

Riganti, Patrizia; Nese, Annamaria; Colombino, Ugo

Conference Paper

Eliciting Public Preferences For Managing Cultural Heritage Sites: Evidence from a Case study on the Temples Of Paestum

44th Congress of the European Regional Science Association: "Regions and Fiscal Federalism", 25th - 29th August 2004, Porto, Portugal

Provided in Cooperation with:

European Regional Science Association (ERSA)

Suggested Citation: Riganti, Patrizia; Nese, Annamaria; Colombino, Ugo (2004) : Eliciting Public Preferences For Managing Cultural Heritage Sites: Evidence from a Case study on the Temples Of Paestum, 44th Congress of the European Regional Science Association: "Regions and Fiscal Federalism", 25th - 29th August 2004, Porto, Portugal, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

<https://hdl.handle.net/10419/117165>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

44TH EUROPEAN CONGRESS OF THE
EUROPEAN REGIONAL SCIENCE ASSOCIATION
REGIONS AND FISCAL FEDERALISM

University of Porto
Porto, Portugal
25-29 August 2004

**ELICITING PUBLIC PREFERENCES FOR MANAGING CULTURAL
HERITAGE SITES: EVIDENCE FROM A CASE STUDY ON THE TEMPLES
OF PAESTUM**

By

PATRIZIA RIGANTI

School of Architecture, Queen's University Belfast

ANNAMARIA NESE

Department of Economics, University of Salerno

UGO COLOMBINO

Department of Economics, University of Turin

This paper discusses ways of improving the management of cultural heritage sites and cities, focusing on new forms of involvement and public participation based on public preferences' elicitation. The problem of city governance and of the appropriate level of democratic participation needs an *integrated approach*, capable of bridging the practice of urban design, conservation of the built environment and decision-making support system.

This paper reports results from a survey using *conjoint choice approach* questions to elicit people's preferences for cultural heritage management strategies for an outstanding world heritage site: the Temples of Paestum, in Italy. The potential of the

above-mentioned methodologies' within the current cultural heritage research scenario is also discussed.

PART I
MANAGEMENT OF CULTURAL SITES AND PUBLIC PREFERENCES
ELICITATION

Managing cultural heritage in the perspective of sustainable development

Cultural sites represent an increasingly important economic resource for the development of a region. Cultural tourism is now spreading in many European regions, also thanks to the new air travel opportunities given by the low cost airlines. A development that does not account for the necessity of appropriate management of cultural goods is not sustainable in economic, cultural and social terms. How to assess management strategies for cultural goods conservation is a matter of research and enhancement of current valuation methods.

This paper discusses one of the possible approaches to cultural heritage management, based on public preferences' elicitation of the economic values of intangible goods, usually considered unpriced. The methodology here used refers to the economics of outdoors recreation and emphasizes the use of one of the economic valuation techniques developed during the XX century by environmental economists.

Managing cultural heritage sites implies finding optimal ways to combine the conservation instance with the need for site valorisation. In turn, this requires the use of valuation methods to assess more preferable options. Since the Athens Charter (1931), the role of historic building conservation has been highlighted at international level. A number of other international documents, such as the Charter of Venice in 1964 and the Granada Convention in 1985, stressing both the relevance of the attached economic values, and the importance for the development of the city of entire cultural sites followed. Other International agreements have since then highlighted the need for the integrated conservation of cultural heritage both in terms of buildings and of sites (Declaration of Amsterdam 1975, Washington Charter 1987).

The Venice Charter in 1964, for the first time, sees cultural heritage sites also as economic goods, therefore a resource, and an asset. More recently, the UNESCO and the World Bank, meeting in Beijing in July 2000 with experts from all over the world,

stated the relevance of regulations as prerequisite for the protection of cultural heritage that needs to involve both decision makers and local communities. As stated in Beijing, the preservation of cultural heritage has been usually perceived as a “public expenditure therefore excluded from cost/benefit analysis”.(Luxen, 2000) A new attitude needs to be developed, where preservation and restoration works may be perceived as real investments. The acknowledgment of the economic values attached to cultural goods is of strategic importance in order to make a negative attitude change.

Conservation of cultural sites and sustainable development: The role of public preferences elicitation

Despite the acknowledgment of the role played by *cultural heritage* in the development of the city, research efforts have not been sufficiently integrated to tackle the complex issues related to its *conservation* and the need to develop comprehensive approaches and methodologies for its *management*. Planning the *sustainable development* of today’s European cities implies accounting for an adequate *conservation of their heritage*. It is our duty to enhance awareness for the conservation of our cultural heritage, in order to transmit the heritage we have received to future generations in its integrity, as recommended by the International Charters and agreements.

Cultural heritage goods bear symbolic values that help building common identities. Monuments and historic areas can be regarded as a *stock of social values* that need to be preserved and enhanced in order to increase the social capital of a specific society. Serageldin (1996) states that, in the wealthiest societies, the ratio between social and man-made capital is 2 to 1. This seems to suggest a relationship among the level of economic welfare, *social cohesion* and the presence of cultural heritage. However, different cultural minorities may perceive these symbolic values in diverse ways. They can even perceive them as a threat, as the symbol of their discrimination and cultural diversity. In order to enhance social cohesion in our multicultural cities is therefore crucial to understand public preference and attitudes towards cultural goods and their alternative management options.

Urban regeneration represents one of the spinning forces informing future economic and social developments in most European cities. Planning regeneration is a multidimensional issue aiming to enhance the quality of the *built environment* and

create a better quality of life for the population involved. Successful city governance “models”, such as the Barcelona case, have accounted for public preferences in their regeneration policies and attempted more comprehensive participation process. However, the level of participation in city governance is still relatively low and fundamentally biased, hardly representative of the majority of the public. Eliciting public preferences in the form of economic values that the relevant population attaches to policy alternatives may help composing the arising conflicts.

Tools and Methodologies: the potential of conjoint analysis

Architects and planners of the 21st century face problems and challenges that may be compared to those introduced by the Industrial Revolution. *New technologies* implied *new spatial relationships* between the city and its countryside: distances being shortened and communications improved. Historic cities had to compromise with new forms of development, far more hectic and sudden than in the past. Their growth was unexpected and mostly uncontrolled. These circumstances caused the development of the first British planning system, mainly concerned with the city rapid rate of growth and the social issues involved, such as housing, public health and social order (HEALEY, 1998). We are now facing a very similar technological revolution, comporting consequences that are even more complex. We are still partially unaware of the implication of *globalisation* and *information technology* on spatial development. However, a reduction of land space needed for the same social interactions might represent a trend. Many sites have already become redundant in the last decades, having lost their original functions. *Urban regeneration* has taken the place of the more traditional development of the city. Today’s European cities, to many extents, do not need to be expanded; they need to be re-developed, regenerated. Therefore, the historic, or *man-made capital* becomes an economic and spatial resource of foremost importance.

Conservation strategies, as any other intervention in the urban tissue, ought to include public participation, and this need has been fully acknowledged by the current “people sensitive” and “collaborative” planning approaches (HEALEY, 1998). The emerging forms to manage conflicts over the use and development of conservation areas presents a challenge to the current conservation and planning practices. Any intervention strategy in conservation areas involves a wide range of those with a ‘stake’

in culture goods of this area. It is extremely important for different stakeholders to be engaged in the decision-making process. Their conflicting concerns, interests, and strategies may well be shaped through discussion and negotiation, leading to a more sustainable intervention strategy.

This paper's argument is that, in order to improve the negotiation process among conflicting interests, we need to elicit the **economic values** attached to each stakeholder's set of preferences and values, experts as well as residents. Local residents may attach both positive and negative values to the environment (as well as to *changes* in its quality) where they live. In economic terms these values can be defined as *positive* and *negative externalities*. Residents have a personal perception of what enhance their quality of life (*positive externalities*) and what causes environmental distress (*negative ones*). They must be regarded as stakeholders in any development strategy of their area. Public's views must be accounted for, in order to achieve a sound development or regeneration program. A way of doing so is to make their perceived values as explicit as possible. To this extent, some economic non-market valuation techniques, such as contingent valuation method (CVM), may represent an important tool.

Non-market valuation techniques have been developed by environmental economists in the last few decades to tackle some market failures. These techniques aim at computing the monetary benefits of environmental policies, important when one wants to compare different categories of benefits, or when one wants to compare the benefits of a policy with its costs.

Usually, one can infer how much individuals value a good by observing their market behaviour, e.g. the amount of this good that is exchanged on the market and its price. However, most public goods such as environmental resources or cultural heritage sites are typically *not* exchanged on regular markets, making it impossible to observe prices and quantities. Economists have developed special techniques to estimate the value of environmental quality changes. Among these techniques, the method of contingent valuation (MITCHELL, 1989) directly asks individuals how much they are prepared to pay for specified changes in environmental quality. The willingness to pay (WTP) for the proposed change is the amount of money that can be subtracted from a person's income at the higher level of environmental quality for him to keep his utility unchanged. In our discussion, we are resorting to this technique and its latest developments, arguing that this approach can prove useful for conservation purposes.

Here our aim is to stress the potential given by this economic valuation technique to tackle different issues.

When one wishes to place a monetary value on the unpriced features of a cultural site using stated preference techniques, two approaches are possible: Contingent valuation and conjoint choice studies.

In a contingent valuation survey, people are asked directly to report their willingness to pay (WTP) to obtain a specified commodity, such the way a conservation site is managed. The change is hypothetical, and no actual transaction takes place. Contingent valuation has been used to place a monetary value on programs for the preservation and restoration of specific urban *buildings* with historical and cultural significance, such as churches, museums, theatres, and marble monuments. An extensive survey can be found in Navrud and Ready (2001).

Conjoint analysis represents a more recent development of the contingent valuation approach, and it seems even more suitable for management purposes. In a typical conjoint choice experiment study, respondents are asked to choose between two or more commodities (or “policy packages”) each of which is defined by a set of attributes, one of which is usually the cost to the respondent. Attributes are varied across “packages,” and the packages are usually matched in such a way that the choice between them is not straightforward, and the respondents must trade off attributes. Conjoint choice analysis, therefore, seems potentially the best valuation technique when aim of the valuation exercise is to assess changes in policies or programs.

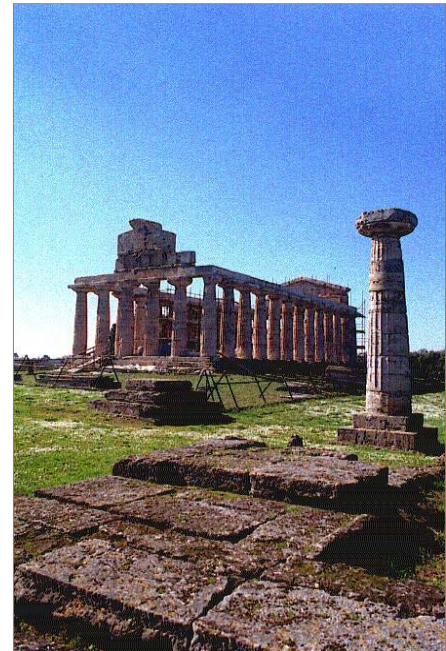
PART II

ELICITING PREFERENCES FOR A WORLD HERITAGE SITE:

THE TEMPLE OF PAESTUM

The temples of Paestum, namely the Basilica, the Temple of Poseidon, the Temple of Ceres, are one of the most impressive examples of Archaic Doric Architecture outside Greece. They were built between 530 and 460 BC they were part of the city of Paestum one of the most important Greek colonies of Magna Grecia. They were inscribed in the world heritage list in 1998, within the Cilento and Vallo di Diano National Park, together with the archaeological sites of Velia and the Certosa of Padula. They are among the most important archaeological remains in Italy and are visited by

many tourists. A Museum situated next to the archaeological remains contains many roman and Greek works of art.



This study focuses on the archaeological area of Paestum and his museum. The museum sector has been the object of increasing interest in the last ten years, see Jackson (1988); Frey - Pommerehne (1989); Feldstein (1991); Frey (1994). Many research studies (i.e. Silbeberg, 1995; Verbeke - van Rekom, 1996; Harrison, 1997; Johnson - Thomas ,1998) have focused on museum services, acknowledging the importance of the fruition aspect more than the pure exhibition one. Within this framework, and in tune with the understanding of the social role played by art, museums management is increasingly linked to market dynamics, and in need to understand public preferences. In fact, financial investments in the museum sector are better justified when related to the improvement in public fruition and understanding of the art piece. Recent literature shows several examples of applications of the contingent valuation method to cultural goods. A more restricted number of studies focus on the use value of museums. Ashworth-Johnson (1996) analyse the monetary value individuals attach to the museum visit, Scarpa et al. (1998) elicit the access value to the Contemporary Art Museum of the Rivoli Castle near Turin. Bertran-Rojas (1996) estimate willingness to pay for the fruition and conservation of some archaeological areas in Mexico, whilst Mazzanti (2001) elicits the willingness to pay for the conservation of the Borghese Gallery Museum in Rome and for the introduction of

some new services, e.g. increase in opening hours, multimedia service and non-permanent exhibitions.

Table 1. Example of a card

Attributes	Scenario A	Scenario B	Scenario C
Opening hours	From 9am till one hour before sunset	From 9am to 10pm	From 9am till one hour before sunset
Audio - guides for the archaeological remains and the Museum (Not included in the entrance fee)	NO	YES	YES
Experts guided tours (Not included in the entrance fee)	NO	NO	YES
Café with view on archaeological remains (Purchase not included in the entrance fee)	NO	YES	NO
Thematic non permanent exhibition (access not included in the entrance fee)	NO	YES	YES
Weekly cultural Events (classical/pop music concerts and theatrical performances) from June to September (access not included in the entrance fee)	NO	YES	NO
Children Lab (access not included in the entrance fee)	NO	NO	NO
Audiovisual projections along the museum and site itinerary (use included in the entrance fee)	NO	YES	YES
IT documentation centre (use included in the entrance fee)	NO	NO	NO
PRICE	Euro 6,20	Euro 7,75	Euro 12,91

This study aimed to assess the validity of stated preference techniques, namely conjoint analysis approach, to elicit preferences for alternative management options, related to policies focused on the educational and leisure side of the museum experience.

The study was funded by the Regione Campania, the Local Government, within a research devoted to the study of economic models for the management of cultural heritage goods. As mentioned above, one of the main research objectives was to elicit

visitors' preferences for a change in services for the fruition of the temples. 732 in person interview were gathered in situ in July 2002. 96% of the sample was made by tourists, and 76,5% of the respondents was living outside the Campania Region. Each respondent was presented with 4 cards, each containing a pairwise choice of different management packages defined by different levels of 10 attributes. The chosen attributes were related to improvements in the fruition of the temples.

They included new opening hours (indicated in table 2 as HOURS), an audiotape service (AUDIO), guided tours (TOUR), a new coffee shop (BAR), new exhibitions within the museum (EXIB), more cultural events (e.g. theatre performances) among the temples (EVENT), the creation of a children lab (LAB), the production of audiovisual (AUDIV), the production of digital documentation (DOCUM). Each of the alternatives had a price to the respondent. Table 2 presents the estimates of the regression analysis conducted on the whole sample. The last column shows the mean willingness to pay (WTP) for each attribute. As one can see, the highest WTP was expressed for guided tour, longer opening hours, and the creation of children labs. The research results have already had some impacts on the management of the site, since some of the most desired attributes are now being implemented.

Background to the study

The conjoint analysis study presented here responded to the local political agenda of developing new management policies for the conservation and valorisation of this outstanding site. The Sovrintendenza ai Beni Archeologici, the local agency in charge of the conservation, maintenance and valorisation of this world heritage site, was interested in developing a better understanding of the site and of its region, in order to promote the cultural tourism already present in the area, and at the same time creating new poles of regional attractions. An increase in the level of fruition and understanding of the temple of Paestum and the role played by it in the whole region, might encourage tourists to de-route towards other nearby cultural sites. A sensible increase in tourists' number was therefore welcomed, if this meant also redirecting tourist to other nearby archaeological areas and transforming the one-day trip visitors into resident tourists for a day or two. This would bring economic benefits to the development of the entire area.

As discussed above, conjoint analysis appeared to be the most flexible and adequate valuation techniques for the purpose at hand. At the time of the questionnaire development and the first implementation of the survey, there were no similar studies in literature. The techniques had been used for a number of cultural goods (see Noonan, 2001, e Navrud and Ready, 2002), but the museum sector had almost been ignored. During the research lifetime, other studies were conducted on similar topics and more recently published (Santagatata e Signorello 2000, Mazzanti, 2001).

The questionnaire and the survey implementation

A crucial aspect of any conjoint analysis is the development of an appropriate questionnaire. For our study, we followed the usual steps envisaged by the literature. First, two focus groups were held in June 1999 aiming to understand which sort of services were particularly preferred. Then two pretests took place, one at the end of June 1999 and the other in mid July 1999. The final version of the survey was then implemented in August 2002.

The pretests and the final survey were carried out on site. The first pretest consisted of 50 interviews collected by 5 interviewers. The second pretest consisted of 245 interviews gathered on site by the same 5 interviewers. Major changes were made in the questionnaire wording and structure between the first and the second pretest, while only minor changes were envisaged after the data analysis of the second pretest. The final survey was carried out on site by 7 interviewers in August 2002 who gathered 732 interviews.

The final questionnaire consisted of 4 major sections to be administrated to the respondent, plus 2 sections to be filled by the interviewer. The first section included questions eliciting respondent's attitude with respect to the category of goods being valued, namely cultural goods. The second one presented the description of the good, the archaeological area of Paestum, and some questions aimed to elicit the level of knowledge of the good. The site description was as usual strengthened by images collated in a brochure prepared in collaboration with the Sovrintendenza. The third section consisted of the valuation question, in this case conjoint choice. The fourth section included questions eliciting all the socio-economic characteristics of the respondents (age, sex, income, level of education etc). The two final sections were

filled by the interviewer and concerned comment on the respondent's attitude throughout the interview, plus other relevant information.

The valuation question part is obviously the crucial one to elicit monetary expressions of respondents' preferences. Each alternative were given by the combination of different levels of the attributes defining it. In our choice experiment, we had nine levels of attributes plus the cost of the "package". We randomly derived a combination of

Table 2 Mean WTP for the different services (552 observations)				
Variables	Coefficients	Std.Dev	t-stat	β/δ^*
HOURS	0,6580	0,0747	8,812	5,22
AUDIO	0,4594	0,0634	7,240	3,64
TOURS	0,8018	0,0675	11,881	6,36
BAR	-0,1937	0,0734	-2,639	-1,54
EXHIBIT	0,2936	0,0733	4,007	2,33
EVENT	0,4561	0,0764	5,972	3,62
LAB	0,7025	0,0805	8,723	5,57
AUDIOV	0,4880	0,0738	6,608	3,87
DOCUM	0,3979	0,0622	6,401	3,16
PRICE	-0,1260	0,0069	-9,444	

*marginal wtp in euro for the museum services

alternatives, to be shown in pairs to the respondent, taking care of eliminating the dominated ones and checking for the appropriateness of the level of the attribute cost (in order to avoid that packages with more expensive services might be "sold" at cheaper prices). We generated 24 cards each showing three options, one of which corresponded to the minimum number of services for the site conservation. Each respondent was required to express the preference among the three options, where the last one did not assume any extra cost to the current ticket price. This choice experiment was repeated 4 times per each individual. The cards order was regularly rotated in the sample administration in order to avoid ordering bias¹.

¹ The order in which the attributes were presented in each card was not varied.

The attributes composing each of the scenarios fell into three main categories: a) fruition services, improving the accessibility and understanding of the site, b) leisure services, c) educational services. Table 1 shows an example of card. Among the services targeted to improve accessibility we have: an increase in opening time (from 9am to 10 pm, instead of sunset), audio guides with recorded description of museum and archaeological site, hourly guided tours. The services targeted to educational purposes are a children lab and multimedia reconstruction of the archaeological remains and documentation IT centre on the other archaeological sites of interest in the region. The leisure services include a café within the archaeological remains, the organization of weekly concerts/performances and of non-permanent exhibitions. The cost to the respondent varies between 6,20 € and 12,91€

The dataset has been analysed using a probabilistic model described in the following section.

The results

In this section we discuss the econometric model used to analyse our dataset.

We assume that the monetary value $V(s)$ of a certain scenario s can be obtained by the following expression:

$$V(s) = \beta_1 X_1(s) + \beta_2 X_2(s) + \dots + \beta_9 X_9(s) - \delta \text{PRICE}(s) \quad (1)$$

Where the $X(s)$ indicate the first nine characteristics of the scenario s (e.g., $X_1(s)$ = hours in scenario s , $X_4(s)$ =1 or 0 whether the café is present or not in the scenario s), and $\text{PRICE}(s)$ is the ticket price associated to scenario s .

The estimated coefficients β divided by δ give the monetary value, willingness to pay (WTP), attached by the respondent to the service identified by β . For instance, β_1/δ is the WTP for an increase in the opening hours, while, β_4/δ is the WTP for the presence of a café within the archaeological area. We assume that the respondent is capable of accounting for his/her budget constraint and of making the appropriate trade-offs with the other attributes of the choice set, when choosing the preferred option.

If we consider the increase in revenue related to the ticket price increase and the increased number of tourists, we can determine to what extent a certain policy can cover maintenance costs. One can show that the following result holds:

The estimated variation in the visitors numbers when one moves from scenario "0" to scenario "S", characterised by a certain increase in the number of services, can be calculated as follows

$$100(\exp\{\sum\beta_i (X_i(S)-X_i(0))+\delta(\text{Price}(S)-\text{Price}(0))\}^{-1}) \quad (2)$$

Such analysis can prove very useful given the current attitude of museums management to introduce new information technologies (computer, video, audio guide, etc.) in

Table 3					
Mean WTP depending on income (552 osservazioni)					
Variables	Coefficients	Std.Dev	t-stat	*	**
HOURS	0,6614	0,0748	8,842	4,17	6,93
AUDIO	0,4607	0,0635	7,253	2,91	5,14
TOURS	0,8181	0,0678	2,070	5,16	8,57
BAR	-0,2118	0,0737	2,875	1,34	-2,22
EXHIBIT	0,2835	0,0734	3,860	1,79	2,97
EVENT	0,4700	0,0767	6,128	2,97	4,92
LAB	0,7181	0,0809	8,879	4,53	7,52
AUDIOV	0,4906	0,0740	6,631	3,01	5,14
DOCUM	0,4082	0,0623	6,549	2,58	4,29
Marginal utility of income				0,158	0,095
* marginal wtp in euro per each service when income = 20658 euro (40 millions of lire).					
** marginal wtp in euro per each service when income = 46481 euro (90 millions of lire).					

support of fruition, often at very high costs. These costs might appear more reasonable if one could prove that they are at least partially met by the generated cash flow.

Table 2 presents the coefficients estimates, standard deviation, and "t" values for our dataset. The usable sample consisted of 552 observations, once eliminated all the observations missing values in one of the variables.

The results show that respondents attach a significant positive value to all characteristics presented in the choice set, but the café, which seems to be perceived

negatively. The most preferred services are guided tours, an increase of opening hours and a children lab. Less interest is shown for performances, concerts, and non-permanent exhibitions. Among the educational services, the smaller willingness to pay is attached to the documentation centre on the archaeological sites present in the region.

Using expression (2) one can calculate the increase in the visitors' number caused by the introduction of a specific service. Previous studies have elicited individual preferences for museums, though with different approaches (e.g. Ashworth-Johnson, 1996; Beltran -Rojas, 1996; Mazzanti, 2001; Santagata - Signorello, 2002), and have found that the interest for cultural goods is linked to individual characteristics as income, education, sex, and age. Table 3 presents the mean WTP per each service as a function of income and, as expected, the marginal utility is decreasing. Some authors (Smith et al., 1983; Ashworth-Johnson, 1996) also mention the possibility of a negative correlation with income, when considering leisure activities, such the visit to a museum, because those who have higher income levels face also higher opportunity costs to visit the site.

Table 4								
	Subsample with level of education ≥ College degree (282 observations)				Subsample with level of education < College degree (270 observations)			
Variables	Coeff.	Std.Dev	t-stat	*	Coeff.	Std.Dev	t-stat	*
HOURS	0,8229	0,1075	7,654	5,00	0,5668	0,1056	5,368	3,97
AUDIO	0,5878	0,0882	6,667	3,57	0,3687	0,1075	3,429	2,58
TOURS	0,9299	0,0947	9,817	5,65	0,7198	0,0968	7,438	5,04
BAR	-0,3883	0,1023	-3,794	-2,36	-0,0330	0,1010	-0,327	-0,23
EXHIBIT	0,2445	0,1133	2,158	1,48	0,3404	0,1187	2,867	2,38
EVENT	0,5601	0,1093	5,126	3,40	0,3943	0,1083	3,640	2,76
LAB	1,0180	0,1293	7,870	6,18	0,4520	0,1105	4,092	3,17
AUDIOV	0,5460	0,1006	5,428	3,32	0,3867	0,1246	3,103	2,71
DOCUM	0,4974	0,0971	5,089	3,02	0,2994	0,0926	3,232	2,09
Marginal utility of income				0,164	0,143			
* * marginal wtp in euro per each service when income = 20658 euro								

Table 4 shows the estimates obtained dividing the whole sample into subsets according to the different levels of education. It is interesting to note that respondents with a level of education inferior to the college degree do not feel the presence of a café

in the archaeological area as a negative feature, a shown by a no longer significant coefficient.

In this case, the preference order for the different services changes, since for people holding a degree the most preferred service is the lab, while the respondents with no college degree prefer longer opening hours and guided tours. In general, in our sample the WTP increases with the level of education as reported also in other studies, e.g. Beltran -Rojas (1996) and Mazzanti (2001).

Table 5 shows the estimates obtained dividing the sample into two subsets corresponding to two levels of age: less or more than 33 years. When one does not consider age, guided tours represent The most preferred service, however, when we divide the sample, we see that people falling into the older group are more willing to pay for an increase in opening hours, whilst the younger prefer a lab and audiovisuals.

Table 5									
	Subsample with age<= 33 years (126 observations)				Subsample with age >33 years (426 observations)				
Variables	Coefficients	Std.Dev	t-stat	*	Coeff.	Std.Dev	t-stat	*	
HOURS	0,1792	0,2221	0,807	0,93	0,7633	0,0802	9,514	5,36	
AUDIO	0,4344	0,1491	2,914	2,26	0,4687	0,0754	6,219	3,29	
TOURS	1,0598	0,1510	7,018	5,50	0,7764	0,0741	10,479	4,45	
BAR	-0,2436	0,1561	-1,560	-1,26	-0,1940	0,0802	-2,419	-1,36	
EXHIBIT	0,2827	0,1620	1,745	1,47	0,3006	0,0916	3,283	2,11	
EVENT	0,4313	0,1508	2,860	2,26	0,4861	0,0857	5,669	3,41	
LAB	0,7446	0,1801	3,886	3,84	0,7198	0,0938	7,673	5,05	
AUDIOV	0,6873	0,1740	3,713	3,55	0,4600	0,0874	5,266	3,23	
DOCUM.	0,3314	0,1564	2,118	1,82	0,4339	0,0737	5,887	3,04	
Marginal utility of income				0,192	0,143				
* marginal wtp in euro per each service when income = 20658 euro									

The latter group also shows a coefficient for the variable BAR no longer significant, while WTP is also higher for the older group. Our result confirms the trend found in Mazzanti (2001) and Morey-Rossman (2002), whilst opposite result can be found in Santagata-Signorello (2000).

Table 6										
Subsample of residents in Campania (190 observations)					Subsample of non residents (362 observations)					
Variables	Coefficients	Std.Dev	t-stat	*	Coeff.	Std.Dev	t-stat	*		
HOURS	0,7241	0,1658	4,368	3,98	0,6481	0,0843	7,688	4,29		
AUDIO	0,5040	0,1082	4,658	2,77	0,4396	0,0861	5,107	2,91		
TOURS	0,9313	0,1259	7,398	5,12	0,7887	0,0799	9,872	5,22		
BAR	-0,3453	0,1203	-2,871	-1,90	-0,1265	0,0879	-1,439	0,84		
EXHIBIT	0,3640	0,1343	2,710	2,00	0,2817	0,1035	2,721	1,86		
EVENT	0,6623	0,1274	5,200	3,64	0,3791	0,0966	3,925	2,56		
LAB	0,7188	0,1575	4,564	3,95	0,6701	0,0983	6,815	4,44		
AUDIOV	0,6940	0,1469	4,723	3,81	0,3902	0,0931	4,190	2,58		
DOCUM	0,5664	0,1170	4,480	3,11	0,3230	0,0812	3,978	2,14		
Marginal utility of income				0,182					0,151	
* marginal wtp in euro per each service when income = 20658 euro										

Table 7										
Subsample of women (190 observations)					Subsample of men (362 observations)					
Variables	Coefficients	Std.Dev	t-stat	*	Coeff.	Std.Dev	t-stat	*		
HOURS	0,6575	0,1090	6,034	4,26	0,6471	0,1025	6,310	3,71		
AUDIO	0,4334	0,1020	4,247	2,81	0,4928	0,0915	5,385	2,83		
TOURS	0,9333	0,1031	9,050	6,05	0,7843	0,0893	8,781	4,50		
BAR	-0,2383	0,1003	-2,376	-1,54	-0,2039	0,0995	-2,049	1,17		
EXHIBIT	0,2092	0,1171	1,787	1,36	0,3808	0,1138	3,345	2,19		
EVENT	0,8147	0,1119	7,283	5,28	0,2206	0,1091	2,023	2,47		
LAB	0,6066	0,1301	4,661	3,93	0,7782	0,1147	6,784	4,47		
AUDIOV	0,7180	0,1341	5,356	4,65	0,3862	0,0983	3,928	2,22		
DOCUM	0,4272	0,0910	4,696	2,77	0,3815	0,0975	3,913	2,19		
Marginal utility of income				0,154					0,174	
* marginal wtp in euro per each service when income = 20658 euro										

Table 6 shows that no significant differences can be found between the preferences expressed by residents of the Campania Region and residents elsewhere, but for the WTP for audio guides, higher among non residents, and the café within the

archaeological area, which is perceived negatively only by residents. A stronger preference for concerts and performances is found among residents, probably because of their facility in accessing the site throughout the year.

Finally, table 7 shows estimates for the women and men groups, analysed on the assumption that the two genders may have different preferences. We can see in this case a higher WTP for performances and other events among women, whilst the most preferred service is given by guided tours.

CONCLUDING REMARKS

One of the first issues to be resolved in order to find optimal policies for the management of museums and, in general, of cultural goods, is the definition of the main and most desirable output, the final goal of the policy, whether it is conservation, education or something else. Different “stakeholders” would probably have different perceptions of what the most desirable output is. An “intellectual”, might perceive art as belonging to an elite whose principal objective and purpose is to preserve the work of art for future generation, or even for its own sake. Someone more linked to a social vision of art and cultural heritage might be more interested in promoting the knowledge of this archaeological site, maybe envisaging free access. A local administrator might prefer a policy aimed to attract more tourism, hence encouraging all the services that may complement tourism, such as those leisure oriented. An optimal policy should account for all the different positions, including that of the general public, whose preferences are often ignored.

This study analyses visitors’ preferences for alternative museum services. Results seem interesting in the perspective of new management policies for the Temples of Paestum, and appear to confirm the potential that stated preference valuation techniques, such as the conjoint analysis approach used in our study, have for these purposes. In particular, we find that the most preferred services are those improving the accessibility and the understanding of the site, including its museum, (longer opening hours, guided tours), followed by educational service such as the children lab. Our results, confirm that the main reason moving people to visit cultural sites is the desire of “learning something”, as also debated by Verbeke - Van Rekom (1996).

WTP to have access to the site increases with age, education, and income, confirming previous results. The majority of respondents show no interest towards the

transformation of this cultural site in a sort of entertaining place, with the organization of performances and the creation of a café within the archaeological remains is perceived negatively. People with a lower level of education, the youngest, and tourists non residents in the region, instead seem interested in the creation of the cafe.

In sum, we can say that our results show a preference for a management policy oriented towards the improvement of the accessibility and linked with educational and pedagogical purposes. This confirms a trend shown in many European museums where the principal focus is on the exhibited good, more than on the other services that are considered ancillary, and sometimes separated from the museum. Further research is needed to test the potential of stated preferences techniques for management purposes of cultural sites and their services.

References

- Ashworth J. e P. Johnson , (1996), "Sources of values for money for museum visitors; some survey evidence", *Journal of Cultural Economics*, n. 20
- Ben-Akiva M. e S.R. Lerman, (1985), *Discrete Choice Analysis*, MIT Press.
- Bertran E. e M. Rojas, (1996), "Diversified funding methods in mexican archeology", *Annals of Tourism Research*, vol. 23, n. 2
- Fekdstein, M. (1991), "The Economics of Art Museums", University of Chicago press, Chicago
- Frey B.S. e W.W. Pommerehne, (1989), *Museums and Markets; Explorations in the Economics of Arts*, Blackwell, Oxford.
- Frey B.S., (1994), "Cultural Economics and museum behaviour", *Scottish Journal of Political Economy*, n. 41
- Harrison J. (1997), "Museums and touristic expectations", *Annals of Tourism Research*, vol. 24 n. 1
- Healey P., 'Collaborative Planning in a Stakeholder Society', *Town Planning Review*, **69**, 1, 1-20, 1998.
- Jackson R. (1988), "A Museum cost function", *Journal of Cultural Economics*, n. 12.
- Verbeke J., e M. van Rekom, (1996), "Scanning museum visitors", *Annals of Tourism Research*, vol. 23, n. 2
- Johnson P.S. e R.B. Thomas, (1998), "The Economics of museums: a research perspective", *Journal of Cultural Economics*, n. 22

- Mazzanti M. (2001), "Discrete choice models and valuation experiments: an application to Cultural Heritage", Working Paper SIEP n. 75
- Mitchell R. And Carson R., *Using Surveys To Value Public Goods: The Contingent Valuation Method*, Resources For The Future, Washington D.C., 1989.
- McFadden D., (1973), "Conditional logit analysis of qualitative choice behavior", in Zarembka (a cura di), *Frontiers of Econometrics*, Academic Press.
- Morey E. e K.G. Rossman, (2002), "Using stated-preference questions to investigate variation in willingness to pay for preserving marble monuments; classical heterogeneity and random parameters", conference on "Contingent valuation of culture", Chicago, February 2003
- Navrud S. And Ready R., *Valuing Cultural Heritage*, Edward Elgar Publishing, 2002.
- Santagata W. e G. Signorello, (2000), "Contingent valuation of a cultural public good and policy design: the case of "Napoli Musei aperti", *Journal of Cultural Economics*, vol. 24 n. 3-
- Silbeberg T. (1995), "Cultural tourism and business opportunities for museums and heritage sites", *Tourism Management*, vol. 16, n. 5
- Smith V. K., W. Desvouges e M.P. McGivney. (1983), "The opportunity cost of travel time in recreation demand models", *Land Economics* n. 59
- Smith V.K. e W. Desvouges,(1986), *Measuring Water Quality Benefits*, Kluwer-Nijhoff, Boston.
- Thompson E., M. Berger, G. Blomquist e S. Allen, "Valuing the Arts: a contingent valuation approach", conference on "Contingent valuation of culture", Chicago, February 2003