Article

Embedding Effects in Contingent Valuation Applications to Cultural Capital: Does the Nature of the Goods Matter?

Patrizia Riganti

School of Interdisciplinary Studies, University of Glasgow, Rutherford/McCowan Building, Bankend Road, Dumfries DG1 4LZ, Scotland, UK; patrizia.riganti@glasgow.ac.uk

Abstract: The paper's argument is that the specific characteristics of cultural heritage goods help minimise insensitivity to the scope, also known as the embedding effect, of contingent valuation (CV) estimates. This bias happens when estimates of willingness to pay (WTP) do not increase with the quantity of the goods presented, as expected from economic theory. The presence of such effect has been actively debated in the literature since it raises major concerns about the validity of the method itself and its uses within a social cost benefit analysis framework. The research presented in this paper discusses one of the few methodological studies testing the embedding effect within and across samples for cultural heritage goods. The research uses empirical data gathered from three independent and comparable samples focusing on the archaeological park of Campi Flegrei in Italy and two of its components: the Castle of Baia and the archaeological park of Cuma. Findings successfully prove that CV estimates relate to the quantity being valued and could be used with confidence by policy makers concerned with an inclusive, sustainable approach to cultural capital management.

1. Introduction

The global commitment towards sustainable development goals (SDGs) has highlighted the importance of safeguarding natural and cultural heritage to achieve sustainable cities and inclusive communities [1]. Monuments, historic urban landscapes and historic cities are among the tangible expressions of the culture of a place, a region, or a nation. Artistic objects, such as sculptures and paintings, constitute movable expressions of the creativity of a community, together with music, literature, and the products of other creative industries. The combination of tangible and intangible expressions of cultural heritage represents the cultural capital of a community [2,3].

The debate around SDGs has further argued that the conservation of cultural capital is a prerequisite for local sustainable development. Cultural heritage in all its forms is the expression of a community's history and identity that must be preserved for the benefits of current and future generations [4,5]. However, this implies investment for the protection of cultural goods in the face of various risks, often in a regime of scarce resources. The severe environmental hazards caused by poor air quality, traffic congestion, and overexploitation of heritage sites, are some of the threats that all countries are currently experiencing at some level [6]. The damage to heritage may be irreversible and cause the destruction of a central part of a community's cultural identity. Urban development might also represent a threat to cultural heritage conservation. Policy makers are asked to make "trade-offs" between urban development instances and conservation needs for the wellbeing of their communities [7]. Social Cost Benefits Analysis (SCBA) is usually the tool used by local or national governments to make these choices. However, whilst the costs of conservation/adaptive reuse of cultural heritage sites might be easily assessed, the social benefits associated with it are difficult to measure. To this day, there is still only one economic

valuation technique, Contingent Valuation (CV), which is capable of expressing in monetary terms the preferences of respondents for conservation strategies/policies/programmes for the purpose of SCBA. CV is a survey-based technique aiming to trace the latent demand curve for goods that cannot be exchanged in regular markets (e.g., air quality, conservation of cultural heritage, etc.). Despite the many controversies around the validity and reliability of Contingent Valuation (CV) estimates [8–10], this technique remains the best alternative to elicit the monetary values associated with non-market goods [11].

The potential of CV and related non-market valuation techniques based on stated preferences (e.g., discrete choice experiments, conjoint analysis, etc) has been recognised in the UK political debate. The Department of Culture Media and Sport (DCMS) in the UK has recently published a framework for the economic valuation of cultural heritage [12] with the intent of helping policy makers consider the economic values associated with the conservation of cultural capital within a SCBA framework, similarly to that for natural capital valuation by the HM Treasury Green Book [13]. The DCMS has also identified areas for further research, in order to improve the level of confidence of policy makers adopting such techniques in their decision-making process. Reducing the occurrence of major sources of bias in estimates is one of them.

The debate around the validity of CV estimates has been vocal from its beginning. However, since the publication of the National Oceanic and Atmospheric Administration (NOAA) panel guidelines [14], researchers have developed ways of minimizing the most important sources of bias in CV studies which can potentially undermine the use of these techniques within a SCBA framework [15,16]. A major controversy surrounding contingent valuation studies has been the fundamental issue of insensitivity to scope, also known as the embedding effect. Since the seminal work of Kahneman & Knetsch, who first found an absence of scope effect in their CV study, a heated debate has spurred on the actual validity of the valuation method itself [17]. In fact, if CV estimates showed no effect of the quantity being sold in the hypothetical market created by the CV scenario, then the main economic theory principle that willingness to pay (WTP) increases with the quantity of the consumed goods would be defied. Several methodological studies were developed in the 1990s addressing the issue of bias minimization to increase the validity and reliability of CV estimates for environmental goods [18–20]. However, only a few studies focused on the issues of insensitivity to scope/embedding effects in the case of cultural goods [21,22].

In recent years, the debate on embedding effects/insensitivity to scope in CV studies has regained momentum. Several key contributions have been published in the literature on this important issue [23–27], but they all refer to environmental goods. A recent paper reviews the literature debate on diagnosing insensitivity to scope in contingent valuation applied to environmental goods [28]. The authors identify four broad categories of explanations for the presence of scope insensitivity in CV, as suggested by the published research. Among them are how people relate to environmental goods and issues in survey design. In other words, insensitivity to scope might be due to the way respondents relate to the goods, or the way the survey has been designed. The study presented here addresses both points. An internal and external scope test is undertaken, arguing that an appropriate survey design might minimise the embedding effect, and that the way people relate to the nature/characteristics of cultural goods matters might also help to this extent. The way the study was shaped follows the Diamond and Hausman adding-up test [9], also mentioned by Hausman [27] as the ultimate scope test. According to Hausman [27], in a review of 109 CV studies applying a scope test [24] only one was designed in a way which allowed an adding up test. However, more recently, Lopes et al. [28] mention that one study by Bishop et al. [29] utilises an external scope test, successfully passing it.

Despite the reignited debate around environmental goods, to date there is no existing research investigating embedding effects in relation to cultural goods, except for the previous work by the author of this paper [21,22]. This, coupled with the ongoing academic [7] and policy [12] debate, identifies a crucial research gap that the present paper aims to address. Testing for embedding effects in CV estimates is an important step to be resolved

in order to encourage the use of stated preference techniques for sustainable and inclusive decision making with regard to cultural heritage/capital. The social sustainability aspect is inherent to the survey-based nature of the technique itself. The estimation of the values associated with cultural heritage conservation programmes through CV is highly participatory in nature, addressing the need for a more inclusive approach to heritage management.

This paper presents the results of previously unpublished research on embedding effects for cultural goods stemming from the author's earlier work on the topic [21,22]. The main research question addressed by this study is whether CV studies applied to tangible cultural goods, such as urban heritage, show embedding effects and, if not, whether this might be due to the specific characteristics of the goods being valued.

The study reported in these pages explores whether CV values estimated for different components of an archaeological park in Italy are consistent with economic theory and pass an insensitivity to scope test. This is analysed using empirical data gathered from three independent and comparable samples focusing on the archaeological park of Campi Flegrei in Italy and on two of its components: the Castle of Baia and the archaeological park of Cuma. This CV survey was designed to estimate WTPs for social benefits associated with the conservation of the cultural heritage incorporated in Campi Flegrei, also eliciting values associated with subsets of this larger complex.

Findings prove the presence of scope effects in the estimates, therefore rejecting the null hypothesis regarding embedding effects, establishing for the first time a link with the nature of cultural capital. Respondents express WTPs that are related to the quantity of the goods described in the scenarios (a whole archaeological park, or individual subparts of it) as we would expect from economic theory. The main argument is that archaeological sites, or more generally cultural goods, possess peculiar characteristics, which can minimise embedding effects. People seem able to perceive the differences in scope of these commodities and, when fairly described and presented, to distinguish among their main attributes and values. Respondents taking part to the survey seem to clearly understand issues regarding unrestricted or restricted access to these goods (which represent their use and option values), as well as the importance of their existence per se (intrinsic, existence value) or to benefit future generations (bequest value).

The paper is structured as follows: section two discusses the definition of cultural heritage as cultural capital within a sustainability framework, linking economic values to various categories of cultural goods and defining a taxonomy for valuation purposes; section three introduces the study at Campi Flegrei; section four describes the survey data, presenting the results of the econometric analysis and of the insensitivity to the scope/embedding effects test. Section five draws conclusions, discusses policy implications and highlights future research avenues.

2. The Sustainability of Cultural Capital

This section discusses the definition of cultural heritage as an economic capital within the sustainability framework. Economic valuation can become a tool for decision makers concerned with an inclusive and sustainable management of cultural heritage. The identification of units of assessments of urban cultural heritage, linking economic values, categories of cultural goods and valuation techniques, such as CV, when the purpose is to assess non-use values, is also discussed in this section. Such a framework could help decision makers understand which kind of value estimates should be incorporated within SCBA. As a consequence, this reflection sheds a light on the importance of research aimed to minimise sources of bias, such as embedding effect.

2.1. The Nature of Cultural Capital

The definition of cultural heritage as cultural capital by Thorsby [30] is the fruit of more than a century long debate around the definition of cultural heritage [31] and the different forms of economic capital. According to Throsby, "cultural capital is the stock of cultural value embodied in an asset. This stock may in turn give rise to a flow of goods

and services over time, i.e., to commodities that themselves may have both cultural and economic value. The asset may exist in tangible or intangible form".

Such a definition lies at the boundaries of various disciplines and within a sustainability framework, establishing a parallel between cultural and natural capital, with clear links to the contemporary discourse on environmental and ecological economics [32]. This spurred a debate around the sustainability path of cultural capital and its implication for heritage management and cultural heritage economic valuation [33], which has not been fully explored.

The distinction made between stock and flows, though stemming from basic (neoclassic) economy theory, is rooted in an interdisciplinary understanding of the characteristics of cultural heritage as an economic good, and of where the parallel between cultural and natural capital breaks and cannot be brought forward. Such a distinction is operational and meant to inform economic valuation (both market and non-market). In particular, the economic value of the stock would coincide with the sale price of the asset (now) plus its non-market valuation, and the flow value (per an identified time period) is the value of its use plus non-use benefits. This allows for the identification of valuation techniques (both market and non-market) able to capture either the stock or flow value of the identified asset. Such a definition of cultural capital also embraces the definition of cultural heritage in terms of intra- and intergenerational equity. Cultural capital can be considered as an economic phenomenon when there is an acknowledged relationship between cultural and economic value. A heritage building is defined as such because it is the expression of a community and of shared cultural values. The building (its stock) will have a market (real-estate) value, independently of its cultural significance, but it is the latter which augments the economic value attached to the physical asset. The presence of the building in a site will also produce a flow of benefits (e.g., positive externalities on passers-by or tourists visiting the site).

The definition of cultural heritage has evolved in the last century and is clearly indicated in some ICOMOS Charters. As discussed by Vecco [31], the concept of heritage as inheritance from past generations was substituted with that of "*patrimoine culturel*", or cultural heritage. The Charter of Venice published in 1964 gives a clear definition of cultural heritage highlighting both the importance of preserving heritage for future generations, (intergenerational equity) and its economic dimension. This definition has since become normative and included in several Charters, such as the Washington Charter and the Burra Charter [34]. The Burra Charter links conservation (and potentially management of heritage) to cultural significance of the site, and hence to its *aesthetic, historic, scientific or social value*. This represents a clear shift, from a judgment made by experts on the intrinsic quality of the asset, to the community and their ability to acknowledge those values. Nonetheless, the practice of heritage management and related investment for its conservation has been undermined by a profound disjoint in the heritage science vs economics of conservation discourse. The use of economic valuation techniques might help bridge this gap.

2.2. Cultural Capital as an Exhaustible Resource

As an economic good, cultural heritage shows some important anomalies: there is no clear production function (at least not in the short run) and its demand curve is often latent. The usual market conditions do not hold. To this extent, cultural goods share many features with environmental goods, and the way economists can approach their valuation and understanding. In particular, we can define them as exhaustible, non-renewable resources, which we need to preserve for future generations.

Cultural heritage has another important feature: it is usually unique in nature and sometimes difficult to substitute, even though its loss might be compensated for. Whether or not the loss (or degradation) of cultural heritage may be (ir)reversible, may lead to interesting issues of weak and strong sustainability (e.g., how much should we preserve, and what can substitute/compensate for the loss of heritage)? In any case, the social value of cultural heritage cannot be assessed by means of normal market transactions.

The financial value of an outstanding cultural landmark cannot be obtained by a supply and demand process in a cultural heritage market, as the usual conditions for market transactions (full information, alternative choices, consumers' sovereignty with known preferences, absence of monopoly positions, properly defined ownership conditions and absence of external effects) are lacking.

The fact that the economic valuation of social benefits is fraught with many problems does not diminish the relevance of this endeavor. The processes and procedures through which cultural heritage derives its socio-economic value are not unambiguous. In other words, financial values (obtained via market transactions) and existence values (derived from societal valuation) are mixed up in a less transparent way. Within this framework and similarly to natural capital, cultural heritage management can be defined as the optimal exploitation path for this special category of non-renewable resources. Given the great number of variables involved, this path is not unique, and we may need to assess different management options for every given policy issue, considering notions of substitutability and weak/strong sustainability. In this context, economic valuation techniques become essential tools to assess the social benefits associated with alternative management/intervention options and to support sustainable and inclusive decision making. To this extent, it becomes paramount that estimates are elicited with a good degree of confidence in their validity and biases are reduced to a minimum.

2.3. Valuing Cultural Capital for Policy Purposes

Recent meta-analysis of CV applications for cultural heritage [35,36] have highlighted an increase in the number of studies since the previous analysis conducted by Noonan [37]. Despite this, the number of CV studies in various forms (Choice Experiments, etc.) are still relatively limited with respect to the research conducted in environmental economics [38]. In recent years, the debate surrounding the economic dimension of cultural capital [9,39,40] has focused on the need to estimate the value of cultural capital for decision making [41]. Nonetheless, studies are limited and there is the need to enhance non-market valuation techniques and increase applications to cultural capital to provide evidence-based research for policy purposes [12]. To support decision making, it is necessary to increase the confidence on the validity and reliability of value estimates. Establishing units of assessment with the associated values to be elicited might help policy makers to tackle different challenges and identify the most appropriate valuation approaches.

In the neoclassical economic approach [10,42,43] each individual has a willingness to pay (WTP), for a specific non-market commodity, such as cultural goods conservation [22]. This WTP will vary according to the utility that the individual gains by the presence of the good, whether they use it (use values) or not (non-use values).

Total economic value (TEV) of a non-market good is given by use values plus non-use values. An agreed expression for Total Economic Value is as follows [21]:

$$\text{TEV} = \text{use value} + \text{non-use value} + \text{option value} + \text{existence value} \tag{1}$$

The concept of option value was first introduced in a seminal article by Weisbrod [44], whilst Krutilla [45] first discussed the concepts of existence and bequest value. Option value for a site is a kind of insurance premium, the amount that an individual would be willing to pay to have the possibility to visit it in the future. Similarly, existence value is expressed by the amount an individual is willing to pay to preserve a site, without having any intention to visit. Finally, bequest value can be represented by the amount of money an individual would be willing to pay to guarantee the conservation of the site for future generations.

When considering cultural goods, it is possible to distinguish other components of values so that the expression (1) can be written:

$$\text{TEV} = \text{use value} + \text{option value} + \text{existence value} + \text{bequest value} + \text{intrinsic value} + \text{glue value}. \tag{2}$$

In this framework, intrinsic value represents the right to exist for future generations that the individual feels peculiar to cultural heritage, for its symbolic/artistic/historic value. It represents an anthropocentric valuation that could be expressed as the willingness to pay to avoid an action, which may threaten the existence of the original cultural good, considered irreplaceable, and therefore unethical to lose. This concept of value is bound to the cultural structure of a society, hence should be identified at local level.

The concept of glue value is borrowed from ecological economics [46], and in the case of cultural goods it could be thought of as an expression of the synergy among the elements. In other words, it represents the value attached to the context, more than to the single monument, and to the interrelations that the latter establishes with the former. It is directly related to use value, in the sense that the higher the glue value, the bigger the utility an individual can gain from using the good.

Table 1 shows possible units of assessments that policy makers might consider when dealing with cultural capital valuation. This represents a taxonomy linking typologies of cultural goods, economic values and possible beneficiaries (e.g., residents, visitors, etc). When considering urban cultural capital, it is possible to identify four main categories of goods: historic landscapes, historic cities, urban neighbourhoods of historic relevance and outstanding buildings. Each category of cultural goods is associated to the economic values composing the TEV of the asset. These values will vary according to the different categories of possible beneficiaries (direct, indirect, potential and future).

Table 1. Categories of cultural goods and economic values.

	Historic Landscapes				Historic Towns				Urban Neighbor.				Outstanding Buildings			
	Beneficiaries				Beneficiaries				Beneficiaries				Beneficiaries			
	D	I	P	F	D	I	P	F	D	I	P	F	D	I	P	F
Use values																
Current	•				•				•				•			
Option		•	•			•	•			•	•			•	•	
Non Use values																
Existence	•	•	•		•	•			•	•	•		•	•	•	
Bequest	•	•	•		•	•	•		•	•	•		•	•	•	
Intrinsic	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Glue									•	•	•	•	•	•	•	•

• This indicates presence of the relevant value at the indicated scale.

When moving from a landscape to an individual monument, the associated economic values would differ according to the category of beneficiaries (with some components of the TEV more relevant than others). For instance, the glue value is relevant at an intermediate scale, such as urban neighbourhoods or monuments, for all beneficiaries, but not at a wider territorial dimension.

Decision makers have several valuation techniques at their disposal, but when the purpose of valuation is to assess the non-use components of the TEV of cultural capital, then only valuation techniques based on stated preferences such as CV can be applied.

2.4. Embedding Effects in Contingent Valuation

Hausman discusses the main theoretical issues undermining the use of CV estimates for policy or litigation purposes [27]. As a fundamental critic of the hypothetical market, he highlights how scope and embedding effects potentially constitute a crucial shortcoming of CV. Here we briefly summarise how this issue has been discussed in the literature.

A 30-year long debate has shed some light on the problems that may be encountered when using CV to estimate WTP for complex goods; that is, when the object of valuation can be broken down into individual components or subsets, which function as complements to each other [47–49]. In such cases, the relative orders of magnitude of the estimates

may not be consistent with theoretical expectations. Since the work by Kahneman and Knetsch [17], this has been generally referred to as the "embedding" effect, because the value of separate smaller components of a larger good are "embedded" into the latter [10,49]. Disentangling these values in hypothetical markets constitutes a challenge and has spurred much controversy [8,47,50–55]. However, Randall and Hoehn [56] find that embedding is not peculiar to CV hypothetical framing but is also observed in the actual market for private goods. They show that "embedding effects are standard economic phenomena induced by substitution relationships and constrained endowments" and, therefore, they cannot be considered as a CV artifact. The recent heated debate [23,25–27] has focused on the plausibility of scope effects in CV applications [26]. Nonetheless, the debate around the reliability and accuracy of contingent valuation (CV) estimates highlights the need to avoid embedding bias, since constancy or near constancy of willingness-to-pay does not appear consistent with diminishing marginal utility. Subsequent research around this topic has focused on a few issues, principally the embedding issue and scope effects, and the temporal stability of values over the short term. Riganti and Willis [22] have addressed the issue of component and temporal stability over the short term in the case of cultural goods. The authors highlight the relevance that the nature and description of the good can have in minimizing the embedding effects. This has also been confirmed by a recent review of the literature [28].

Carson [10] states that among the empirical claims concerning CV the embedding effect has received the greatest attention. The basic question is whether the phenomenon is avoidable using an appropriate survey design and how much it is related to the nature of the good itself. Carson recalls the position of some CV critics who question the reliability of CV estimates, since the phenomenon seems to be robust. Kahneman & Knetsch [17], maintain that the insensitivity to scope is exacerbated when the good has both use and non-use values, while Desvousges [47] emphasizes that the issue is particularly relevant mainly when passive uses are involved. The research presented in this paper has used an on purpose-designed questionnaire to disentangle use and non-use values and analyse the role played by the nature of the good in minimizing the embedding effects across samples [22].

3. Data and Methods

This section of the paper presents the Contingent Valuation (CV) study of Campi Flegrei. The CV was comprised of three surveys. The first was carried out on the whole park of Campi Flegrei, whilst the other two surveys were implemented on two large sites embedded within the park: the Aragonese Castle of Baia and the archaeological park of Cuma. These three distinct but correlated surveys were simultaneously implemented to test for the embedding effect. The research design followed Carson tests for insensitivity to scope [18] and the Diamond-Hausman adding-up test [27].

3.1. The Sites: Campi Flegrei, the Baia Castle and Cuma

Campi Flegrei is a large area of Roman remains, which, because the sea level is now higher than that in ancient Roman times, lies partly under the sea, where some remains are still located un-catalogued and un-researched. During the first century AD, the Campi Flegrei were chosen as the royal summer residence of the Roman Emperors, so this site is of outstanding importance. The Castle of Baia and the archaeological Park of Cuma are two components inside the wider area of Campi Flegrei. They were selected to analyse the issue of insensitivity to the scope/embedding effect of the obtained CV estimates and their internal consistency. If the CV estimates were reliable, then we would expect WPT for the cultural assets of Baria and Cuma to be lower than the WTP for the whole Campi Flegrei.

At the time of the survey's implementation, the archaeological site of Campi Flegrei constituted an impediment to the urban expansion of Naples, and to coastal urban development in the area. In the early years of the XX Century, the Bagnoli site, one of various areas within the Campi Flegrei, was chosen as the location for a large iron and steel plant

to create jobs for this depressed economy. However, the plant was closed at the beginning of 1990s to encourage a more sustainable development of the area. The redevelopment of Bagnoli was a potential threat to the conservation of Campi Flegrei and was at the centre of a heated policy debate.

The Baia Castle is situated near the Baths of Baia, in a central position with respect to the whole Campi Flegrei, and in between the areas of Cuma and Pozzuoli. It was built by the Aragoneses during the 15th century as a fortification to the site, being situated on a strategic point of the gulf of Pozzuoli, with a breath-taking view of the islands of Capri, Procida and Ischia. These features alone, disregarding the architectonic value of the castle itself, would make this heritage a site of unique importance. However, the unregulated development in recent decades had divided the castle from its landscape.

The Sovrintendenza, the local authority in charge of cultural heritage conservation strategies, has contemplated an extensive restoration program for the Baia Castle. However, at the time of the survey, the Castle was still in a rundown condition. The survey for the Baia Castle aimed at eliciting the mean willingness to pay for a restoration program, which foresaw three different destinations for the site. The first privileged a destination as museums and exhibitions, while the second promoted concerts and conferences, and the last one focused on underwater archaeology.

The archaeological park at Cuma is currently concentrated on the Acropolis, a small portion of the ancient city of Cuma, which, with 55,000 visits per year at the time of the survey, represented the most visited area inside the Campi Flegrei. The remains situated outside of the city, in the countryside, are single historic buildings, fragmented by the presence of unregulated modern urban development. At the time of the survey, the local authority in charge of the conservation program of the site was implementing a requalification project for the archaeological park at Cuma, named Kyme, which aimed at enhancing the knowledge of the ancient city through an excavation campaign and at improving tourists' facilities by creating new information centres. The Kyme project was adopted as a conservation scenario of the CV survey for this site.

3.2. The Surveys

The three collated surveys used a similar questionnaire, where a referendum approach (Single Bounded Dichotomous choice) aimed at eliciting the willingness to pay for a conservation program of the whole Campi Flegrei and of two of its parts Baia and Cuma (The three surveys were implemented during summer 1997). The Campi Flegrei survey intended to elicit the maximum monthly amount people would be willing to pay to preserve the cultural heritage located in Campi Flegrei. To test the sensitivity to scope of these estimates, we ran an internal test. Each respondent was asked five WTP questions. The first was related to the conservation of the whole Campi Flegrei. Other questions elicited responses regarding the willingness to pay (WTP) for some of its components, such as the benefits associated with the bequest values and option values of smaller parts of the Campi Flegrei [21,22]. The rationale of the methodological experiment was that estimated WPT from the first question related to the whole Campi Flegrei would be representative of the Total Economic Value of the conservation of Campi Flegrei, whilst other questions would elicit WTP for a part of the TEV, such as bequest and option values. This is further explained in Section 4.2. To investigate the components of bequest benefits, respondents were asked to express their WTP for the conservation of areas where the access to remains were to be limited only to future generations. This is equivalent to subtracting use values from current users, but still providing bequest value. Locals were quite familiar with this situation, as some sites discovered in the years before the survey had never been open to the public. These archaeological sites within Campi Flegrei were not going be accessible until full restoration, hence for many years.

Pilot and final surveys were all conducted in person. The range of discrete response bids employed in the final survey was identified from the open-ended responses in the pilot studies [57,58]. The highest bid of 77.50 Euros/month (the original bid was in Italian

lire, with 1 EUR = 1936.27 Lit., and results here have been reported in Euros.) was a likely choke price, while the lowest (2.50 Euros/month) was considered an amount that every respondent would be willing to pay. A total of nine bids were employed [57].

This survey for Campi Flegrei was carried out by 16 interviewers who collected 497 interviews, canvassing and intercepting both on-site and off-site respondents in the greater urban area of the City of Naples. Although the purpose of the study was speculative and not linked to damage assessment, the design of the survey fulfilled all the guidelines contained in the NOAA panel [14]. Great care was taken in describing the cultural good being valued, and before posing the WTP questions respondents were reminded that "any money spent on the project cannot be spent elsewhere", as well as the possible substitutes for the good [59]. Finally, follow-up questions were asked to understand the reasons for the stated answers [60]. The respondents were shown a booklet containing maps of the site and pictures of the most significant archaeological remains. Interviewers were fully trained and asked to gather a sample. using population quotas and approaching respondents near specific sites withing the Campi Flegrei, of every seventh person passing by, to increase randomization of the sample and minimise interviewers' biases.

The CVs carried out for Cuma and Baia were designed and implemented following the same phases and guidelines as the main survey at Campi Flegrei, and two interviewers collected 300 interviews per each site.

4. Results and Discussion

4.1. Testing the Insensitivity to Scope of Cultural Goods: An Econometric Analysis

The analysis of the three datasets was implemented according to the following steps:

1. Welfare measures and confidence intervals' estimation for the Campi Flegrei, Baia and Cuma samples;
2. Within subjects' test for embedding, implemented on each sample;
3. Stepwise regressions to estimates the parameters coefficients for each sample.

Although the questionnaire's design aimed at helping the identification of protests through follow up questions, the criteria used, when needed, to drop an observation or not were linked to the offered bid, stated willingness to pay and income registered per each observation. The Campi Flegrei sample has been adjusted for protest and outliers, which were identified as follows: protests were observations where a Bid is equal to 1 EUR, income is greater than 33,000 EUR per year and all answers to the different willingness to pay questions are negative. Similarly, those observations for which Bid is greater than 25 EUR, Income is less than 15,000 EUR and all WTPi are positive were regarded as outliers. The analysis presented in this paper consider the whole of the Baia and Cuma samples.

Tables 2 and 3 present the mean willingness to pay estimated for each sample. The WTP point estimates have been computed using the Hanemann's approximation, while the 95% confidence intervals have been obtained with the Delta method. Table 4 describes the variables used in the logit regression analysis, whilst Tables 5 and 6 show the results of the model analysis. Table 7 shows a summary of the internal tests for the Campi Flegrei sample. The first three tests all passed both at point estimates and 5% significance level, while the remaining two inequalities do not hold when the points estimates are considered. Similarly, Table 8 shows the results of the internal tests across the sample of Campi Flegrei, Baia and Cuma.

A logit regression per each WTPi has been run on the adjusted Campi Flegrei (CF) sample (*n* = 484), and on the whole Baia (*n* = 300) and Cuma (*n* = 300) samples. A backward stepwise based on Likelihood Ratio test for deleting variables from the model has been run for each sample. The unrestricted model had the probability of a Yes response to the offered bid as dependent variable, and a number of explanatory variables which included age, gender, income, income squared in order to catch the nonlinear effects, level of education, level of knowledge of the site, being a member of an environmental group, being Neapolitan, possessing a car and the sort of job held by the respondent (see Table 4). Tables 5 and 6 give the parameter estimates obtained using the stepwise procedure. Both

the variables BID and INCOME are consistently present in all models, whichever sample is considered, and appear also to be highly significant (usually significant at 1% level of confidence). Knowledge of the site seems to be an important factor as the variable KNOWL is significant at 1% level in the CF sample for all the WTPs except WTP2. The variable GENDER is never significant when looking at the CF sample, but being a man is highly significant in the Baia and Cuma samples. Being of young age also affects WTP1 and WTP4 when analysing the CF sample. All the other variables appear to be significant for some of the WTPs, but without showing any specific pattern. As highlighted above, Tables 2 and 3 present respectively the Mean willingness to pay for Campi Flegrei, Cuma and Baia (indicated as Hanemann's approximation). These values can be aggregated for the relevant populations and then discounted at an appropriate discount rate, to obtain the economic values needed to inform subsequent public hearings and political decisions.

Table 2. Mean WTPs for the adjusted Campi Flegrei sample (*n* = 484).

Features	WTP 1	WTP 2	WTP 3	WTP 4	WTP 5
N. of obser.	480	476	475	476	476
−2 Log-likelih.	564.132	524.465	545.286	490.675	498.077
Constant	0.7438	0.2753	−0.0754	−0.0906	−0.4320
	(0.1403)	(0.1427)	(0.1387)	(0.1468)	(0.1455)
Bid	−0.0251	−0.0276	−0.0189	−0.0271	−0.0187
	(0.0031)	(0.0038)	(0.0032)	(0.0042)	(0.0035)
Hanemann's	29.633	9.974	3.989	3.343	23.101
Approx.	(27.066 ÷	(1.428 ÷	(−10.256 ÷	(−8.234 ÷	(1.119 ÷
95% CI	32.200)	18.519)	18.234)	14.920)	45.083)

Table 3. Mean WTPs for Cuma (*n* = 300), and Baia (*n* = 300).

Features	Cuma	Baia
N. of observations	299	300
−2 Log-likelih.	364.498	381.796
Constant	0.1742	0.6775
	(0.1830)	(0.1805)
Bid	0.0476	−0.0480
	(0.0104)	(0.0093)
Hanemann's Approx.	3.659	14.114
95% CI	(8.9536 ÷ −1.634)	(9.2042 ÷ 19.0238)

Table 4. Description of variables included at first step.

AGE	continuous variable, expressing the age
BID	continuous variable, expressing the bid level
EDUC	continuous variable, expressing the increasing level of respondent's education
INCOME	continuous variable, expressing the income level
INCSQ	continuous variable, equal to income square
KNOWL	continuous variable, expressing the increasing level of knowledge of the site
MEMBER	Dummy variable = 1 if respondent belongs to an environmental group, 0 otherwise
CAR	Dummy variable = 1 if respondent possesses one or more cars, 0 otherwise
GENDER	Dummy variable = 1 if respondent is female, 0 otherwise
DEMP1	Dummy variable = 1 if respondent is a student/unemployed/housewife, 0 otherwise
DEMP2	Dummy variable = 1 if respondent is worker/trader/craftsman, 0 otherwise
DEMP3	Dummy variable = 1 if respondent is a clerk/self- employed professional, 0 otherwise

Table 5. Stepwise results for the Campi Flegrei sample (*n* = 484).

Features	WTP 1	WTP 2	WTP 3	WTP 4	WTP 5
N. of obser.	415	412	412	412	411
−2Log-likelih.	439.277	439.261	451.815	414.920	430.421
% Correct Predictions	74.46	74.76	73.79	74.51	73.24
Constant	−0.4523	−1.2260 **	−2.953 ***	−0.9159 **	−1.724 ***
Age	−0.1080 **			−0.1304 ***	
Bid	−0.0324 ***	−0.0307 ***	−0.0202 ***	−0.0292 ***	−0.0194 ***
Educ	0.2733 **				
Income	0.0105 *	0.0160 ***	0.0495 ***	0.0168 ***	0.0150 ***
Incsq			−0.0003 *		
Knowl	0.3227 ***		0.3276 ***	0.3177 ***	0.3019 ***
Member	0.5792 **	0.6622 **			
Car		0.9669 **	0.8079 *		
Gender					
DEmp1					
DEmp2					
DEmp3					

*** significant at 1%; ** significant at 5%; * significant at 10%.

Table 6. Stepwise results for the Cuma and Baia samples (*n* = 300).

Features	Cuma	Baia
N. of observations	263	258
−2 Log-likelih.	288.760	294.847
% Correct predictions	73.38	72.48
Bid	−0.0623 ***	−0.0473 ***
	(0.0129)	(0.0101)
Age	−0.2398 **	0.2632 **
	(0.1118)	(0.1193)
Income	0.0250 ***	−0.0529 **
	(0.0059)	(0.0227)
Gender	−0.7238 **	−10.1441 ***
	40.2913)	(0.2895)
Member	−0.5696 **	
	(0.3110)	
Incsq		−0.0005 ***
		(0.2895)
Constant	0.7298 *	−0.4082
	(0.4880)	(0.7240)

*** significant at 1%; ** significant at 5%; * significant at 10%.

Table 7. Summary of internal tests for Campi Flegrei.

		Campi Flegrei	
Implication	Type of Benefit	(1)	(2)
WTP1 > WTP2	Option value for not accessible sites	Yes	Yes
WTP1 > WTP3	Bequest Value for whole Park	Yes	Yes
WTP1 > WTP4	Magnitude Conservation	Yes	Yes
WTP4 > WTP5	Bequest Value for Bagnoli	No	-
WTP3 > WTP5	Magnitude of Bequest Value	No	-

(1) consistent at point estimates of WTPs. (2) consistent at 5% significance level.

Table 8. Summary of internal tests across samples.

Implications	(1)	(2)
WTP CF > WTP B	Yes	Yes
WTP CF > WTP C	Yes	Yes
WTP CF > WTP B + WTP C	Yes	Yes

4.2. Embedding Effects, Insensitivity to Scope and Cultural Goods

This methodological study aimed at verifying the insensitivity to scope of CV estimates for complex historic goods within and across samples.

The ultimate test of CV is criterion validity: how accurate are CV studies in predicting what happens in the real world; that is, how good are CV at predicting quantities demanded at various prices [61]. However, the accuracy of non-use or passive use values can only be assessed in terms of content validity and theoretical expectations in construct validity. This study uses statistical significance tests of theoretical expectations to assess whether mean WTP values are significantly different for the whole of an archaeological good compared with its components.

The results presented in this paper show the values associated with subsets of a larger complex good, Campi Flegrei, namely Baia and Cuma. These results have been checked for consistency with economic theory according to "within subjects tests", as shown in Tables 6 and 7. In fact, the surveys' design aimed at verifying the hypothesis of insensitivity to scope, in other words the reliability of CV estimates elicited for different cultural sites, using distinct CV surveys. Economic theory comes to help when defining the relationships among the parts of the complex historic good of Campi Flegrei, to provide a higher degree of confidence about the obtained welfare measures.

The CV survey for the whole of Campi Flegrei addressed a total of five different WTP questions that were presented to each respondent, ordered as in the following sequence:

1. WTP1: value of conservation in the whole Campi Flegrei area (total economic benefit for conservation);
2. WTP2: value of conserving those components of Campi Flegrei not yet available to the public (economic benefits associated with option value).
3. WTP3: value of conservation of Campi Flegrei only for use by future generations (economic benefits from bequest value);
4. WTP4: value of conservation in the smaller area of Bagnoli (total economic benefit for conservation of Bagnoli);
5. WTP5: value of conservation of Bagnoli only for use by future generations (economic benefits from bequest value of Bagnoli);

While WTP1 and WTP4 represent the total economic values for the conservation of the whole Campi Flegrei and Bagnoli, respectively, WTP3 and WTP5 represent bequest values, while WTP2 can be defined as an option value [21]. The maintained assumption of non-satiation in the respondents' utility functions rules out strong inequalities, hence we expect the following:

1. WTP1 > WTP2;
2. WTP1 > WTP3;
3. WTP1 > WTP4;
4. WTP4 > WTP5.

Since Bagnoli is a component of the Campi Flegrei area, its bequest value will be part of that of the whole Campi Flegrei, therefore the following inequality also holds:

5. WTP3 > WTP5.

The Baia and Cuma CV studies aimed at computing a mean willingness to pay for what is only a part of the whole Campi Flegrei, therefore the following conditions must also hold:

6. WTP Campi Flegrei (CF) > WTP Baia (B)

7. WTP (CF)> WTP Cuma (C)
8. WTP (CF) > WTP (B) + WTP (C)

A single bounded dichotomous choice contingent valuation question was used to ask about the various WTPs and results of the estimated eight inequalities reshown in Tables 7 and 8. As shown in Table 7, the last three conditions are all fulfilled, both at point estimates and 5% level of confidence [62].

The results presented in this paper are encouraging for policy purposes. Our study confirms the reliability of contingent valuation estimates, as the welfare measures obtained through three parallel but distinct CVs appear to be congruent with theoretical expectations. The nature of cultural goods is likely to help minimise the embedding effect, which may still bias these and similar results. In this perspective, we stress the need, in the actual debate on stability and reliability of contingent valuation estimates, for a substantial research effort in this direction.

5. Conclusions

This paper aimed to contribute to the literature debate on insensitivity to scope, also known as embedding effects, in contingent valuation studies. Sensitivity to scope is considered a necessary condition for the validity of CV estimates, which in turn are essential if the purpose is to use such estimates in a decision-making context. A review of the most recent literature [27,28] has highlighted the importance of the topic, but also the lack of studies focusing on cultural goods. The review of the current debate has highlighted how, despite the relevance of the embedding effect, to the best of our knowledge no recent study has been implemented for the purpose of testing the insensitivity to scope in CV welfare estimates for complex cultural goods.

The research reported in these pages shows how CV estimates for different components of an archaeological park in Italy are consistent with economic theory and pass an insensitivity to scope test. They pass both an internal and external adding up test, which Hausman describes as the most accurate for this purpose [27].

This methodological study confirms that appropriate survey design can help minimise the embedding effect and that the characteristics of cultural goods, if adequately presented in the scenario description, contribute to the ability of respondents to appreciate differences in quantity sold in the CV hypothetical market. The paper establishes for the first time a link with the nature of cultural capital. The result reinforces what was highlighted in recent literature [28] on the importance of survey design and exploring how people relate to the goods being valued. Results from our study show that people have different values for different elements of cultural goods.

This study used within subjects' tests for embedding on the three samples, as this as a necessary condition for rejecting the null hypothesis of insensitivity to scope. This was done both within the Campi Flegrei sample and across independent samples (Baia and Cuma compared to results obtained from the survey on Campi Flegrei), and this is a unique example in the literature. The dichotomous choice format applied in the CV studies reported here seems to be capable of limiting the bias due to sequencing effects, even with medium/small sample sizes. The stability across samples of the tests for embedding shown in Table 7, which passed both at point estimates and 5% level of significance, confirms that appropriate design can substantially reduce these effects. The result from this study seems to strongly encourage the use of CV for policy purposes, though highlighting the need for more research in the field, to provide evidence to decision makers faced with sustainable management alternatives for cultural heritage.

Several lessons can be learned from our study. First, it shows the need for more CV applications in the cultural heritage sector to further pursue research in this direction. This line of enquiry seems extremely promising. In fact, cultural heritage goods, such as the one presented here, can easily be disaggregated into their components. The lesson learned by our study could be transferred to other fields of research where CV is applied. Our research confirms what is highlighted by [18], namely the importance of presenting

respondents with a scenario description where the difference among components of goods is meaningful, and the use of a survey design, which promotes respondents' participation during the interview process. Careful pretesting of surveys can improve the way the scenario is communicated to respondents, to make sure the hypothetical market appears realistic to participants, so they can appropriately relate to the goods being valued. Related to this aspect is our result on the role played by the knowledge that the respondents have of the commodity (in this case an archaeological site) presented in the scenario. When dealing with passive use values, such as existence and intrinsic values, the knowledge of the characteristic of the commodity being valued becomes crucial [21]. Analysing the level of knowledge of respondents is therefore essential. Our results confirm what was summarised also by Lopes et al. [28] in their review of diagnosing insensitivity to scope in CV.

Another major problem with CV estimates of WTP is that they are often subject to large variances. A consequence of large variance is that the null hypothesis of no difference between WTP for various elements of cultural goods sometimes cannot be rejected. However, careful survey design in our research also helped to an extent.

Our research has tackled issues that often raise concerns with policy makers about the acceptability of results based on hypothetical market experiments. Valuing cultural heritage should not represent a purely academic activity but must be linked with decision-making, possibly in an ex-ante framework. This is particularly relevant within the UK context, where the national government is now promoting the use of non-market valuation techniques such as CV and Choice Experiment for cultural capital, in support of national and local policy making [12]. New research funding has been envisaged to promote research in this field in the near future.

Though this is a remarkable initiative, it is not totally isolated. The cultural sector has developed various approaches to support sustainable management of cultural heritage to progress towards sustainable cities. Survey-based economic valuation techniques such as CV have the potential to increase participation in the management of local and national heritage, something until recently delegated to experts. From this perspective, the costs of implementing studies such as CVs would be compensated by the social benefits gained, in terms of knowledge of the priorities that the relevant population may express for the development or the management of an important cultural area. This ensures participative grounds upon which to base policy and management decisions.

The study presented here was not commissioned by the local authority (which in Italy is the Sovrintendenza per i Beni Archeologici) to provide an answer to a specific management issue but was designed purely for methodological purposes. Nevertheless, the mean WTPs obtained for different parts of the site at Campi Flegrei have shown a good degree of reliability, despite the limitations of the study, and represented a useful piece of information to feed local policy decision making. In fact, it would be possible to estimate the social surplus generated by different policy strategies, with their associated costs to the population. For example, one could estimate the effects of new management strategies, such as introducing an entrance fee for the restricted access sites. Furthermore, one could analyse the income elasticity of demand for archaeological sites, congestion dis-utilities at sites, and the carrying capacity of sites according to some sustainability criterion. This could allow forecasts of primary and secondary benefits of alternative policies, both in terms of positive and negative externalities. In other words, it could be possible to define management models for this peculiar non-renewable resource.

References

1. United Nations (UN). *Transforming Our World: The 2030 Agenda for Sustainable Development*; United Nations: New York, NY, USA, 2015.
2. Throsby, D. Cultural Capital. *J. Cult. Econ.* **1999**, *23*, 3–12. [CrossRef]
3. Throsby, D. Heritage Economics: A Conceptual Framework. In *The Economics of Uniqueness: Historic Cities and Cultural Heritage Assets as Public Goods*; Licciardi, G.A., Ed.; World Bank: Washington, DC, USA, 2012; pp. 75–106.
4. UNESCO. *Convention Concerning the Protection of the World Cultural and Natural Heritage*; UN Educational, Scientific, and Cultural Organisation: Paris, France, 1972.
5. UNESCO. *Convention for the Safeguarding of the Intangible Cultural Heritage*; UN Educational, Scientific, and Cultural Organisation: Paris, France, 2003.
6. Fang, J.; Lau, C.K.M.; Lu, Z.; Wu, W.; Zhu, L. Natural disasters, climate change, and their impact on inclusive wealth in G20 countries. *Environ. Sci. Pollut. Res.* **2019**, *26*, 1455–1463. [CrossRef] [PubMed]
7. Riganti, P.; Throsby, D. Editors' introduction: Recent developments in urban heritage valuation: Concepts, methods and policy application. *City Cult. Soc.* **2021**, *26*, 100414. [CrossRef]
8. Hausman, J. (Ed.) *Contingent Valuation: A Critical Assessment*; North-Holland: New York, NY, USA, 1993.
9. Diamond, P.A.; Hausman, J.A. Contingent valuation: Is some number better than no number? *J. Econ. Perspect.* **1994**, *8*, 45–64. [CrossRef]
10. Carson, R.T.; Flores, N.E.; Meade, N.F. Contingent Valuation: Controversies and Evidence. *Environ. Resour. Econ.* **2001**, *19*, 173–210. [CrossRef]
11. Epstein, R.A. The regrettable necessity of contingent valuation. *J. Cult. Econ.* **2003**, *27*, 259–274. [CrossRef]
12. Sagger, H.; Philips, J.; Haque, M. *Valuing Culture and Heritage Capital: A Framework Towards Informing Decision Making*; Department for Digital Culture Media and Sport: London, UK, 2021.
13. HM Treasury. *The Green Book. Central Government Guidance on Appraisal and Evaluation*; HM Treasury: London, UK, 2018.
14. Arrow, K.; Solow, R.; Portney, P.R.; Leamer, E.E.; Radner, R.; Schuman, H. Report of the NOAA Panel on Contingent Valuation. *Fed. Regist.* **1993**, *58*, 4601–4614.
15. Atkinson, G.; Mourato, S. *Cost-Benefit Analysis and the Environment*; OECD Environment Working Papers, No. 97; OECD Publishing: Paris, France, 2015. [CrossRef]
16. Provins, A.; Pearce, D.; Ozdemiroglu, E.; Mourato, S.; Morse-Jones, S. Valuation of the historic environment: The scope for using economic valuation evidence in the appraisal of heritage-related projects. *Prog. Plan.* **2008**, *69*, 131–175. [CrossRef]
17. Kahneman, D.; Knetsch, J.L. Valuing Public Goods: The Purchase of Moral Satisfaction. *J. Environ. Econ. Manag.* **1992**, *22*, 57–70. [CrossRef]
18. Carson, R.T.; Mitchell, R.C. Sequencing and nesting in Contingent valuation surveys. *J. Environ. Econ. Manag.* **1995**, *28*, 155–173. [CrossRef]
19. Smith, V.K.; Osborne, L.L. Do contingent valuation estimates pass a "scope" test? *A meta-analysis. J. Environ. Econ. Manag.* **1996**, *31*, 287–301. [CrossRef]
20. Carson, R.T. Contingent Valuation: Theoretical Advances and Empirical Tests since the NOAA Panel. *Am. J. Agric. Econ.* **1997**, *79*, 1501–1507. [CrossRef]
21. Riganti, P.; Scarpa, R. Categorical Nesting and Information Effects on WTP Estimates for the Conservation of Cultural Heritage. In *Environmental Resource Valuation in Italy: Applications of the Contingent Valuation Method*; Bishop, R.C., Romano, D., Eds.; Kluwer: Dordrecht, The Netherlands, 1998.
22. Riganti, P.; Willis, K.G. Component and Temporal Value Reliability in Cultural Goods: The Case of Roman Imperial Remains Near Naples. In *Valuing Cultural Heritage*; Navrud, S., Ready, R., Eds.; Edward Elgar Publishing: Cheltenham, UK, 2002; pp. 142–158.
23. Chapman, D.J.; Bishop, R.C.; Hanemann, W.M.; Kanninen, B.J.; Krosnick, J.A.; Morey, E.R.; Tourangeau, R. On the adequacy of scope test results: Comments on Desvousges, Mathews, and Train. *Ecol. Econ.* **2016**, *130*, 356–360. [CrossRef]
24. Desvousges, W.; Mathews, K.; Train, K. Adequate responsiveness to scope in contingent valuation. *Ecol. Econ.* **2012**, *84*, 121–128. [CrossRef]
25. Desvousges, W.; Mathews, K.; Train, K. Reply to on the adequacy of scope test results: Comments on Desvousges, Mathews, and Train. *Ecol. Econ.* **2016**, *130*, 361–362.
26. Whitehead, J.C. Plausible responsiveness to scope in contingent valuation. *Ecol. Econ.* **2016**, *128*, 17–22. [CrossRef]
27. Hausman, J. Contingent valuation: From dubious to hopeless. *J. Econ. Perspect.* **2012**, *26*, 43–56. [CrossRef]

28. Lopes, A.F.; Kipperberg, G. Diagnosing insensitivity to scope in contingent valuation. *Environ. Resour. Econ.* **2020**, *77*, 191–216. [CrossRef]
29. Bishop, R.C.; Boyle, K.J.; Carson, R.T.; Chapman, D.; Hanemann, W.M.; Kanninen, B.; Kopp, R.J.; Krosnick, J.A.; List, J.; Meade, N.; et al. Putting a value on injuries to natural assets: The BP oil spill. *Science* **2017**, *356*, 253–254. [CrossRef]
30. Rizzo, I.; Throsby, D. Cultural Heritage: Economic Analysis and Public Policy. In *Handbook of the Economics of Art and Culture*; Elsevier: Amsterdam, The Netherlands, 2006; Volume 1, pp. 983–1016.
31. Vecco, M. A definition of cultural heritage: From the tangible to the intangible. *J. Cult. Herit.* **2010**, *11*, 321–324. [CrossRef]
32. Costanza, R.; Daly, H.E. Natural capital and sustainable development. *Conserv. Biol.* **1992**, *6*, 37–46. [CrossRef]
33. Nijkamp, P.; Riganti, P. Valuing Urban Cultural Heritage. In *Cultural Tourism and Sustainable Local Development*, 1st ed.; Routledge: London, UK, 2016; pp. 75–90.
34. Petzet, M. Principles of Preservation: An Introduction to the International Charters for Conservation and Restoration 40 Years after the Venice Charter. In *International Charters for Conservation and Restoration. Monuments & Sites*; ICOMOS: Munich, Germany, 2004; pp. 7–29.
35. Wright, W.C.C.; Eppink, F.V. Drivers of heritage value: A meta-analysis of monetary valuation studies of cultural heritage. *Ecol. Econ.* **2016**, *130*, 277–284. [CrossRef]
36. Lawton, R.; Fujiwara, D.; Arber, M.; Maguire, H.; Malde, J.; O'Donovan, P.; Lyons, A.; Atkinson, G. *DCMS Rapid Evidence Assessment: Culture and Heritage Valuation Studies*; Technical Report; Arts Council England: London, UK, 2020.
37. Noonan, D.S. Contingent valuation and cultural resources: A meta-analytic review of the literature. *J. Cult. Econ.* **2003**, *27*, 151–176. [CrossRef]
38. Venkatachalam, L. The contingent valuation method: A review. *Environ. Impact Assess. Rev.* **2004**, *24*, 89–124. [CrossRef]
39. Throsby, D. Determining the Value of Cultural Goods: How Much (or How Little) Does Contingent Valuation Tell Us? *J. Cult. Econ.* **2003**, *27*, 275–285. [CrossRef]
40. Throsby, D. Regional aspects of heritage economics: Analytical and policy issues. *Australas. J. Reg. Stud.* **2007**, *13*, 21–30.
41. Licciardi, G.; Amirtahmasebi, R. *The Economics of Uniqueness: Historic Cities and Cultural Heritage Assets as Public Goods*; The World Bank: Washington, DC, USA, 2012.
42. Davies, R.K. Recreation planning as an economic problem. *Nat. Resour. J.* **1963**, *3*, 239–249.
43. Mitchell, R.; Carson, R. *Using Surveys to Value Public Goods: The Contingent Valuation Method*; Resources for the Future Press: Wahington, DC, USA, 1989.
44. Weisbrod, B.A. Collective-consumption services of individual-consumption goods. *Q. J. Econ.* **1964**, *78*, 471–477. [CrossRef]
45. Krutilla, J.V. Conservation reconsidered. *Am. Econ. Rev.* **1967**, *57*, 777–786.
46. Turner, K. The Place of Economic Values in Environmental Valuation. In *Valuing Environmental Preferences*; Bateman, I.J., Willis, K.G., Eds.; Oxford University Press: Oxford, UK, 1999.
47. Desvousges, W.; Johnson, F.; Dunford, R.; Boyle, K.; Hudson, S.; Wilson, K. Measuring natural resource damages with contingent valuation: Tests of validy and reliability. In *Contingent Valuation: A Critical Assessment*; Hausman, J., Ed.; North-Holland: Amsterdam, The Netherlands, 1993.
48. Lew, D.K.; Wallmo, K. External tests of scope and embedding in stated preference choice experiments: An application to endangered species valuation. *Environ. Resour Econ.* **2011**, *48*, 1–23. [CrossRef]
49. Svedsäter, H. Contingent valuation of global environmental resources: Test of perfect and regular embedding. *J. Econ. Psychol.* **2000**, *21*, 605–623. [CrossRef]
50. Loomis, J.; Lockwood, M.; DeLacy, T. Some empirical evidence on embedding effects in contingent valuation of forest protection. *J. Environ. Econ. Manag.* **1993**, *24*, 45–55. [CrossRef]
51. Diamond, P. Testing the internal consistency of contingent valuation surveys. *J. Environ. Econ. Manag.* **1996**, *30*, 337–347. [CrossRef]
52. Heberlein, T.A.; Wilson, M.A.; Bishop, R.C.; Schaeffer, N.C. Rethinking the scope test as a criterion for validity in contingent valuation. *J. Environ. Econ. Manag.* **2005**, *50*, 1–22. [CrossRef]
53. Hjerpe, E.; Hussain, A.; Phillips, S. Valuing type and scope of ecosystem conservation: A meta-analysis. *J. For. Econ.* **2015**, *21*, 32–50. [CrossRef]
54. Veisten, K.; Hoen, H.F.; Navrud, S.; Strand, J. Scope insensitivity in contingent valuation of complex environmental amenities. *J. Environ. Manag.* **2004**, *73*, 317–331. [CrossRef]
55. Whitehead, J.C.; Haab, T.C.; Huang, J.-C. Part-whole bias in contingent valuation: Will scope effects be detected with inexpensive survey methods? *South. Econ. J.* **1998**, *65*, 160–168.
56. Randall, A.; Hoehn, J.P. Embedding in demand systems. *J. Environ. Econ. Manag.* **1996**, *30*, 369–380. [CrossRef]
57. Kanninen, B.J. Optimal experimental design for double-bounded dichotomous choice contingent valuation. *Land Econ.* **1993**, *69*, 138–146. [CrossRef]
58. Cooper, J.; Loomis, J. Sensitivity of willingness-to-pay estimates to bid design in dichotomous choice contingent valuation models. *Land Econ.* **1992**, *68*, 211–224. [CrossRef]
59. Kotchen, M.J.; Reiling, S.D. Do reminders of substitutes and budget constraints influence contingent valuation estimates? *Another comment. Land Econ.* **1999**, *75*, 478–482. [CrossRef]

60. Bateman, I.; Carson, R.; Day, B.; Hanemann, W.; Hanley, N.; Hett, T.; Jones-Lee, M.; Loomes, G.; Mourato, S.; Ozdemiroglu, E.; et al. *Economic Valuation with Stated Preference Techniques: A Manual*; Edward Elgar Publishing: Cheltenham, UK, 2002.
61. Carson, R.T. Contingent Valuation Surveys and Tests of Insensitivity to Scope. In *Determining the Value of Non-Marketed Goods*; Springer: Dordrecht, The Netherlands, 1997; pp. 127–163.
62. Park, T.; Loomis, J.; Creel, M. Confidence Intervals for Evaluating Benefits Estimates from Dichotomous Choice Contingent Valuation Studies. *Land Econ.* **1991**, *67*, 64–73. [CrossRef]