlapping economic values may not necessarily impair the extent to which individuals can reveal their preferences. However, problems may arise in clearly categorizing them.

An interesting reflection in this regard is to consider use value and its relation to time. The duration of the experience is likely to influence the variety and intensity of the benefits for the user. The literature suggests different definitions for the duration of an experience. In some instances, the experience may start while searching for information, in other instances, the experience may not start before entering an institution. In order to describe the value of cultural institutions, a clear description of the duration of the experience and, consequently, the use and non-use value would be helpful. One example of when difficulties may arise is when an individual buys a ticket to a cultural institution. The

person is looking forward to and is excited about the upcoming performance, but sadly falls ill and cannot attend. What should be counted as direct, indirect or option value?

Understanding economic values is particularly helpful for economic valuation studies (such as contingent valuation studies), since conclusions can be drawn about what individuals are thinking and including when stating their willingness-to-pay. With a rich understanding of the content of economic values, questions to elicit individuals' willingness-to-pay could be formulated more specifically. This may eventually also increase the relevance of contingent valuation assessments of value in other disciplines.

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Article 5

Developing a scale for measuring the perceived value of cultural institutions

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Abstract

Previous research into the value of cultural institutions has emphasized a variety of benefits arising from cultural institutions such as social, educational and health related impacts. An economic assessment of cultural institutions is usually made in monetary units. This one-dimensional assessment of value has been criticized for being elusive, disregarding the complex and multidimensional nature of cultural values.

This article suggests scales for measuring the value of cultural institutions. Based on previous research, and an exploratory study on the perceived value of cultural institutions, this article describes the development of a scale using exploratory and confirmatory factor analysis. Six factors comprise the scale: social, educational, health, image, identity and financial effects.

The scale may be used to describe and compare the value of cultural institutions qualitatively. Conclusions about the perceived contribution of different institutions may be possible. From a policy perspective, the scale may allow an understanding of the contribution individuals with different socioeconomic backgrounds perceive the cultural institution as making.

Introduction

Arts and culture can be regarded to comply with public good characteristics, as discussed by Baumol and Bowen (1993) and Frey and Pommerehne (1989), and economic research has developed methods to measure and understand the impacts and welfare contribution of arts and culture (Navrud & Ready, 2002; Tuan & Navrud, 2007, 2008). The arts and culture are suggested to contribute to creativity, which may help maintain and develop new industries and welfare (Bille Hansen, 1995). Furthermore, the benefits of cultural institutions have been studies in terms of education and general skills (Catterall, 2002; Deasy, 2002), prestige value (Bille Hansen, 1997), identity (Vidal González, 2008), social relations (McCarthy, Ondaatje, Laura, & Brooks, 2004) and so forth. Apart from economics, research in anthropology, sociology, heritage studies and history has dealt extensively with the value of arts and culture. English Heritage (1997), for example, describes the value of cultural heritage as educational, academic, cultural, resource-related, aesthetic and recreational.

From the perspective of the individual, cultural institutions may be perceived as valuable because they provide experiences and consumer value. It is less clear, however, why individuals perceive cultural institutions to be valuable regardless of use (non-use value). Since many cultural institutions require support, in terms of public resources, it would also be desirable to understand the non-use value of cultural institutions as perceived by individuals. The research question addressed in this study is therefore: what makes cultural institutions valuable for individuals? In particular, value accruing regardless of use (non-use values) will be investigated.

The multidimensional nature of the value of arts and culture suggests that measures need to account for its complexity (Throsby, 2010). Scales are measures that are applied when studying phenomena that cannot be directly observed (DeVellis, 2011). They are often used to assess attitudes, opinions and perceptions. It is assumed that the unobservable factors (latent variables) may be measured by means of item statements. Scales, in this regard, are to be understood as item-based measurement instruments. Choi, Papandrea and Bennett (2007) developed a cultural worldview scale to assess the dimensions underlying different cultural world views. The assumption in their study is that every individual perceives culture to be valuable for different reasons. The perceived importance, in turn, is determined by underlying factors. While scales are common in the social sciences (Churchill, 1979; DeVellis, 2011), few efforts have been made to develop scales in cultural

studies to measure and describe the value of cultural institutions from the perspective of individuals. Assessing why cultural institutions are valuable to individuals may contribute to understanding the value created. The purpose of this article is to develop and test a scale for measuring the value of cultural institutions as perceived by individuals.

Literature review

The literature review first intends to discuss the value created by cultural institutions. The second part of the literature review will introduce scale development.

Value of cultural institutions

In the following, some literature available for developing the factors and items comprising the scale is presented. In a way similar to earlier research, this paper seeks to describe the value of cultural institutions using a limited number of categories. While there are differences in conceptualisations prevailing, many existing categorizations in the literature recognize similar aspects as valuable. Six different aspects indicating why cultural institutions may be valuable to individuals are considered, to form the basis for the forthcoming measurement model. These are the perceived contributions to economic development, education and skills, social relationships, identity, image and health.

The *economic value*, is what Guetzkow refers to as "art as 'export' industry" (2002, p. 8). Usually, the financial effects of tourism are subsumed under this aspect (Andersson, Armbrecht, & Lundberg, 2008; Crompton, 2006). In particular, events and festivals have been studied regarding their economic contribution to a site (Andersson, 1985; Andersson et al., 2008; Andersson & Samuelson, 2000). However, culture and cultural institutions may also market a destination as attractive (Myerscough, 1988). "The density of arts organizations and prevalence of arts events may play a role in attracting residents and businesses to (re)locate to a community" (Guetzkow, 2002, p. 8). Companies with highly trained personnel or those active in the creative industries (Walesh & Henton, 2001) are especially fond of locating their business in areas with a high density of cultural organizations (Cwi, 1980). Bille Hansen (1995) summarizes the short term economic impacts of the arts to be: 1) the localising factor for enterprises, 2) tourist attractions and 3) the sale of goods in the export market.

Another area of investigation is the value of cultural institutions in terms of *perceived contribution to education*. Lipe (1984) describes the learning effect as informational value, whereas The Burra Charter (1979) and English Heritage (1997) label it as educational and academic value respectively. Mykletun (2009), in an event setting, refers to a similar phenomenon as building human capital. Bille Hansen (1997), mentions educational benefit as one perceived externality of cultural activity. Fiske (1999), after an extensive data analysis and literature review, concludes that "learners can attain higher level of achievement through their engagement with the arts" (p. VIII). Catterall (2002) and Catterall and Chapleau (1999) show empirically how students, participating in the arts, outperform students who were less engaged in the arts.

Mason (1999, 2002) uses *social value* in relation to social capital. Social capital is initially a sociological concept referring to individuals' social relations to other individuals and organizations (Bourdieu, 1973, 2008; Putnam, 2001). As a broad concept, social capital may refer to trust, concern about others, social norms, connections between individuals and the emerging networks calling for trustworthiness and reciprocity (Putnam, 2001). Cultural institutions are facilitators and catalysts of social interaction and the construction of social networks. Throsby (2001) uses the term social value to describe "the sense of connection with others" (p.29) with which a work of art or, as in this case, a cultural institution may contribute. While some researchers consider the number of contacts that each individual possesses to be the most important, other researchers hold the strength of ties as more important (Granovetter, 1973).

Matarasso (1997) emphasizes that cultural institutions and cultural activity contribute to develop community identity by touching individuals' perceptions of where they live and those with whom they connect. In a heritage setting, the historical value is pertinent as a connection to the past, affecting individuals' *identity*. Mykletun (2009) uses the concept of cultural capital in reference to Bourdieu (1973), to refer to cultural information including traditions, customs, acceptance and heritage. Throsby (2001) also uses the term cultural capital, but describes cultural capital as "an asset which embodies, stores or provides cultural value in addition to whatever economic value" (p. 46) a cultural service or good may possess. Throsby (2001) sees cultural value as consisting of several 'elements' such as: aesthetic value, spiritual value, social value, historical value, symbolic value and authenticity value. Similarly, English Heritage (1997) suggests that cultural significance (similar to cultural value) represents aesthetic, historic, scientific, social or spiritual value

for past, present or future generations. Mason (1999) refers to cultural value as the shared meanings associated with a cultural object.

The symbolic character of cultural institutions, and the experiences they provide, may also affect the pride, prestige and *image* of a destination as perceived by individuals (Bille Hansen, 1995). Numerous landmark institutions, such as the Guggenheim Museum in Bilbao, testify to this inherent symbolic value. Cultural institutions and in particular events and festivals are used for communication and conveying meaning to people (Boo & Busser, 2006; Waitt, 2008).

Health related research emphasizes the potential of the arts to have positive effects on individuals' *health* (Bygren, Konlaan, & Johansson, 1996). Findings reveal that general wellbeing and mental, physical, intellectual, emotional, social and spiritual health are affected by cultural consumption (Fiske, 1999; Konlaan, Bygren, & Johansson, 2000; Stynes, Peterson, & Rosenthal, 1986). Staricoff (2004) shows that the arts and culture have positive effect on 1) clinical outcomes, 2) staff outcomes, 3) education and training of practitioners, 4) mental health and 5) mechanisms of art perception.

The categorization suggested in this article can be compared to previous categorizations as outlined in table 1. The first two columns in table 1 present heritage and conservation (cultural) perspectives on the value of culture. The second two columns represent perspectives that take into account a cultural and wider economic perspective. A wider perspective implies going beyond the consideration of financial transactions and including use and non-use values (Cwi & Lyall, 1977; Throsby, 2010).

Table 1: Examples of value typologies for cultural institutions. The last column outlines the categorization applied in this article.

Lipe (1984)	**English Heritage (1997)**	**Mason (2002)**	**Throsby (1997, 2010)**		**Present study**
Economic	Economic	Economic	Economic value		Economic
Informational	Educational and academic				Education and skills
		Social		Social	Social
		Historical		Historical	Identity
Associative/symbolic	Cultural	Cultural/symbolic	Cultural value	Symbolic	Image
		Spiritual/religious		Spiritual	
	Resource (sustainability)				
Aesthetic	Aesthetic	Aesthetic		Aesthetic	
	Recreational				
					Health

The last column, presents the six categories (factors) to be used in this study. To some extent, previous categories are related to those proposed in this article. The categories are

perceived contribution to: economic development; positive image; identity; social relations; skills and knowledge; and mental and physical health.

Scale development

Choi et al. (2007) use the findings of Dunlap and Van Liere (2008) and Dunlap, Van Liere, Mertig and Jones (2000) to develop a cultural worldview scale (CW) with the purpose "to explore the potential for the identification of latent variables that are likely to help explain the multidimensional nature of cultural value" (p. 313). The basic assumption for the CW is that 'general attitudes' like 'beliefs and perceptions' are determined by a 'limited number of latent variables', i.e. factors. The *a priori* formulated dimensions are: loss of cultural heritage, materialism, the possibility of an identity crisis and the significance of cultural heritage. Choi et al. (2007) use the guidelines, as proposed by DeVellis (2011), to formulate a number of statements (items) to which respondents have to react. They develop an item pool by giving consideration to what to include, how many statements to include and what to avoid (DeVellis, 2011, pp. 73 - 114). To develop the CW, 35 items are formulated and reviewed by experts. This procedure corresponds to DeVellis' (2011) suggestion to have the item pool reviewed by "colleagues who have worked extensively with the construct in question or related phenomena" (DeVellis, 2011, p. 100). With experts to review their 35 items, the list was expanded to contain 48 items. Each expert had to have no problems in understanding which item was attributable to a specific factor. When items are suspected to measure more than one factor they are excluded from the item pool (DeVellis, 2011).

Traditionally, scale development has been of interest in psychology and business administration. Parasuraman, Zeithaml and Berry (1985, 1988), for example, develop a scale to measure service quality. They used qualitative, exploratory research findings to define ten dimensions (latent variables or factors) intended to capture service quality (SERVQUAL). The ten dimensions were measured by 97 items (later reduced to 22 items). Approximately half of the items were positively and the other half negatively worded. The degree to which respondents agree with a statement is indicated on a seven point Likert-type scale, showing whether they strongly agree (7) or strongly disagree (1).

The procedure in this study for developing a scale parallels the efforts of Parasuraman, Zeithaml & Berry (1988) and Choi et al. (2007) and follows the recommendations of DeVellis (2011) and Churchill (1979).

Method, model and definitions

In this study, the method to develop a scale is based on Churchill (1979) and Parasuraman, Zeithaml and Berry (1988), and outlined in figure 1.

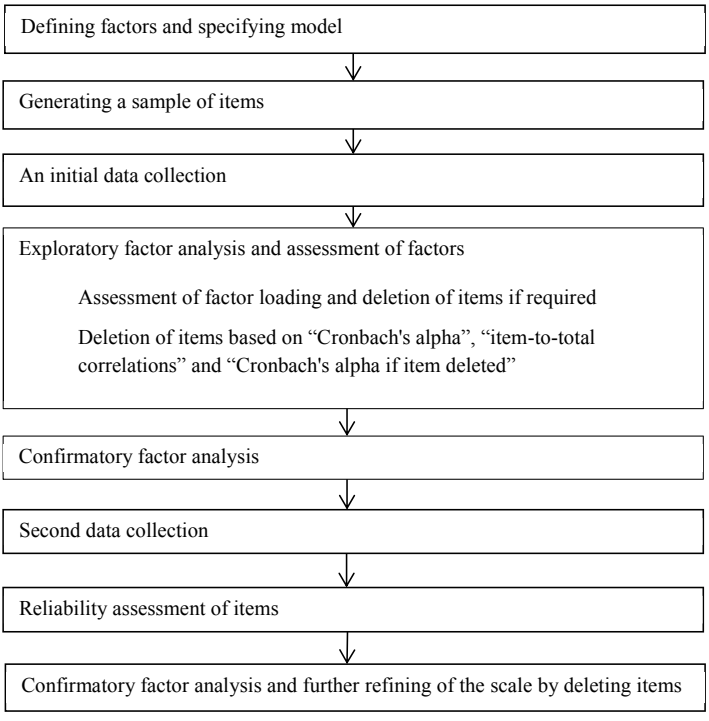

Figure 1: The scale development procedure in this article

Drawing on the literature, a model with six factors is proposed. The model assumes that the performance of cultural institutions determines to what extent individuals perceive the outcomes outlined figure 2.

Definition of factors

Perceived contribution to economic development: The contribution made by cultural institutions to the economy is partly discussed in terms of tourism impacts. This is particularly true for art-related events and festivals, but also for operas, theatres and concert halls. Items are therefore designed to capture whether or not cultural institutions are

perceived as positively affecting the local economy through tourism. Other themes for generating items consider entrepreneurship, level of income and company start-ups.

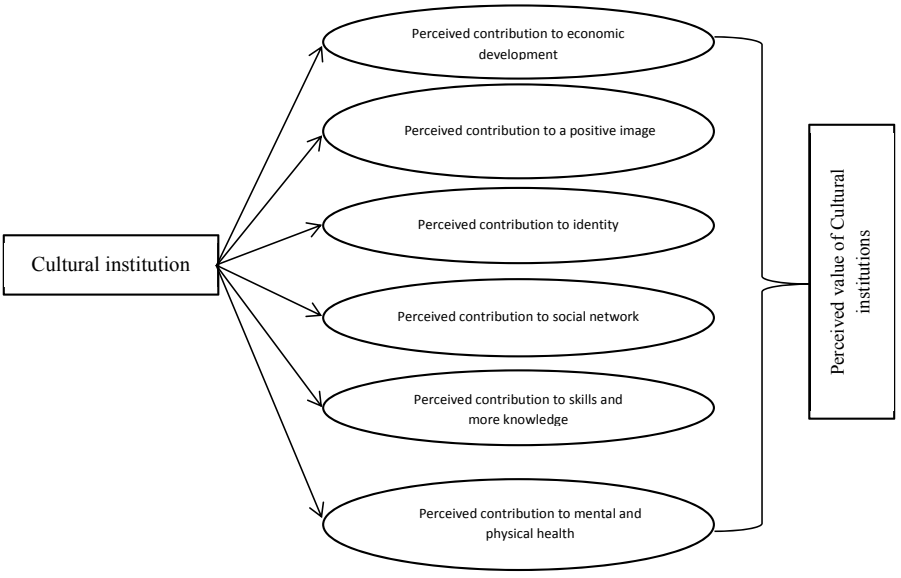

Figure 2: Model specification

Perceived contribution to a positive image: It is assumed that cultural institutions positively affect the perceived image of a destination. A positive image, in turn, may render a place more desirable to live in. Items in the scale need to capture the contribution a cultural institution makes in terms of attractiveness and the perceived image of a place.

Perceived contribution to identity: Cultural institutions foster cultural skills for understanding one's own and other societies. This effect may result in a better understanding of oneself, and the society one lives in, and ultimately affect the individual's identity. The scale items are formulated to capture the extent to which they affect cultural skills, individuals' self-perception and identity.

Perceived contribution to social network: Cultural institutions provide a public space that facilitates meetings between individuals. Meetings and social interaction affect the social ties between individuals and/or organizations. To capture the social value, items are therefore formulated to capture the perceived contribution to meetings between people and the extent to which they affect political influence and inclusion/exclusion in society.

Perceived contribution to skills and knowledge: While cultural institutions provide arts education, they also transmit skills and knowledge that affect school performance in

subjects such as maths and reading ability. Furthermore, cultural institutions disseminate skills that are not easily attainable in other contexts. The process of creation and creativity are two examples. For the process to formulate items, creativity and the dissemination of skills and knowledge will therefore be considered.

Perceived contribution to mental and physical health: Research has shown that mental and physical health are interrelated. Because individuals may perceive it difficult to judge physical health in relation to cultural institutions, the items focus primarily on individuals' mental health.

Generating a sample of items

To develop a scale, it is necessary to formulate items that reflect the six latent variables (factors) (DeVellis, 2011). The items in this study are based on previous research, as well as an exploratory study (Armbrecht, 2013) aimed at understanding the aspects individuals perceived as valuable in regard to cultural institutions. This initial process of item construction yielded 54 items. Once the items were formulated, colleagues were invited to suggest three items for each factor and to review the 54 *a priori* formulated items. During a seminar, the suitability of existing, and possible expansion with new items, was discussed (DeVellis, 2011; Sellitz, Wrightsman, & Cook, 1976). The new list contained 63 items.

In accordance with the recommendations of DeVellis (2011), a seven point scale was used to measure the extent of agreement with each statement. (1) was assigned to the text "strongly agree", and (7) was assigned "strongly disagree". The mid-point (4) was defined as a neutral point ("neither agree nor disagree"). All the other points had no labels. When constructing the questionnaire, the items were mixed in a different order than the one in which they are presented in table 2, so respondents would not recognize the six factors.

Apart from the 63 item-statements, the questionnaire contained a short introduction about the aim and purpose of the study. Background questions concerning the respondents' socioeconomic characteristics, culture habits and interests were added.

Table 2: Items intended to measure each factor[16].

Perceived contribution to identity	**Perceived contribution to skills and more knowledge**
The cultural institution (CI) contributes to increased quality of life	The CI helps children in the region obtain good grades in school
The CI does not increase the interest in art and culture among young people	The CI disseminates important knowledge
The CI helps me to understand other cultures	The CI enables learning
The CI is an irrelevant legacy from the past	The CI contributes positively to creativity
The CI affects the quality of other cultural institutions positively	The CI can disseminate knowledge that is otherwise hard to find
The CI increases my understanding of society	The CI promotes democracy
The CI affects how well I succeed at work	The CI does not help children in the region obtain broader skills
The CI does not affect how I see myself	The CI affects children's' performance in school positively
The CI provides no new or different solutions to problems	The CI breeds creativity
The CI makes me look positively upon other people	**Perceived contribution to economic development**
The CI is significant as part of a culture system	The CI is good for the region's economic development
The CI affects future generations' identity positively	The CI makes the region attractive for start-ups
The CI helps me understand why I am who I am	The CI impacts positively on my friends'/relatives' finances
The CI increases tolerance in society / the region	The CI gives birth to new businesses
The CI helps me understand society	The CI creates good conditions for tourism
	The CI does not lead to more entrepreneurship
Perceived contribution to social network	The CI does not create new jobs
The CI reduces exclusion in the region	The CI inspires starting one's own business
The CI means that I have good social contacts	The CI impacts on my own income positively
The CI means that I and my family / friends get together	The CI helps businesses in the region earn money
The CI provides few opportunities to make new contacts	The CI is good for the local economy
The CI promotes equality	**Perceived contribution to a positive opinion about a region among non-locals**
The CI contributes to a prosperous society	The CI is a good tourist attraction
The CI helps to develop business contacts	The CI is something I want to be associated with
The CI creates positive meetings	The CI is good advertising for the region
The CI implies meetings between people who would otherwise not meet	The CI is an important motivation for visiting the region
The CI does not affect integration processes positively	The CI is not a reason for the region being attractive
The CI affects individuals' political influence positively	The CI does not make me proud, when I tell others where I live
	The CI is one reason I live / still live in the region
Perceived contribution to mental and physical health	The CI creates a good image of the region among people who do not live in the region
The CI makes the elderly in the region feel better	The CI makes me proud when I can read about it in the newspaper
The CI reduces stress	
The CI helps the elderly in the region remain mentally vital	The CI makes the region attractive to move to
The CI makes me relax	The CI makes the region more attractive to live in
The CI makes me feel good	The CI makes me proud when I hear about it on TV or radio

[16] Henceforth, CI is used as an abbreviation for Cultural Institution. In the questionnaire, CI was replaced by one of the three surveyed institutions (opera, museum or concert hall). When studying the opera, the wording of the third item, for example, would then become: 'The Göteborg Opera House helps me to understand other cultures. All items are translated from Swedish.

An initial data collection

An initial data collection was conducted to test and refine the appropriateness of the item-list. Three groups of students (randomly) sampled 60 respondents each, at three cultural institutions: 1) the Göteborg Opera House, 2) the Göteborg Concert Hall and 3) the Göteborg City Museum (hereinafter referred to as opera, concert hall and museum). The sampling was conducted just inside, or outside, the entrance to each institution. Additionally, each group sampled 60 respondents randomly to represent the 'average Gothenburg citizen'. These were sampled at traffic nodes, on streets and other places where many people pass by. Respondents interested in participating in the survey were informed about the background and aims of the survey and were asked to give their e-mail address. An information sheet about some of the survey questions was also handed out. It was stressed that the respondents would remain anonymous. The next day, an e-mail including a link to the survey tool and the web-based questionnaire was sent to the respondent. Contact information to a researcher was included if respondents had any queries.

Table 3: Non-response analysis

	A	**B**	**C**	**response rate D = C/(A-B)**
Study object	collected e-mail addresses	incorrect addresses	answers	response rate
Opera	120	7	60	53%
Concert hall	120	5	67	58%
Museum	120	6	56	49%
TOTAL	**360**	**18**	**183**	**54%**

Two reminders were sent out. The first was sent out three days after, and the second six days after, the initial contact. The survey was closed after eight days. 183 persons answered the questionnaire. After exporting the data from the web-survey tool (Webropol) to Excel and SPSS, the data was cleaned and coded. All negative items were recoded and the data checked for appropriateness.

Exploratory factor analysis - principal component analysis

Principal component analysis (PCA) represents a factor analytical method for empirically testing whether correlating variables (items) can be summarized as components (factors) (Tabachnick & Fidell, 2006). PCA was used to analyse if the 63 items could be expressed by a smaller number of factors. Prior to the analysis, the suitability of the data was controlled. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.917, exceeding the recommended value of 0.6 (Kaiser, 1970, 1974). Bartlett's Test of Sphericity yielded a

significant value (p = 0.000), supporting factorability. A visual check of the correlation matrix identified many coefficients above 0.3, as suggested by Tabachnick and Fidell (2006). The principal component analysis yielded 13 components (factors) with an Eigenvalue above 1 (table 4), explaining 74.3 per cent of the total Variance.

Table 4: The figure presents the number of components, the Eigenvalue for each factor and the accumulated % of variance explained.

Component	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Initial Eigenvalues	25.7	5.0	3.1	2.3	2.1	1.8	1.7	1.6	1.3	1.2	1.2	1.1	1.0
Accumulated % of Variance explained	39.0	46.6	51.3	54.7	57.9	60.7	63.3	65.5	67.6	69.4	71.2	72.8	74.3

Using Eigenvalues, to determine how many factors to include in the model, would deliver a total number of 13 factors. A large number of factors however may negatively impair on the parsimony of the model. Furthermore, the use of Eigenvalues to establish a cut-off is recommended primarily when the number of factors is between 20 and 50. If the number of factors is larger or smaller, other methods may be used (Hair, Black, Babin, & Anderson, 2010). The Scree test (figure 3) is an alternative criterion for determining the number of factors to extract.

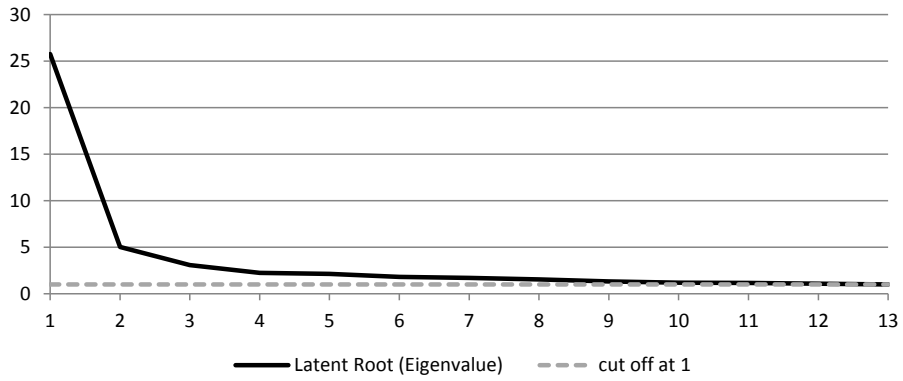

Figure 3: Explained variance (scree plot)

The Scree test can be interpreted as indicating an elbow (i.e. cut-off) after 2 factors alternatively 3 or 4. Initial attempts were made to find two logical and consistent factors

reflecting 1) a distinction between items referring to oneself, e.g. "I" and those items that refer to others, primarily "society" or "region". 2). Thereafter, a two factor model was estimated, with one factor reflecting 'economic development' and the other 'cultural value' as determined by items on health, social, education, identity and image, in the spirit of Throsby (2003). No logical structure was achieved in either of the cases.

Because the literature suggests it may be difficult to disentangle some factors as distinct ones, further attempts were made to develop a 3, 4 or 5 factor model by collapsing some pre-defined factors. The social and cultural factors were summed up, for example, into a socio-cultural factor. Another attempt was to collapse the perceived cultural value with education, since cultural capital also may represent the benefits of increased cultural skills and knowledge. A third test was to collapse perceived health related benefits with social benefits. Despite several attempts to extract three, four or five factors, no satisfactory model that was logically consistent was obtained. Therefore, based on the literature, the six factor model as proposed in figure 2 was tested.

Hinkin (1995, p. 975) and Landau & Everitt (2003, p. 299) propose that it is only suitable to retain items with a factor loading exceeding 0.4. Items not complying with this criterion were removed. Furthermore, items loading more than 0.4, on more than one factor, were deleted as far as possible.

Having reached satisfactory cleanliness and fit, using the method proposed by Hinkin (1995) and Landau & Everitt (2003), the PCA proposed a model with six, seven or eight factors. If seven instead of six factors are used in the PCA, the IMAGE items split in two factors, instead of the one, as in the six factor model. If eight factors were used, SOCIAL also becomes two factors, all else being equal. Considering these results, and the initially proposed model, six factors were regarded appropriate for further analysis.

A criterion for testing internal consistency is to use Cronbach's alpha (reliability coefficient) (Cronbach, 1951). DeVellis (2011) proposes that the reliability coefficient should exceed 0.7. For each of the six factors, Cronbach alpha was used as a tool to decide which items to retain and which to discard (Churchill, 1979; Cronbach, 1951) and thus used to purify the instrument (Parasuraman et al., 1988). An iterative process, using coefficient testing and PCA, reduced the number of items to 28, reflecting six factors. The result in terms of coefficient alpha and factor loadings is shown in table 5.

Table 5: Principal component analysis and coefficient alpha.

Rotated Component Matrix

	Component					
	Factor 1	Factor 2	Factor 3	Factor 4t	Factor 5	Factor 6
Cronbach's alpha	0.885	0.857	0.866	0.858	0.798	0.75
The CI makes me proud when I hear about it on TV or radio	.784		.426			
The CI makes me proud when I can read about it in the newspaper	.705					
The CI makes the region more attractive to live in	.699					
The CI creates a good image of the region among people who do not live in the region	.684					
The CI is good advertising for the region	.634					
The CI is an important motivation for visiting the region	.553				.408	
The CI enables learning		.815				
The CI can disseminate knowledge that is otherwise hard to find		.718				
The CI disseminates important knowledge		.683				
The CI helps children in the region to obtain broader skills		.611				
The CI affects the learning process positively		.599	.435			
The CI helps me understand why I am who I am			.763			
The CI makes me look positively upon other people			.646			
The CI helps me understand society		.520	.627			
The CI affects how well I succeed at work			.622		.402	
The CI increases tolerance in society / the region			.556			
The CI helps businesses in the region earn money				.815		
The CI is good for the local economy	.416			.750		
The CI gives birth to new businesses				.718		
The CI increases entrepreneurship in the region				.653		
The CI is good for the region's economic development				.548	.415	
The CI makes the elderly in the region feel better					.665	
The CI reduces stress					.631	
The CI helps the elderly in the region remain mentally vital					.575	
The CI provides good opportunities for making new contacts						.800
The CI means that I have good social contacts					.455	.593
The CI results in meetings between people who would otherwise not meet						.561
The CI reduces exclusion in the region					.456	.516

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 11 iterations.

The table shows the six factors and their respective Cronbach alpha coefficients. The cut-off for inclusion in table 5, was 0.40. The factors conform to DeVelli's (2011) and Nunnally's (1967) requirement that Cronbach's alpha should exceed 0.7. Cronbach alpha values between 0.80 and 0.90, as for the first four factors, are considered good (DeVellis, 2011; Nunnally, 1967). Factor loadings vary between 0.402 and 0.815. All items load significantly on each factor with respect to sample size (Hair et al., 2010, p. 117). Nine

items load higher than 0.40 on more than one factor, indicating a multidimensionality of components (Hair et al., 2010, p. 117). Items [*The CI helps me understand society*], [*The CI means that I have good social contacts*] and [*The CI reduces exclusion in the region*] load higher than 0.450 on other than the predicted factor.

In regards of factor labels, DeVellis (2011) suggests using the first item of each factor in the PCA as a 'window' understand the latent variable. This is particularly relevant in exploratory analyses, when there is no theory about latent variables available.

For the first factor, the first item (*The CI makes me proud when I hear about it on TV or radio*) loads 0.784. The second item (*The CI makes me proud when I can read about it in the newspaper*) loads 0.705 and refers to a feeling of pride. One option therefore is to label the first factor 'pride'. Referring back to table 2, the first two items, as well as the subsequent three, belong to the a priori formulated factor '*Perceived contribution to a better image*'. The items are summarized under the concept of IMAGE.

For the second factor, the first item (*The CI enables learning*), as well as the subsequent five, reflect items that were formulated to reflect the factor initially labelled '*Perceived contribution to skills and more knowledge*'. EDUCATION AND SKILLS also reflects the items loading on factor two.

The third factor has '*The CI helps me understand why I am who I am*' as the item, loading the highest. The first, and the other four items, loading on factor 3 are all items that refer to '*Perceived contribution to identity.* To obtain short factor labels, factor 3 is labelled IDENTITY.

The next factor has '*The CI helps businesses in the region to earn money'* as the item loading most. All items loading on factor four have in common that they were formulated to reflect '*Perceived contribution to economic development*', which is from now on labelled ECONOMIC DEVELOPMENT.

The fifth factor consists of three items. The first says 'The *CI allows the elderly in the region feel better*'. Similarly, the other two items were articulated to reflect '*Perceived contribution to mental and physical health'*. From here, on this factor is labelled HEALTH.

Factor number six has '*The CI provides good opportunities to make new contacts*' as the item loading highest. Similarly with the following three items, factor four is determined by items that were formulated to reflect '*Perceived contribution to social network'*. From here on, factor six is labelled SOCIAL.

Further refinement of the scale

Using "Cronbach's alpha if item deleted" yielded a further reduction to 23 items ([*The CI* m*akes me proud when I hear about it on TV or radio*], [*The CI creates a good image of the region among people who do not live in the region*], [*The CI disseminates important knowledge*], [*The CI makes me look positively upon other people*] and [*The CI increases tolerance in the region*] were removed)

Using 23 items, the PCA (OBLIM rotation) yields a Kaiser-Meyer-Olkin Measure of Sampling Adequacy of 0.902, clearly exceeding the recommended value of 0.6 (Kaiser, 1970, 1974; Tabachnick & Fidell, 2006, p. 614). Bartlett's Test of Sphericity yielded a significant value (p = 0.000), supporting factorability. The six factors represented by the 23 items explain 70 per cent of the total variance.

Confirmatory factor analysis

To determine how well the measured model fits the data, a confirmatory factor analysis (CFA) was used. The six factor model measured by 23 items was tested. The model is shown in figure 4.

The fit measures, as proposed by Hair et al. (2010) and Hu and Bentler (1999), were used to assess the model. A small chi-square (χ^2), and large p-value, indicates that the model describes the data well. In the current analysis, chi-square is 394 and p-value is significant (p=0.000). Iacobucci (2010) argues that a large number of respondents will inflate χ^2, and "χ^2 will almost always be significant (indicating a poor fit), even with only modest sample sizes" (Iacobucci, 2010, p. 91) as is the case in the current study. As a consequence "it has been suggested, with some consensus in the psychometric literature, that a model demonstrates reasonable fit if the statistic adjusted by its degrees of freedom does not exceed 3.0" (p. 91). This conception corresponds to earlier literature, where the generally accepted cut-off point for chi-square statistics adjusted by degrees of freedom should be less than 5, preferably less than 2 (Byrne, 1989; Carmines & McIver, 1981; Marsh & Hocevar, 1985). The current study meets these requirements: CMIN/DF (Chi-square in relation to freedom) = 1.851.

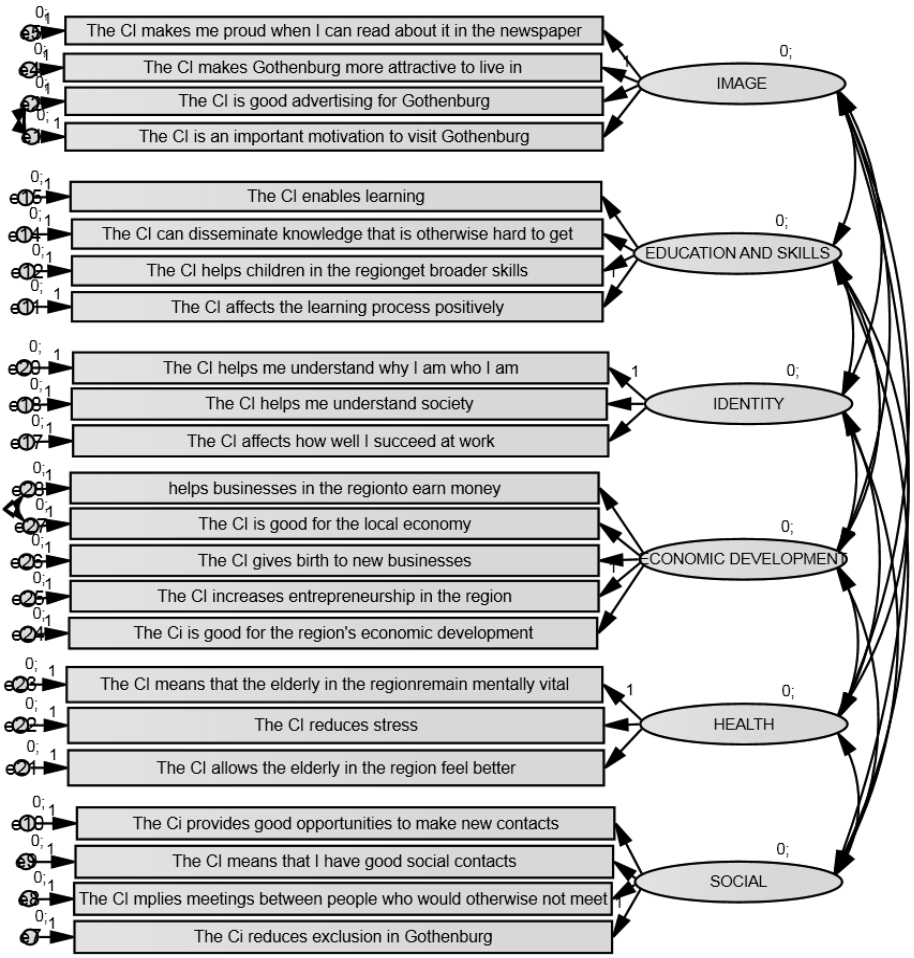

Figure 4: A preliminary six factor model measured by 23 items

Another relevant fit measure is the comparative fit index (CFI) (Iacobucci, 2010). CFI is an incremental fit index and it is based on NFI. Whereas NFI "is a ratio of the difference in χ^2 value for the fitted model and a null model divided by the χ^2 value of the null model" (Tabachnick & Fidell, 2006, p. 668) CFI is normed to generate an output value between 0 and 1 (Bentler, 1990; Bentler & Bonett, 1980). A value above 0.9 is considered a good fit (Bentler, 1990; Bentler & Bonett, 1980). The CFI for the present model is 0.916.

The RMSEA (root mean square error of approximation), a third fit measure, is one of the most widely used fit indices. RMSEA indicates how well a model fits a population, correcting for model complexity and sample size. In the model RMSEA is 0.068, which according to Browne and Cudeck (1993) meets the fit requirements. A modest refinement of the model was reached using *modification indices* and *standardized residual covariance*[17] among some items.

Second data collection

To further evaluate item suitability and construct robustness, a second set of data was collected. The data for testing the model derives from a sample of e-mail addresses for visitors to the Nordic Watercolour Museum collected two years before. The sample consists of 508 e-mail addresses for randomly approached respondents. To be selected as a respondent, each respondent was required to be older than 16 years. Out of 508 e-mails, 483 reached a respondent and 166 respondents filled in the questionnaire correctly. 317 respondents failed to answer the survey for some reason. The response rate is 33 %.

Reliability assessment of items

The data was first cleaned and then analysed using PCA. Kaiser-Meyer-Olkin Measure of Sampling Adequacy in the second phase yields a value of 0.908, exceeding the recommended value of 0.6 (Hair et al., 2010; Kaiser, 1970, 1974; Tabachnick & Fidell, 2006). Bartlett's Test of Sphericity yielded a significant value ($p = 0.000$), supporting factorability. A visual check of the correlation matrix showed many coefficients above 0.3 (Tabachnick & Fidell, 2006, p. 614).

The aim of the second data collection and analysis is to refine the scale and to reassess the robustness of the model and scale items (Churchill, 1979). This is done by computing and assessing coefficient alpha (reliability coefficient) and item-to-total correlations for each factor against the new data (cf. Parasuraman et al., 1988). Thereafter CFA was used to test the model.

[17] There is an on-going discussion on whether the correlation of residuals is an appropriate way to increase model fit. Among others, Fornell (1983), Gerbing & Anderson (1984) and Bagozzi question the correlation of measurement residuals. (If error terms are kept uncorrelated, CMIN/DF = 2.134; CFI = 0.887; and RMSEA = 0.079).

Cronbach's alpha for each of the six factors indicates good internal consistency. DeVellis (2011, p. 109) considers alpha values above 0.7 to be respectable. Table 6 presents all factors are above 0.7. HEALTH and ECONOMIC DEVELOPMENT are above 0.8, which may be considered acceptable internal consistency (DeVellis, 2011 p. 109).

Table 6: Item-total statistics and Cronbach's alpha reliability coefficient[18]

	Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha for factor	Cronbach's Alpha Based on Standardized Items	N of Items
IMAGE	The CI makes me proud when I can read about it in the newspaper	.622	.670	0.762	0.784	4
	The CI makes the region more attractive to live in	.518	.754			
	The CI is good advertising for the region	.596	.700			
	The CI is an important motivation for visiting the region	.594	.701			
SOCIAL.	The CI provides good opportunities to make new contacts	.325	.770	0.719	0.734	4
	The CI means that I have good social contacts	.716	.545			
	The CI implies meetings between people who would otherwise not meet	.554	.631			
	The CI reduces exclusion in the region	.493	.667			
EDUCATION AND SKILLS	The CI enables learning	.622	.635	0.74	0.75	4
	The CI can disseminate knowledge that is otherwise hard to find	.573	.664			
	The CI helps children in the region obtain broader skills	.376	.778			
	The CI affects the learning process positively	.603	.638			
HEALTH	The CI helps the elderly in the region remain mentally vital	.676	.807	0.839	0.841	3
	The CI reduces stress	.681	.797			
	The CI makes the elderly in the region feel better	.757	.727			
IDENTITY.	The CI helps me understand why I am who I am	.699	.526	0.754	0.759	3
	The CI helps me understand society	.618	.645			
	The CI affects how well I succeed at work	.460	.813			
ECONOMIC DEVELOPMENT	The CI helps businesses in the region earn money	.701	.834	0.866	0.865	5
	The CI is good for the local economy	.564	.866			
	The CI gives birth to new businesses	.748	.822			
	The CI increases entrepreneurship in the region	.737	.825			
	The CI Is good for the region's economic development	.693	.837			

[18] CI is an abbreviation for Cultural Institution. In the second data collection stage, 'CI' was replaced by Nordic Watercolour Museum. When studying the Nordic Watercolour Museum the wording of the first item would then have been: The Nordic Watercolour Museum makes me proud when I can read about it in the newspaper.

The "Cronbach's Alpha if Item Deleted" column reveals that the internal consistency of some factors (IMAGE, EDUCATION AND SKILLS and IDENTITY) would benefit from removing some items. The Corrected Item-Total Correlation column shows fair results. However, four items have lower Item-Total Correlation than the suggested .50: [*The CI provides good opportunities to make new contacts*]; [*The CI reduces exclusion in the region*], [*The CI helps children in the region obtain broader skills*], [*The CI affects how well I succeed at work*]. So far, however, the aim is to keep the model intact for confirmatory factor analysis.

Refining the structural model

The model developed in the first round consisting of six factors and 23 items is tested against the data collected at the Watercolour Museum. Using the model from the first confirmatory factor analysis and the data from the second round, the model fit was evaluated using recommendations from Hu and Bentler (1999). Relevant measures to be considered are, first, the chi-square statistics adjusted by degrees of freedom. The chi-square for the second round was 480.921, leaving 213 degrees of freedom. The accepted cut-off point for chi-square statistics adjusted by degrees of freedom < 3 is met (480.921/213 = 2.258) (Hu & Bentler, 1999). With regards to CFI (comparative fit index), Bentler (1990) and Bentler & Bonnet (1980) suggest that values above 0.9 are to be considered as good. For the current model, the CFI is .869. The RMSEA (root mean square error of approximation) in the model results in 0.087, which does not meet the strict fit requirements, but is still considered acceptable (Browne & Cudeck, 1993).

Further analysis indicates low regression weights for the following items: [*The CI is good for the local economy;* .554], [*The CI provides good opportunities to make new contacts;* .390], [*The CI makes the region more attractive to live in; .425*] and [The *CI helps children in the region obtain broader skills;* .587*]*. Two of these items also had low Item-Total Correlation. Removing the four items, and using *modification indices* and *standardized residual covariance* to reduce chi-square, resulted in a 19-item scale.

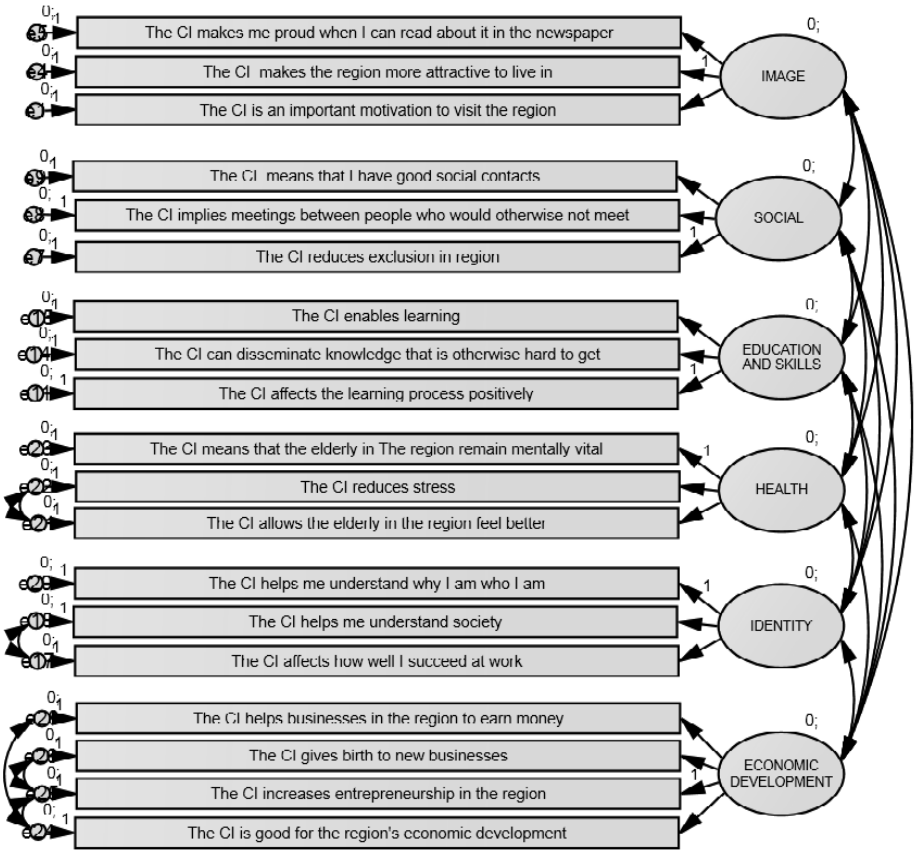

Figure 5: A six factor scale measured by 19 items

The refined 19-item model as outlined in figure 5, yielded the following results: chi-square adjusted by degrees of freedom: 2.053; CFI: .920; RMSEA: .080. The new somewhat adjusted model results in a better fit and solves the problems with corrected item-total correlation mentioned earlier. (If error terms are kept uncorrelated, CMIN/DF = 2.273; CFI = 0.899; and RMSEA = 0.88).

Conclusions and discussion

This study has developed a scale for measuring how individuals perceive the value of cultural institutions. Based on previous research and a qualitative study, a six factor model and suitable items for measurement were formulated. Using two data sets, the model was then refined using exploratory and confirmatory factor analysis. The resulting model

suggests that the perceived value of cultural institutions may be measured by six factors: image, education, health, economic development, social relationships and identity/cultural capital.

The decision to model six factors is based primarily on the literature. Statistical methods were used to test the model developed. The results support the six factor model. Items, with high (above 0.40) values on more than one variable (as shown in table 5) are an issue to be considered in the model. Social and cultural values are examples. They are sometimes also referred to as socio-cultural values, since they are difficult to distinguish. Efforts to refine the scale may increase the predictive power of the scale.

The data was mainly derived from physical cultural institutions such as museums, and a theatre, providing visual and music experiences. They may be subsumed under 'the fine arts'. To understand the scale's suitability for measuring the value of other cultural phenomena, further applications, for example, to libraries and festivals, possibly also sports, are suggested.

Similar to the scale, economic methods for assessing the created value of cultural institutions rely on the preferences of individuals. Comparing the results from applying the scale with those from a non-market valuation may allow conclusions to be drawn about their relatedness. Possibly, such a comparison might also allow investigating the factors that determine the perceived value of cultural institutions.

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