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The Evaluation of the Process of Cultural Good Consumption for Different Profiles of Consumers.
The case of the Scrovegni Chapel.

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1. Introduction

The arts have always played a crucial role within societies. Over the past few decades, anthropological studies have described arts as fundamental for human cultures because they enhance the capability for adaptation. Arts develop social identity, producing collective signs and symbols, and they play a key role in cultural evolution by modifying beliefs. Their changing potential is crucial for individual expression and for inspiring individual creativity, the engine of economic activities (Bateson 1980; Hauser 1982; Levy-Strauss 1983; Morris and Eschbach 1993).

At the present time, the social role of the arts can be described by stressing three different dimensions (Evrard and Colbert 2000): arts as a substitute for religion (e.g. museums are the new religious venues with their ritualizations), as educational assets (in terms of norms transmission) and as an entertainment source (a consumer good). The latter, consumption of cultural goods, has been increasing since the 1970s, becoming a *must* in today's western lifestyles. Recent theories regarding cultural studies state that we go to museums, exhibitions, performances and so on, in order to satisfy emotional needs and to contribute actively to the development of our cultural and social identity (Greenberg 1996; Hall 1997). The recently added economic facet provides a new perspective on arts consumption and requires a multidisciplinary viewpoint.

In this paper, we empirically study the demand of arts consumption in order to address and identify satisfaction factors, starting from a theoretical perspective. Moving from the assumption that the need for consumption of arts depends upon social, cognitive and emotional factors, our aim is two-fold: first, to understand and quantify what elements of the artistic visit affect the general satisfaction of visitors and secondly to discriminate different satisfaction profiles with respect to motivations, expectations and the overall consumer experience. We have extracted variables from an empirical analysis designed for visitors of the Scrovegni Chapel, decorated by Giotto and assistants around 1305 in Padua. We interviewed 302 visitors at the entrance and the exit of the

chapel to capture their social, cultural and emotional experiences. For the first aim, we elaborate on this information using an ordinal logit model, in order to provide a measurement for the degree of customer satisfaction. The latter is a marketing tool employed for strategic goals, in particular to measure demand features and market evolution. For the identification of the main profiles, we perform a cluster analysis, to unify similar customers in groups, thus allowing detection of similarities within groups and differences between groups.

The paper is organized in four parts. We begin by introducing the different theoretical interpretations on satisfaction for cultural consumption and add our own contribution to its description. We then briefly describe methodology, data and results of the study that we carried out. In the third section, we evaluate the General Satisfaction of the consumer, illustrating an analytical model and the results that we obtained. The next section presents the cluster analysis and the main profiles of visitors that stemmed from this analysis. Some concluding remarks follow.

2. Consumption of cultural goods: what type of satisfaction?

In order to investigate satisfaction derived from arts consumption, we considered what types of motivations might trigger it. Usually economists are not engaged in this kind of research because they consider motivation a social or psychological cause that does not pertain to the economic domain. However, the arts are a very peculiar consumption good, both in terms of demand characteristics and in terms of local supply, because they affect the territorial multiplier by importing demand instead of exporting local goods. With his pioneering contribution, Throsby (1994, 2001) underlines that arts consumption is an endogenous process that requires an investigation of differences among cultural tastes. This viewpoint is shared by other economic research areas, such as management of arts and tourist research analysis.

We can briefly sketch the content of these theoretical economic domains on the topic, as follows. Economic research describes two main motivations that drive cultural consumption: the present satisfaction of aesthetic characteristics of the individual utility function and the accumulation of knowledge and experience (individual cultural investment) that reduces the future shadow price of cultural goods. Of course, these main motivations are strictly intertwined with social and/or institutional causes, which build up the cultural capital necessary for individual creativity and innovation (Florida 2002; Frey 2000; McCain 1992; Throsby 2001). In the field of management of arts, cultural goods are similar to other markets such as sports, for example, because there is an identification process by the consumer/spectator with the artist/champion, or markets such as the communication industry, given that artistic activities use the same information channels for dissemination (Evrard and Colbert 2000). With respect to motivations, arts management underscores the relevance of the emotional experience in explaining cultural consumption and also points out the individual need to participate actively in a cultural process (Van Oost 2002).

Finally, in tourist research analysis, motivation is studied with respect to the *tourism attraction system* defined by the co-presence of a human being (the tourist), the feature of a place (the sight), and a marker (information) (Leiper 1990). Motivations and tourist behavior depend upon three nuclei, each one belonging, respectively, to a place, to the known previsit and to the discovery after arrival at the destination. Richards (2002), in an empirical analysis of this nuclear structure, concludes that tourists are really pushed towards attractions rather than being pulled by some particular attraction of a site. Moreover, in this research area, there is a growing attention to the relationships between tourism satisfaction and the feelings that stem from the visit. Given that the consumption process leaves affective traces in memory, satisfaction depends not only on the cognitive experience but also on evoked emotions (Rodríguez del Bosque and San Martín 2008).

It seems to us that the three research areas stress different crucial points. As far as economic studies are concerned, they put the accent on the definition of the economic *value* of the arts in order to investigate the market functioning; while management of arts is more concerned about *organization*

of events or permanent exhibitions of the arts. Indeed, the analysis of consumption demand is needed to approach effective organization. Tourist research analysis addresses the complexity of the tourist behavior, investigating the *socio-economic characteristics* of this growing economic phenomenon, i.e. what micro and macro regularities we observe. Despite these goal differences, the three research areas agree on the assumption of cultural goods as basic ingredients of a symbolic system and consider cultural motivation as a strong trigger for aesthetic experiences. Since motivation is essential for expectations of arts consumption, we can say that motivation, and particularly its structure, is crucial for generation of satisfaction.

In this paper we intend to enrich this description, putting forward the consumption emotions, stressed in managerial studies and tourism research analysis, into the investigation of satisfaction in arts consumption.

Usually, to study the consumption emotions with respect to experiential satisfaction, empirical analyses use the expectancy-disconfirmation model (Bagozzi, Baumgartner, Pieters and Zeelenberg 2000; Mano and Oliver 1993; Westbrook and Oliver 1991). However, more than adding the variable "emotions" to the model, they recast the investigation of satisfaction into the relationships between affective expectations and the emotions stemming from consumption (Phillips and Baumgartner 2002; Sujan, Bettman and Baumgartner 1993). Therefore, following these studies, we attempt to identify the content of satisfaction, taking into account the assets of cultural, social and emotional elements gathered with a sampling investigation and then defining motivations, expectations and the artistic experience itself. Through statistical analyses, we try to detect which elements are more relevant to the satisfaction process of artistic consumption and whether there are differences among visitor profiles for the satisfaction relevance of the items identified.

3. The behavior of the Scrovegni Chapel visitors

To describe the behavior of the Scrovegni Chapel visitors, we have taken into account all of the dimensions involved in the experience of aesthetic fruition, which include cognitive, affective and somatic-emotional factors (Gambarotto, Fantinel and Furlan 2008). The questionnaire consisted of four sections: the first section, *motivations*, concerns the social and cultural motivations and the involved cognitive process of documentation upon the artistic content of the visit. The second section, *expectations*, is about cultural, social and emotional reasons moving the aesthetic experience. The third section was dedicated to the *personal and cultural profile* of the visitor. Lastly, the fourth section, compiled at the exit of the visit, concerned the *emotional and cognitive* experience of the Scrovegni Chapel visit.

Motivation	*%*	*Motivation*	*%*
Fond of the art of that period	43	To see the Scrovegni Chapel	6
To take a friend / relative to the visit	15	In Padua for the De Chirico exhibition	5
Told about it by a friend /relative	14	In Venice for tourism	5
Spending free time	12	In Padua for a conference / trade fair	3
Read about the visit in newspapers / magazines	9	In Abano/Montegrotto for a thermal treatment	3
In Padua for tourism	7	Other	13

Table 1. Motivations for visiting the Scrovegni Chapel (percentage values)

We interviewed 302 visitors, the majority of whom were adults from the North of Italy (80%), with a medium-high educational level (89%). The prevailing motivation to visit, namely *to be fond of the*

art of that period (43%), turned out to be directly linked to the aesthetic pleasure and to the high educational level of visitors, as a large part of the economic evidence has already explained (see Table 1 for the impact of other motivations). As far as the consumption expectation is concerned, we have to bear in mind that expectation is built up when visit motivation becomes conscious, becoming the first step of the choice process. Visitor expectation is made clear from the expected result, and the choice option that offers a satisfactory expectation will be the one that starts the program action of the visitor, such as going to the museum, booking, find someone to accompany them, how to enjoy the cultural good (see Figure 1 for the expectations listed in the questionnaire). The most frequent kind of expectations for the people intending to visit the Scrovegni Chapel were both to deepen their artistic culture (59%) and to experience aesthetic emotions (49%).

Figure 1. Expectations before the visit (percentage values)

The second step of the interview — at the exit of the Chapel visit — addressed the individual learning function of the actual cultural experience. We tried to gather information on the three individual dimensions involved in consumption emotions: the somatic (emotion), the affective (memory) and the cognitive (thought). We observed the thinking activity in relation to the psychical activity of remembering and being moved, in order to see how much these affected the aesthetic experience. We prepared a sequence of questions based on emotions stemming from observing the frescos: those for emotions (joy (19%), reflectivity (51%), irritation (4%), sadness (14%), fear (5%), other (12%)); those for thinking (contemplation about the technique (47%), about the artist (11%), about the era of the painting (26%), and about the depicted subject (4%)); and those for memories (none (70%), a family event (6%), childhood event (5%), a friendship event (3%), a school event (2%), a work-related event (1%), other artwork events (3%)).

It proved that, during the perception of a work of art, people have a very active cognitive function about the artist's techniques (color, drawing, disposition of figures) showing that they experience an 'aesthetic perceptive' attitude and not simply superficial factual knowledge. However, a large number of the interviewees had not experienced a memory, showing that visitors lack a meta-dimension of the experience that requires an appropriate context, i.e. time, concentration and receptiveness. We have to stress that the visit time was too short to become aware of the cultural experience by remembering an event that once created emotions.

While the satisfaction level of the visitors with respect to their expectations was very high (97%), we observed differences in the General Satisfaction from the visit: approximately half of the interviewees were very satisfied, while only one third declared themselves to be very much satisfied. This is a crucial item in this study, because we use it as a total measure of visit

satisfaction.

In summary, the study shows that there is a discrepancy between prior expectation recorded before the visit and the satisfaction recorded after the event. Expectations for visiting a cultural good are mainly described in cognitive terms (*to broaden one's culture*) while satisfaction after the visit is described with respect to memories, emotions, color perception, beauty and enjoyment. The cultural experience also results in a social tool to share with friends, with their family, and less strongly, with job mates.

In this paper, we put these results forward to deepen the visitor satisfaction analysis. We look for those elements – among those of the questionnaire – of the cultural consumption process that contribute significantly to the final evaluation of the visitor. This analysis is particularly important because the present satisfaction from a cultural experience will increase consumption in the future. This inter-temporal relationship depends both on the present consumption emotions and on the social communication role that culture, and the arts in particular, plays.

4. The evaluation of General Satisfaction

Our first aim is to understand which aspects of the visit significantly influence the *General Satisfaction* of the visitors and then to quantify this relationship. We approach these topics with a proportional-odds cumulative-logit, since General Satisfaction is an ordinal variable with 4 levels (little, enough, very and very much).

4.1. The model

A proportional-odds cumulative-logit (in the sequel we will refer to this as "ordinal logit") has been implemented to study the relationship between the General Satisfaction (*response variable*) from the visit and the aspects (*regressors*) surveyed in the questionnaire. The reason for the popularity of proportional-odds cumulative-logit is because it models an ordinal variable, intended as a categorization of an unobservable continuous variable. In this case, General Satisfaction should be intended as a continuous variable Z that has been categorized for simplicity in four classes by three cut-points (see Figure 2). If the General Satisfaction Z is less than or equal to the first cut-point I_1, that is for $Z \leq I_{little/enough}$, we observe the first level of "General Satisfaction" Y=1 (little); if satisfaction Z is between the first and second cut-point I_1 and I_2, that is for $I_{little/enough} \leq Z \leq I_{enough/very}$, then we observe the second level of General Satisfaction Y=2 (enough); if $I_{enough/very} \leq Z \leq I_{very/very much}$, we observe Y=3 (very), and finally, if satisfaction is over the last cut-point I_4, that is for $Z \geq I_{very/very much}$, we observe the fourth level of General Satisfaction Y=4 (very much).

If Z is related to regressors $X = (X_1,...,X_p)$ through a linear regression Z=Xβ+ε, where $\beta = (\beta_1,...,\beta_p)'$ is the set of parameters and ε is a random error from a logistic distribution (with mean zero and constant variance), then Y will be related to X by a proportional-odds cumulative-logit, that is:

$$\text{logit}(P(Y > j)) = -I_j + X\beta + \varepsilon$$
$$= -I_j + X_1\beta_1 + \ldots + X_k\beta_k + \ldots + X_p\beta_p + \varepsilon \qquad j = 1,2,3,4 \qquad (1)$$

where the generic β_k represents the tendency of observing a major level of satisfaction (that is, bigger than the j-th level) when X_k increases, and I_j represent the j-th cut-point (or intercept). In particular, the generic β_k represents the log-odds of observing a major level of satisfaction, as X_k increases of one-unit, for $k = 1,...,p$.

If we deal with a regressor that is a dummy variable, the interpretation of parameter β_k must be set as follows. A dummy variable is a qualitative dichotomous variable that has only two categories: usually the first category (*reference category*) assumes value 0 and the second category assumes value 1. In this case, β_k represents the variation of the tendency of observing a satisfaction bigger than the j-th level in correspondence to the second category of X_k, with respect to the reference category of X_k.
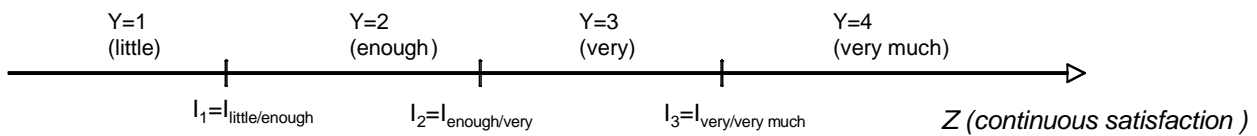

Figure 2. Categorization of General Satisfaction Z (continuous) in four categories by three cut-points $I_{little/enough}$, $I_{enough/very}$, $I_{very/very\ much}$. Y represents the categorized General Satisfaction into levels "little", "enough", "very" and "very much".

To test the significance of variable X_k it is necessary to verify whether or not the corresponding coefficient β_k can be considered equal to zero (at a level of significance $\alpha = 0.05$). This purpose corresponds to the following hypothesis testing:

$$\begin{cases} H_0 : \beta_k = 0 \\ H_1 : \beta_k \neq 0 \end{cases} \tag{2}$$

where H_0 is the null hypothesis and H_1 is the alternative hypothesis. This can be carried out with a t-test at level $\alpha = 0.05$ of significance. H_0 is rejected if the p-value associated with the t-test is smaller than α and we would say that X_k is significant (at level $\alpha = 0.05$). On the other hand, if the p-value is greater than α, H_0 is not rejected and X_k is considered not significant (at level $\alpha = 0.05$).
Analogously, the significance of the generic intercept (cut-point) I_j, $j = 1,\ldots,4$, is tested with the following hypothesis testing:

$$\begin{cases} H_0 : I_j = 0 \\ H_1 : I_j \neq 0 \end{cases} \tag{3}$$

performing a t-test at level $\alpha = 0.05$ of significance.
For more details on the proportional-odds cumulative-logit and on corresponding hypothesis testing, the reader can refer to Agresti (2002).

4.2. Study results

At the beginning of the analysis, we included in the ordinal logit model (1) all of the items surveyed in the questionnaire, for a total of more than 100 regressors, since the majority of the questions provide for multiple responses. In this way, starting with all of the regressors and reducing the model step by step, we were able to isolate those elements of the four sections of the questionnaire

(motivations, expectations, personal-cultural profile and emotional-cognitive experience) that had a significant relationship with General Satisfaction. For each section of the questionnaire, one or more items have come out to be significant, with exception of motivations and cognitive aspects of the experience, that apparently are not involved in the cultural consumption process, at least in the way they have been surveyed in the questionnaire.

Regressors	Coeff. (log-odds)	std. Error	T test	p-value
[P]Educational Level (*high* vs. low[†])	0.87	0.36	2.42	0.0157
[P]Consumption of Art Magazines	0.31	0.12	2.63	0.0086
[E]Expectation of Sharing Experiences (*yes* vs. no[†])	0.51	0.25	2.20	0.0281
[EX]Satisfaction from Expectations (*yes* vs. no[†])	2.48	0.71	3.50	0.0005
[EX]Reported Joy after Visit (*yes* vs. no[†])	0.54	0.23	2.37	0.0178
[EX]Reported Feedback to Family (*yes* vs. no[†])	0.90	0.26	3.53	0.0004

Intercepts	Coeff. (log-odds)	std. Error	T test	p-value
$I_{Little / Enough}$	-2.57	0.65	-3.98	0.0001
$I_{Enough / Very}$	0.80	0.43	1.87	0.0608
$I_{Very / Very much}$	3.12	0.47	6.71	0.0000

[†]reference category
[P]personal profile, [E]expectation before visit, [Ex]reported feelings at the exit.
Table 2. Ordinal logit model for the General Satisfaction from the visit at the Scrovegni Chapel

In particular, the regressors that have a significant relationship with General Satisfaction from the visit are *educational level* (low, high), *consumption of art magazines* (never, seldom, enough, frequently), *expectation of sharing experiences* (yes, no), *satisfaction from expectations* (yes, no), *reported joy after visit* (yes, no) and *reported feedback to family* (yes, no). Table 2 shows parameter estimates of regressors X_k ($k = 1,\dots,p$) and of intercepts I_j ($j = 1,\dots,4$), corresponding standard errors, t-tests and p-values (corresponding to hypothesis testing (2) and (3)). Apart from Consumption of Art Magazines, the other regressors are dummy variables and the reference category is marked with [†]. Satisfaction from Expectations is the most important regressor among the dummy variables, since the corresponding parameter estimate assumes the largest value: that is, the logit of the probability of observing a major category of General Satisfaction increases of 2.48 for those whose expectations were satisfied (with respect to those whose expectations were not satisfied). Successively, Educational Level and Reported Feedback to Family assume similar parameter estimates (0.87 and 0.90 respectively): that is, the logit of the probability of observing a major category of General Satisfaction increases of 0.87 for highly educated people (with respect to the less educated) and of 0.90 for those who report a feedback to their family (with respect to those who did not report back).

In conclusion, from the results presented in Table 2, we can briefly say that people with a higher education level are more likely to be more generally satisfied than are less educated people (log-odds=0.87). A major consumption of art magazines is also more likely to have a positive effect on the satisfaction from the visit (log-odds=0.31). People with expectation of sharing experiences are more likely to be more satisfied than who did not have that expectation (log-odds=0.51). People who reported their expectations satisfied are more likely to be more satisfied than are those whose expectations were not satisfied (log-odds=2.48). People who expressed joy after the visit are more likely to be more satisfied than people not finding the visit joyful (log-odds=0.54). People who were going to report feedback to their family members are more likely to be more satisfied than those who were not going to report feedback (log-odds=0.90).

The profile of General Satisfaction stemming from the ordinal logit model shows that *cognitive* and *social* elements significantly affect the outcome of arts consumption. This means that the visitors activate a learning process before and during the visit and actively look for the socialization dimension of arts. In part, the relevance of both the educational level and the expectation of sharing artistic experiences confirm the Bordieau (1979) theory on distinction as elements fostering beliefs and the social identity. However, the consumption of art magazines shows that satisfaction passes through a learning process of culture and there is need to personally experience arts in order for people to increase their own cultural capital. The relevance of experiencing joy after the visit is the other crucial element for learning; the emotional dimension deepens and structures General Satisfaction because, in line with recent theories in neurobiology (Freedberg and Gallese 2007) and arts anthropology (Elkins 2001; Plutchik 1994), visitors can become *creative* through their personal affective interpretation of the artistic experience.

It could be viewed as surprising that the variables we gathered for *motivation* do not result in significance in the model. We propose the following two possible interpretations for this result: first, there is a logical difference between motivation and expectation, and in economics, motivation is an element defining the choice process and the creation of different options from which to choose. Expectation is tied up with action, i.e. with routines, norms and learning processes (Hodgson 1998). Given that our aim is to identify variables affecting General Satisfaction, it is plausible that motivation will not emerge as significant. The second possibility is based on a cognitive interpretation of motivation (Simon 1967); if motivation is assumed to be a complex structure, as Leiper (1990) also suggests, that stems from the relationships of the educational level, the consumption of art magazines and the expectation of sharing experiences, then we can say that motivation is included in the model. However, the relationships between General Satisfaction and motivation remain a complicated point asking for a more in depth analysis.

4.3. Descriptive statistics of General Satisfaction on the regressors

To better understand the dynamics of the satisfaction process from the visit, it should be of interest to evaluate the percentages of the four levels of General Satisfaction in correspondence with the more important items. Since the ordinal logit provides the elements of the questionnaire that are more closely related to General Satisfaction from the visit, we propose a distribution of General Satisfaction stratified by the significant regressors identified by model (1) (see Table 3).

Among highly educated people, 45% report being "very" satisfied from their visit and 36% "very much" satisfied; while among less educated people, 31% of the respondents indicate being satisfied "enough" and 48% "very" satisfied. From the results of the ordinal logit, it was already known that educational level influences General Satisfaction, because less educated people are less satisfied with their visit than are highly educated people. Moreover, as Table 3 shows, we can conclude that the percentage of "little" and "very" satisfied visitors is very similar in both high and low educational level, while the percentage of level "enough" is higher for less educated people (31% vs. 18%) and the percentage of level "very much" is higher for highly educated people (36% vs. 18%). In conclusion, levels "little" and "very" of General Satisfaction seem to be independent of the Educational Level, while we observe a major tendency of associating a level of satisfied "enough" with less educated visitors and the level "very much" satisfied with highly educated visitors. This means that the cultural level affects the satisfaction process, because it increases the evaluation capability and the pleasure of the visiting experience.

| | | Percentage of General Satisfaction | | | |
		Little	Enough	Very	Very much
Educational Level	*High*	1	18	45	36
	Low	3	31	48	18
Consumption of Art Magazine	*Never*	2	23	44	31
	Seldom	2	18	52	28
	Enough	0	13	42	45
	Frequently	0	5	45	50
Expectation of Sharing Experiences	*Yes*	0	13	45	42
	No	2	23	46	29
Satisfaction from Expectations	*Yes*	1	18	47	34
	No	20	50	20	10
Reported Joy after Visit	*Yes*	1	14	46	39
	No	2	23	45	30
Reported Feedback to Family	*Yes*	1	13	47	39
	No	1	34	43	22

Table 3. General Satisfaction from the visit stratified on the regressors

For the Consumption of Art Magazines people "very" satisfied are equally distributed across categories "Never", "Seldom", "Enough", and "Frequently" (44%, 52%, 42%, 45% respectively). In contrast, people satisfied "enough" are more associated with a low frequency of magazine consumption while people "very much" satisfied are associated with a high frequency of art magazine consumption (23%, 18%, 13%, 5% vs. 31%, 28%, 45%, 50% respectively). We can say that interest in the arts affects satisfaction because it contributes to visitor awareness and their involvement in the learning process.

The percentage of respondents "very" satisfied with their visit is similarly round 45% among people that both have and have not Expectations of Sharing Experiences from the visit. Again, visitors "very much" satisfied are more associated with the expectation of sharing experiences (42% vs. 29%), while the satisfied "enough" are more associated with not having this kind of expectation (13% vs. 23%).

A close relation exists between the Satisfaction from Expectations and the General Satisfaction with the visit; indeed, of those visitors whose expectations were satisfied, 47% report to be "very" satisfied (vs. 20% of people whose expectations were not satisfied) and 34% to be "very much" satisfied (vs. 10% of people whose expectations were not satisfied). On the other hand, among respondents that indicated not having had their expectations satisfied, 50% said to be satisfied "enough" with their visit (vs. 18% of people whose expectations were not satisfied) and 20% said to be "little" satisfied (vs. 1% of people whose expectations were not satisfied). This result confirms the role of expectation on the perception and evaluation of the artistic experience. Moreover, the high value of the coefficient of this variable in the ordinal logit model and its stratification implies that the expectation pattern is crucial for satisfaction itself and generally for the satisfaction with the visit.

For the Reported Joy after the Visit, the percentage of "very" satisfied people is quite similar between those who feel it (46%) and those who do not (45%). Again, differences lie in the levels "enough" and "very much"; among people that report joy after the visit there is a higher percentage of those "very much" satisfied (39% vs. 30% who did not report it) and a lower percentage of those satisfied "enough" (14% vs. 23% who did not report it).

Finally, General Satisfaction is positive related to the intention of giving feedback about the visit to the family: 39% of the visitors who state the intention of giving feedback indicate to be "very much" satisfied (vs. 22% that do not have the intention), 47% to be "very" satisfied (vs. 43%) and 13% to be satisfied "enough" (vs. 34%).

In conclusion, we can indicate that levels "little" and "very" for General Satisfaction seem not to be affected by the characteristics of visitors, while the features of the visitors seem to influence levels "enough" and "very much". It seems that the completeness (very much) or incompleteness (enough) of General Satisfaction is the outcome of a complex process including cognitive, social and emotional dimensions. When these three dimensions are less/much developed, General Satisfaction reduces/increases significantly, affecting the individual cultural capital in a negative/positive way. We can suppose that the minimum and maximum levels of satisfaction require the setup of a knowledge stock that is partly dependent upon educational level and partly on individual sensibility.

5. Identification of the main profiles of the visitors

The second aim of the paper is to identify the main profiles of cultural consumers of the Scrovegni Chapel. Cluster analysis is the statistical tool that we consider appropriate for approaching this topic since it allows us to group individuals with similar characteristics and to separate into different groups individuals with different features.

5.1. Cluster analysis

This technique has spread out in marketing for market segmentation and is a worthwhile technique when the objective is to improve the understanding of consumer behaviors. In this part of the study, we outline the basic ideas of this technique; the reader is referred to Kaufman and Rousseeuw (1990) for further details.

The output of a cluster analysis is the division of a population of consumers into a certain number of groups (or clusters), with the feature that individuals belonging to the same group are as similar as possible, and individuals belonging to different groups are as dissimilar as possible. The similarity (or dissimilarity) among groups must be intended with respect to a set of variables that describe consumer characteristics. The measure of similarity is based on the Gower's coefficient, which allows evaluation of the proximity between groups for mixed data types (that are both quantitative and qualitative variables).

In this analysis, we perform a hierarchical cluster through which the individuals are divided into groups in multiple steps. At the beginning, there are as many clusters as the number of the individuals (that is one single individual for each cluster), then a series of partitions takes places that combines the two closest groups at each stage, to get finally to a single cluster of all individuals. In this analysis, we use "Ward's method" as the group agglomerative procedure; the two closest groups are defined as the two clusters that, when merged, guarantee the minimum increment of variance within groups. In other words, the two most homogeneous groups are merged at each step.

The optimal number of clusters is not known *a priori* but currently there are several techniques that assist the researcher in this task. Finally, after the identification of groups, it is possible to perform a number of descriptive statistics on the variables involved, stratified by cluster.

5.2. Study Results

In this part of the study, we decide to measure the similarity among groups through General Satisfaction with the visit and the regressors that are determined to be significant in the ordinal logit shown in Table 2, and we identify three clusters representing three different profiles of visitors. These three profiles describe, respectively, *exigent educated visitors* (cluster 1), *socialized educated visitors* (cluster 2), *joyful less educated visitors* (cluster 3). The first two clusters consist of 36% of visitors each, while the third consists of 28%.

	Cluster 1: *Exigent educated* (36%)	Cluster 2: *Socialized educated* (36%)	Cluster 3: *Enjoyable less educated* (28%)
GENERAL SATISFACTION FROM THE VISIT			
Little	3	0	1
Enough	27	8	20
Very	47	45	45
Very much	23	47	34
EDUCATIONAL LEVEL			
High	99	99	72
CONSUMPTION ART MAGAZINES			
Never	52	54	68
Seldom	23	24	18
Enough	15	15	8
Frequently	9	7	5
EXPECTATION OF SHARING EXPERIENCES			
yes	17	100	6
SATISFACTION FROM EXPECTATIONS			
yes	92	99	100
REPORTED JOY AFTER THE VISIT			
yes	2	45	87
REPORTED FEEDBACK TO FAMILY			
yes	60	69	55

Table 4. Cluster analysis output: characteristics of clusters (percentages)

Table 4 shows the characterization of the clusters, with respect to the variables involved, while Figure 3 gives the corresponding plot. With respect to General Satisfaction, we can state that the *exigent educated visitors* are characterized by the less satisfied individuals, *socialized educated visitors* by the most satisfied people, and *joyful less educated visitors* represents a compromise between these other two profiles. Indeed, 23% of respondents that belong to cluster 1 indicate to be "very much" satisfied with the visit, 47% "very" satisfied, 27% only "enough" satisfied and 3% "little" satisfied. Of cluster 2, 47% of respondents report to be "very much" satisfied with the visit, 45% "very" satisfied, 8% "enough" and 0% "little". Of cluster 3, 34% of interviewed visitors said to be "very much" satisfied with the visit, 45% "very" satisfied, 20% "enough" and 1% "little". Similarly, as seen in Section 3.3, we highlight that levels "little" and "very" with respect to General Satisfaction are characterized by the same percentage of individuals in all of the profiles.
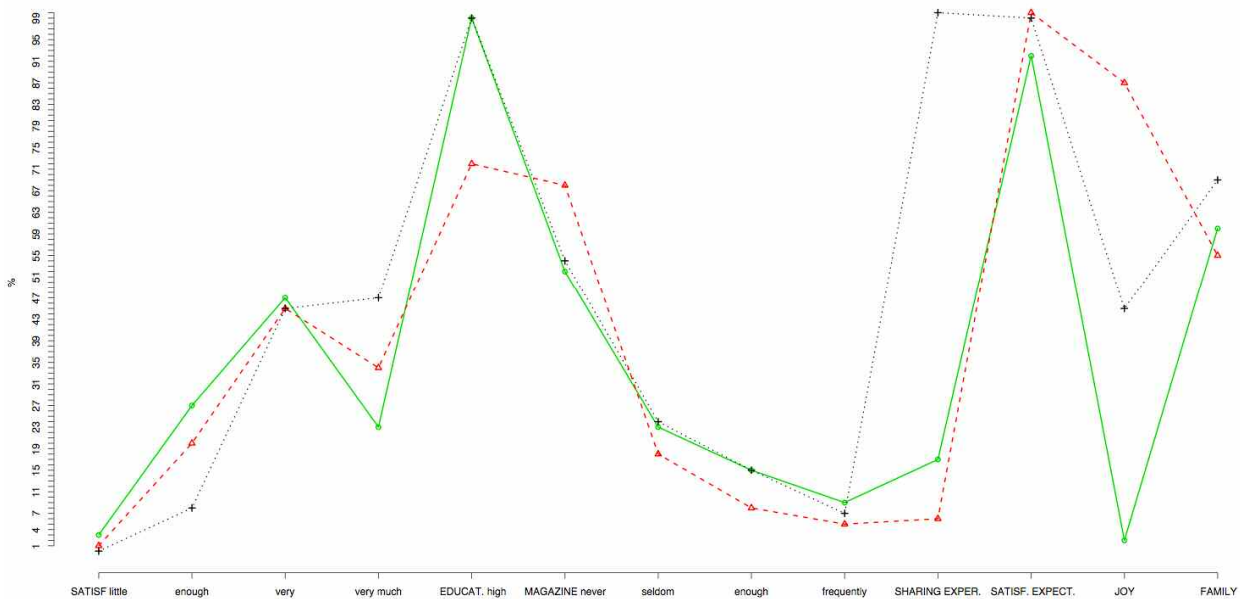
Figure 3. Cluster profiles. Cluster 1 is represented by a solid line, cluster 2 by a dotted line and cluster 3 by a broken line.

The first two profiles are characterized by the same high Educational Level (99% in both the clusters against 72% of cluster 3) and, looking to the Art Magazines Consumption, also to the same high cultural background in arts; indeed, in cluster 3, 68% of the interviewed visitors indicate that they "never" consume art magazines (vs. 52% and 54% in cluster 1 and 2), 18% to "seldom" consume these (vs. 23% and 24% in cluster 1 and 2), 8% consume "enough" (vs. 15% in both clusters 1 and 2) and 5% "frequently" consume (vs. 9% and 7% in cluster 1 and 2).

In summary, the most prominent feature is that the groups of visitors that are the most and the least satisfied have the same general cultural backgrounds, even though their degree of appreciation of the cultural good is different. Consequently, other aspects will be crucial for distinguishing the first two profiles.

The first difference between *exigent educated visitors* and *socialized educated visitors* concerns the Expectation of Sharing Experiences; 100% of people belonging to *socialized educated visitors* report having this kind of expectation, which drops to only 17% of *exigent educated visitors*, while *enjoyable less educated visitors* have the lowest percentage (6%).

Satisfaction from Expectations is very high for each group, even though *exigent educated visitors* report a slightly lower percentage of satisfied people (92%).

The second crucial difference between cluster 1 and 2 is represented by the Reported Joy after the Visit; only 2% of *exigent educated visitors* feel joyful after the visit, while 45% of *socialized educated visitors* do. It is important to stress that *joyful less educated visitors* with a percentage of 87% is the group made up of the most joyful people.

For the Reported Feedback to Family, cluster 2 holds the highest percentage (69%), followed by cluster 1 (60%) and then cluster 3 (55%).

In conclusion, the cluster analysis depicts three relevant and different dimensions for satisfaction arising from an artistic visit. Comparing cluster 1 and 2 , from the analysis it is seen that, for the same educational level, the cognitive dimension of the visit (e.g. historical facts and the artistic technique) plays a crucial role in satisfaction for *exigent educated visitors*, while *socialized educated visitors* look for a "social satisfaction", i.e. to gratify their need for socialization through the visit. Furthermore, the *exigent educated visitors* are not interested in socializing and do not feel

joy at all; this could mean that these visitors are oriented to a contemplative experience, which normally requires a long time of contact with the artistic object, which is something that the management of the Scrovegni Chapel does not allow. Regarding the third cluster, the *joyful less educated visitors*, they appear to be focused on the emotional experience while their interest in socialization is even less than that of the *exigent educated visitors*.

6. Conclusion

The aim of this paper is twofold, to identify what socio-cultural-emotional elements affect the satisfaction process of artistic consumption and to find differences among visitor profiles for the satisfaction relevance of these items.

For the evaluation of general satisfaction, the ordinal logit analysis identifies significant variables related to General Satisfaction from artistic consumption. They include the educational level, consumption of art magazines, expectation of sharing experiences, satisfaction from expectations, reported joy after the visit, and reporting of feedback to family members. Simply put, the ordinal logit model shows that the outcome of arts consumption is affected by all of the dimensions we investigated; i.e., the cultural, social and emotional variables. This means that satisfaction depends on the learning process activated by the visit and that it is composed of three dimensions: cultural (cognitive), social and emotional. The cultural dimension affects the evaluation capability of visitors, the social one allows feedback of the visit satisfaction via experience communication, while the emotional involvement during the visit depicts the creativity of visitors; that is, their active participation in the aesthetic experience.

We have addressed the second aim of our study using a cluster analysis from which three visitor profiles stemmed; namely, the *exigent educated visitors* that pay particular attention to the cultural dimension of the artistic visit for satisfaction, the *socialized educated visitors* interested in gratifying their need for social communication of the aesthetic experience, and the *joyful less educated visitors*, who were the most satisfied with the visit and focused on their emotional experience.

In our opinion, these results show that the involvement of visitors during a cultural event is affected by a plurality of variables and that consumer heterogeneity for artistic goods can be reduced to a number of profiles of preferences for satisfaction. This is a useful result, both for artistic management and for territorial marketing of cultural events. It stresses that the emotional dimension is a sensitive item for investigation of customer satisfaction, putting forward a new theoretical perspective on emotional consumption. However, at the same time, it shows that these aesthetic experiences are affected by personal cultural capital and by the organization of the event. Management of an artistic event has to take into account all of these dimensions for customer satisfaction and to organize events in such a way that satisfaction can stem from the interaction of the three investigated dimensions.

It seems to us that our results can also prove useful for territorial marketing and attraction of cultural sites. Knowing what consumers are seeking and, in particular, what consumer profile best characterizes a tourist population, it becomes easier to match supply and demand of artistic goods. However, understanding the demand for artistic goods requires more empirical investigation to identify its content in terms of cognitive, social and emotional dimensions, as well as to grasp the nature of the economic value that people assign to artistic consumption.

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