

Relationality in Urban Processes: How Cultural Projects Makes Connections With The Human and Physical Reality

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Abstract

The vision of a city is translated into practice by a series of urban projects. They can be small or big, private or public, but relationality represents a constant key factor for their successful implementation. In the existing urban studies literature, the concept of relationality is very rich and it exist on multiple levels.

Our work proposes a multidisciplinary investigation, we analyze two dimension of relationality which are relevant in urban processes: spatial characteristics (urban design and planning) and user behavior (urban economics). The empirical context of this work is a small city, i.e. Lugano, Switzerland, that is experiencing a remarkable transformation process. The city embraces an urban strategy frequently called “Guggenheim effect”, hoping a catalytic effect with large investments. For our analysis, we consider different urban projects in the cultural domain, like theaters, convention centers, cinemas, museums, etc. in order to explore how relationality plays out in these two dimensions.

Implementing a sequential explorative strategy, we look at how people behave before-and-after a visit to a certain project and we combine these data with those on physical reality and urban projects. More precisely, what we do is to model the relationality of an urban project by looking at their users choices and behavior. In that context, discrete choice analysis techniques allow us to adequately account for: the characteristics of the user, the characteristics of the projects and the way in which those characteristics interact with the attributes of alternative destinations, i.e. zones of the city.

All in all, our research objectives are to establish: i) which projects respond to the cultural needs of a variety of users, ii) what are the willingness to pay of different users groups, iii) what are the attributes of a zone that better complement the activities offered by different cultural projects iv) which are the obstacles to relations between urban projects and the rest of the city and v) what physical characteristics work as incentive for interactions among users groups before, during and after a visit to a cultural project.

As the data collection phase is still ongoing, this paper present only the theoretical concept and some first descriptive of the RP survey.

Keywords

relationality – urban project – culture – cultural activities – urban economics

1. Introduction

Relationality is a growing issue of urban transformation processes. The project Urban Relationality¹, financed by the Swiss National Fund and directed by Rico Maggi and Jeanne Mengis, aims to investigate about this issue through three disciplinary fields: urban design and architecture (design processes), organizational communication (coordination across professional boundaries), and economics (user behavior). Through these perspectives relationality can be understood as:

1. the ways in which projects make connections with other urban transformation projects and with the physical urban reality, more in general as well as the ways in which urban projects enact linkages between past-present-future;
2. the ways in which projects connect and actively engage a variety of stakeholders;
3. the ways in which projects attract and actively involve a variety of end users or population groups, such as citizens and tourists.

The empirical context is a small city, Lugano (Switzerland) that undergoes a considerable transformation process re-orientating itself nationally and internationally. For this purpose the city seems to have embraced an urban strategy frequently discussed under the term ‘Guggenheim effect’, hoping to achieve a catalytic effect with one large investment, e.g. LAC project. We take this iconic project and interrogate it in regards of its potential relationality.

The general objectives of the study are to answer to the following questions:

- a) what makes an architectural project ‘relational’?
- b) How urban projects rearrange relationships between different user groups and stakeholders?

From an economics point of view (user dimension) the relationality of an urban projects can be understood as the ways in which projects attract and actively involve a variety of end users or population groups, such as citizens and tourists. We argue that projects can be relational if they are interesting in the sense of use and willingness to pay for that variety of users. The analysis is focused on the phenomena of the relationality of architectural objects from an interdisciplinary point of view to reach a deeper understanding of relationality. Projects with a high user relationality respond to the cultural needs of a variety of users. Heterogeneity and relationality are not linked in a linear way, however, as a certain homogeneity is needed to

¹ www.urbanrelation.org

respond to specific preferences while heterogeneity guarantees interaction among groups and with the urban fabric.

The first question from the proposal raises the issue of which segments of the local population stemming from which neighborhood use or intend to use the project for which content, with which frequency and which willingness to pay, and which underlying dimensions of relationality can be identified. Then it also could be argued what is the attractiveness along the same dimensions in terms of the origin, the socioeconomic segment, the effective of intended use and the willingness to pay for visitors and tourists.

The second question raises for what concerns the potential users of an urban project and what characteristics make which kind of urban projects attractive for which group of (potential) users. Therefore do residents in the project neighborhood evaluate small projects differently from residents in other parts of the city or from visitors; and how do users and non-users of large projects evaluate them?

The third question emphasizes which are the relational communalities in use between specific large and small project, i.e. what is the relational potential of various set ups?

Finally how does the integration of urbanistic knowledge about design of projects, places and spaces and planning principles improve the design of choice experiments, and what useful feedback can the economic research provide to enhance the relevance of relational urbanism? How does the identification of stakeholder interest improve the experiments and what useful feedback can economics provide to management of communication around a public project?

For the overall project the economics team proposes a combination of revealed and stated preference approaches regarding existing large and small cultural facilities and hypothetical relational projects in Lugano, that will be implemented for stratified samples of local population and visitors.

This first research phase, on which this paper is based, serves to identify the relationality of existing facilities and cultural offers and is consisting in revealed preference research. However, as the LAC is not yet operational and its content is currently provided partly by the other two facilities (i.e. Studio Foce e Centro Congressi) and partly by other providers of cultural content (e.g. museums, concert facilities) the empirical strategy will concern also these latter. The focus of this research will be on the identification and characterization of users (socioeconomics, attitudes), their cultural consumption (their use of the cultural facilities), and, importantly, their use of the city.

The final objective of this part of the research, in addition to providing an answer to what makes a cultural project relational by studying users characteristics and scenario's attributes

through multivariate statistics, is also to modeling the destination (or zone-end) choice dimension of itineraries of individuals. In fact disaggregate analysis of zone-end choices allows us to adequately account for:

- a) the characteristics of the decision maker (age, income, education, group composition);
- b) the characteristics of the urban project assumed as scenario (large or small project, far or not from the city center, type of cultural events organized);
- c) the way in which those characteristics interact with the attributes of alternative destinations (combinations of itineraries like “home – cultural event – home” or “restoration in a specific zone of the city center – cultural event – home” and so on);
- d) the use of elemental alternatives would create a substantial number of alternatives in the users’ choice set. Other dimensions of choice in the context of trips such as mode choice, departure time and number of trips are not directly related with the concept of relationality and they have been examined elsewhere.

By following this approach, we study and measure the activities undertaken before and after the event and in which zone of Lugano. By studying the socio-economic characteristics of the choice makers and then the attributes of the areas that attract these individuals, we can say in general what are the factors that have a positive impact on relationality of the urban project itself.

2. Data Collection

2.1 The Survey

The final version of the questionnaire was prepared according to the advices of the three working groups. The survey was implemented in collaboration with the public institutions of the city (Dicastero Giovani ed Eventi, Dicastero Turismo, Studio Foce e Palazzo Congressi) and other stakeholders (Orchestra della Svizzera Italiana, Progetto Martha Argerich, Lugano Festival, Movimento Artistico Ticinese, Dance School Paso Adelante, Cinestar, Lugano in Scena).

In general the paper pencil survey was implemented by two or three interviewers before the beginning of a specific event. The interviews were conducted during 9 main types of events: (a) Dance performance [62]; (b) Classical music [43]; (c) Theater [41]; (d) Art Gallery [35]; (e) Music Performance [30]; (f) Pop/rock concerts [26]; (g) Cinema [26]; (h) Comedy [25]; (i) Piano performance [8]. These events have been chosen on the basis of the likely events that could be organized in the future LAC (Lugano Art and Culture), which will be fully operational from 2014.

The investment of CHF 169 million for the LAC project involves the construction of a new multipurpose cultural center, which will host cultural events of all kinds, e.g. concerts, theater, exhibitions of visual arts. A project of this scale that aims to change the urban reality, wants to improve the city's image to attract private investments and tourists worldwide. For this reason, the sites chosen for the interviews are cultural projects already in operation, conceptually related to the LAC: (a) Lugano Centro Congressi (congress center), (b) Nuovo Studio Foce, (c) Cinestar, (d) Cittadella 2000, (e) Museo Cantonale d'Arte and then (f) Museo d'Arte Malpensata.

Centro Congressi was built in 1975 and has been hosting various cultural events (e.g. congresses, concerts, ballets, theaters). While the building of Nuovo Studio Foce, originally constructed in 1938 to host Radio Monteceneri, was renovated in 2002 in order to host cultural events such as music, theatre and dance performances. Cinestar is a cinema, whose building has seven projection rooms and it is a cultural institution able to attract many users. Cittadella 2000 is provided both by theatrical and cinematographic equipment. It is present in the cultural sector of Lugano since 2000. The Museo Cantonale d'Arte (Cantonal Art Museum), which opened in 1987, is located in the center of Lugano and it is located in an historical building edified after 1400. Its exhibitions dealing with very different themes ranging from painting to sculpture, from photography to video, from architecture to graphics. The art museum is located in Villa Malpensata, which was built in the 18th century. In 1893

Antonio Caccia donated the villa to the city of Lugano. In 1960 the city started the renovations to transform it into a museum.

Table 1 The Interviews

Site/Event	# Events	# Respondents	% of Sample	Interviews/ Event
Centro Congressi	13	121	40.88	9.31
Studio Foce	9	93	31.42	10.33
Cinestar	2	26	8.78	13.00
Museo Cantonale d'Arte	2	22	7.43	11.00
Museo d'Arte	1	13	4.39	13.00
Cittadella 2000	3	21	7.09	7.00
<i>TOTAL</i>	<i>30</i>	<i>296</i>	<i>100.00</i>	<i>10.21</i>

Source: Urban Relationality Dataset April 2013

The interviews at Centro Congressi were conducted 30 minutes before the beginning of the event. The same applies for Studio Foce and Cittadella 2000. At Cinestar interviews have been conducted before the beginning of films at different hours, generally from 6 p.m. to 11 p.m., to cover a large range of visitors. While in the Art museums the survey has been implemented during 3 inaugurations of art exhibitions. In total 296 interviews were conducted during 30 events, with an average of 10.21 interviews/event, as shown in Table. 1.

The survey was structured so as to obtain:

- general information: type of event, place, hour;
- socio-economic variables: place of residence, age, gender, education, employment, income distribution, group of people, mode of transport;
- expenditure at the urban project: price of ticket, restoration and other expenditures;
- information on the degree of relationality with the territory: activities undertaken before and after the visit and expenditure (restaurant, bar, shopping, outdoor activities and so on);
- areas: to the respondents it was requested to indicate in a map the area where these activities were undertaken before and after the urban project, the parking and the stop of public transport.
- cultural habits: attendance at cultural institutions and expenditure during last six months;

- the perception of the territory: psychological variables about the city evaluation, i.e. likert scale about the known sites of Lugano.

The questionnaire was implemented with some difficulties but it has led to good results. The difficulties were due to the fact that we have often had little time to conduct a considerable number of interviews, this because people often came to the urban project shortly before the beginning of the event.

3. Descriptive Statistics

The descriptive statistics presented include the analysis of the sample according to the most relevant socio-economic characteristics, i.e. age, education, income, employment and group composition. Subsequently a cross-sectional analysis is done for the different urban projects, in order to study the heterogeneity of the users groups.

The next section is dedicated to the most important part for what concerns the Relationality of urban projects. After defining five areas of the city of Lugano of particular interest, it is analyzed the composition of the socioeconomic groups that they attract and which activities they mainly undertake.

The main results obtained are heterogeneous groups who practice different activities in different areas.

3.1 The sample

We assume that the visitors surveyed were chosen by the conductors of the survey at random and in no case it was tried to influence the investigation, everyone had the same probability of being interviewed. We notice first from Figure 1 that these institutions are attended by many people aged 30-44 years old (34%) and by people aged between 15 and 29 years (27%). Also people aged 45-59 (20%) and over 60 years old (19%) are culturally active.

The respondents were mainly Swiss (71%) and Italian (22%), while in the remaining 7% are included persons of German, Brazilian, Japanese, Dominican, U.S., Russian, Spanish, French, British, Croatian and Serbian.

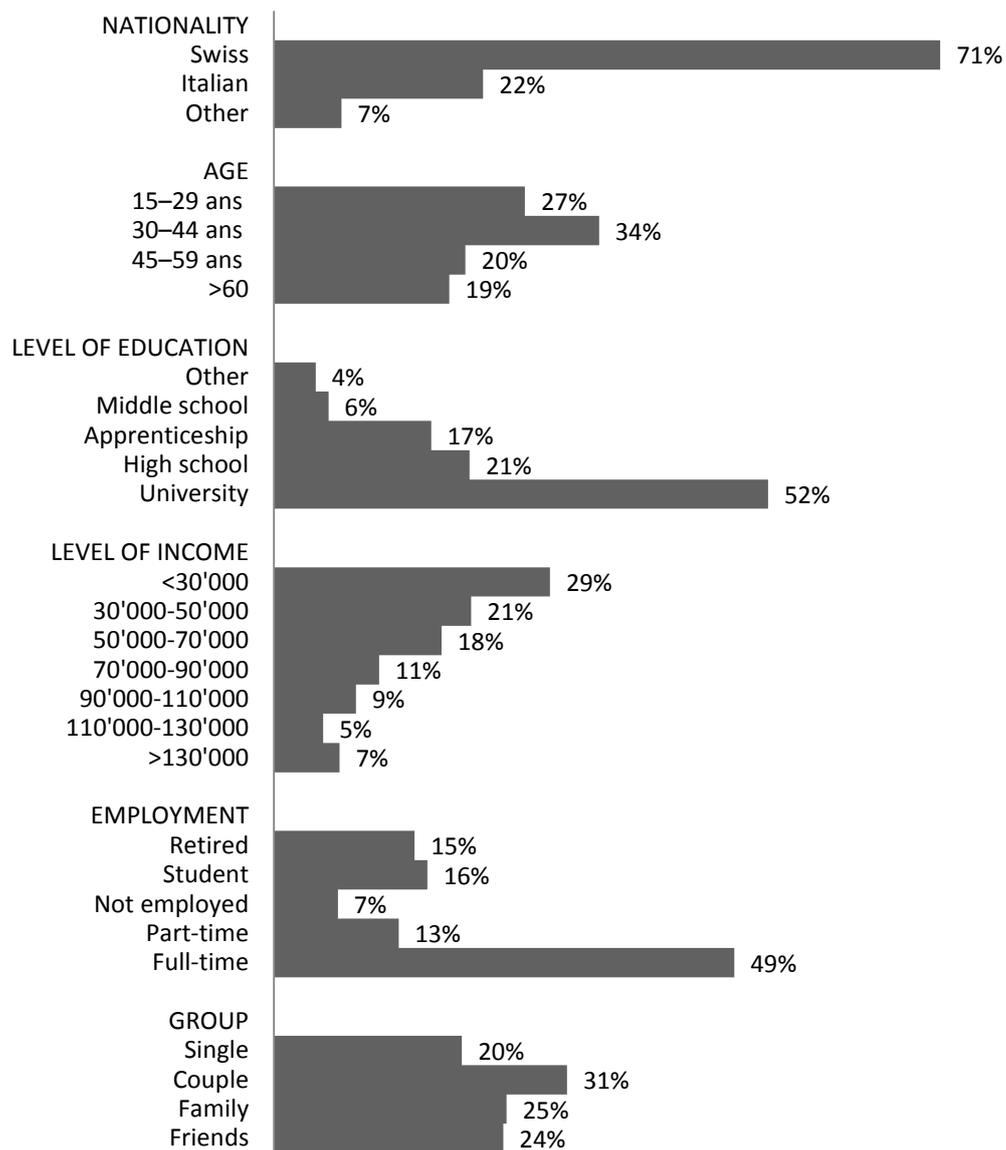
These cultural institutions are attended mostly by people with a university degree (52%) and more in general we observe that the level of education is a very important variable for people culturally active.

The respondents stated that their annual income (in CHF) was: less than 30'000: 29%; between 30'000 and 70'000: 39%; more than 70'000: 32%.

Generally the most active people in the cultural sector are highly educated people with higher income. So during these events it would be likely to observe this distinctive feature of cultural institutions, but in the case of Lugano this is especially evident for the level of education. For the income this pattern can only be observed for certain cultural events such as concerts of classical music, where the participants on average are richer. This is an interesting aspect of the cultural sector in the city of Lugano, in fact these cultural events attract various socioeconomic groups. However these people have different cultural habits in terms of their

attendance at cultural institutions in the months preceding the survey and richer people may be more culturally active and attending more often cultural institutions.

Figure 1 Socioeconomic characteristics of the sample



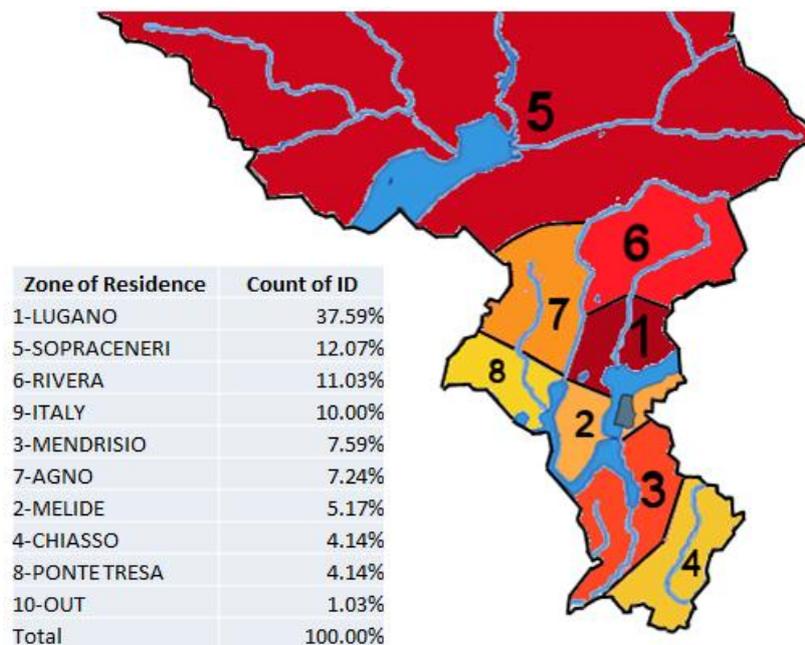
Source: Urban Relationality Dataset April 2013

For the employment we note that visitors are mainly full-time workers (49%), students (16%) and retired people (15%). Finally we notice that most of people attend cultural institutions in pairs (31%), with the family (20%) or with friends (27%), even if there is a large share (20%) of people attending cultural events alone.

3.1.1 Zone of residence

Figure 2 shows the zones of residence of respondents. The zones are based on geographic location and named according to the main municipalities of the canton Ticino. We see that almost 38% comes from Lugano (Zone 1) and surroundings. An interesting fact is that 10% comes from the neighboring Italy.

Figure 2 Zones of residence



Source: Urban Relativity Dataset April 2013

3.2 Modelling the zone-end choice dimension

We focus on the destination (or zone-end) choice dimension of itineraries because disaggregate analysis of zone-end choices allows us to adequately account for:

- a) the characteristics of the decision maker (age, income, education, group composition);
- b) the characteristics of the urban project assumed as scenario (large or small project, far or not from the city center, type of cultural events organized);
- c) the way in which those characteristics interact with the attributes of alternative destinations (combinations of itineraries like “home – cultural event – home” or “restoration in a specific zone of the city center – cultural event – home” and so on);
- d) the use of elemental alternatives would create a substantial number of alternatives in the users’ choice set. Other dimensions of choice in the context of trips such as mode choice, departure time and number of trips are not directly related with the concept of relationality and they have been examined elsewhere.

3.3 The Urban Projects

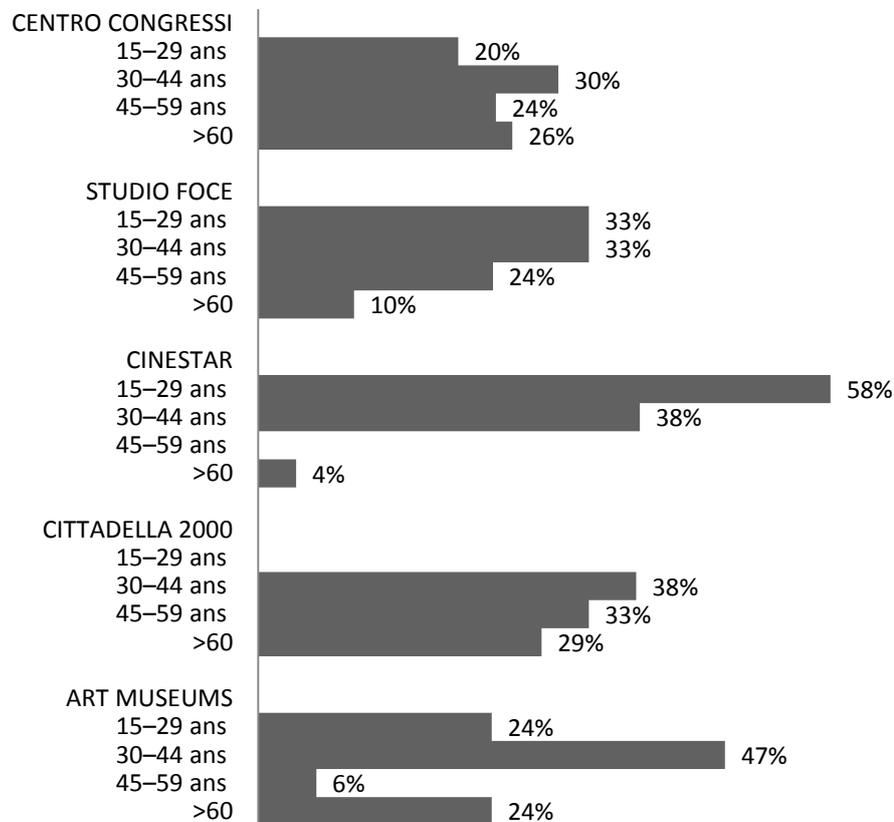
Through a cross-sectional analysis of urban projects it is possible to see how they are able to attract groups of users among themselves heterogeneous. The considered cultural institutions on our sampling are (see chapter 2.1 for explanations):

1. Centro Congressi;
2. Studio Foce;
3. Cinestar;
4. Cittadella 2000;
5. Museo Cantonale d’Arte;
6. Museo d’Arte Malpensata.

3.3.1 Age distribution

With regard to the age distribution (Figure 3), we see that young people in the age group 15-29 years are numerous especially in the Cinestar (58%) and Studio Foce (33%). In fact, the first urban project is a cinema infrastructure, which obviously attracts many young people, while Studio Foce offers many cultural events dedicated to a younger audience, as well as families. Cittadella 2000, given our sample, although small (21 individuals), it would seem to attract a public aged more than 30 years old. Centro Congressi offers cultural events intended for a wide audience, in fact it is possible to notice that the dominant age classes are both persons in the 30-44 (30%) and people over 60 (26%). For art museums it would seem that the most numerous visitors are aged between 30-44 years (47%).

Figure 3 Age Distribution: Urban Projects

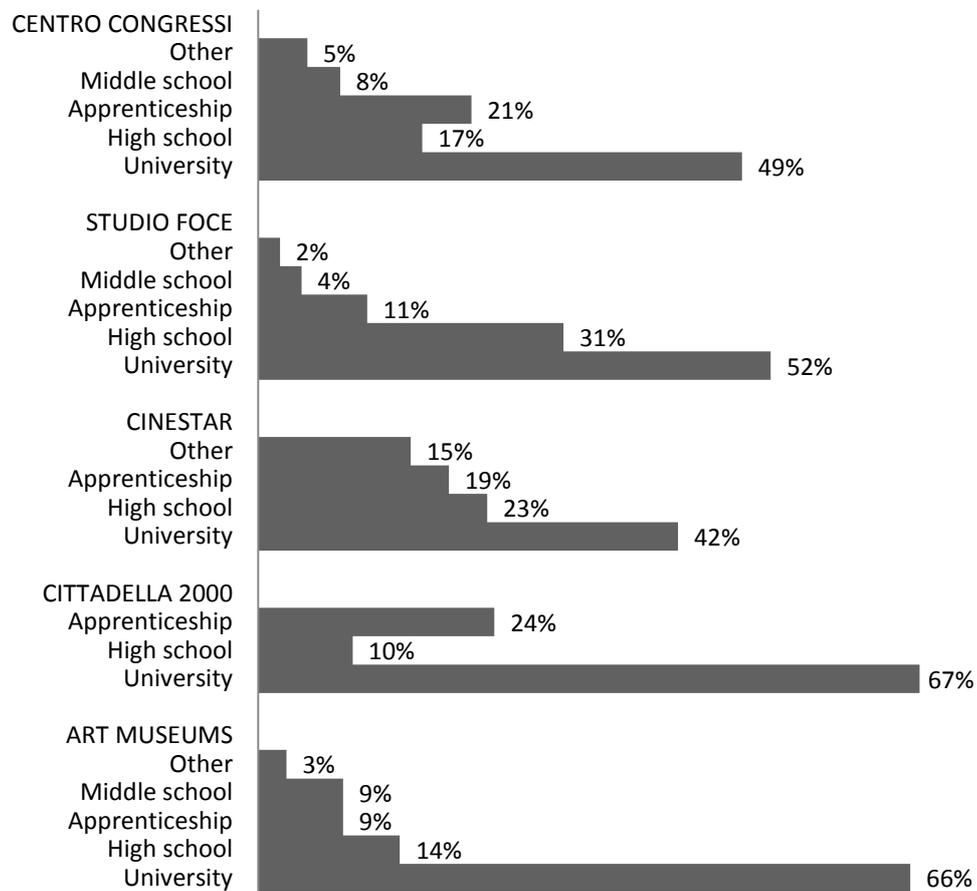


Source: Urban Relativity Dataset April 2013

3.3.2 Education distribution

In general it is assumed that highly educated people are also the biggest consumers of cultural goods. In fact, this result emerges also for the cultural reality of Lugano, since, as shown in Figure 4, for every cultural institution visitors with an university degree are much more numerous.

Figure 4 Education Distribution: Urban Projects

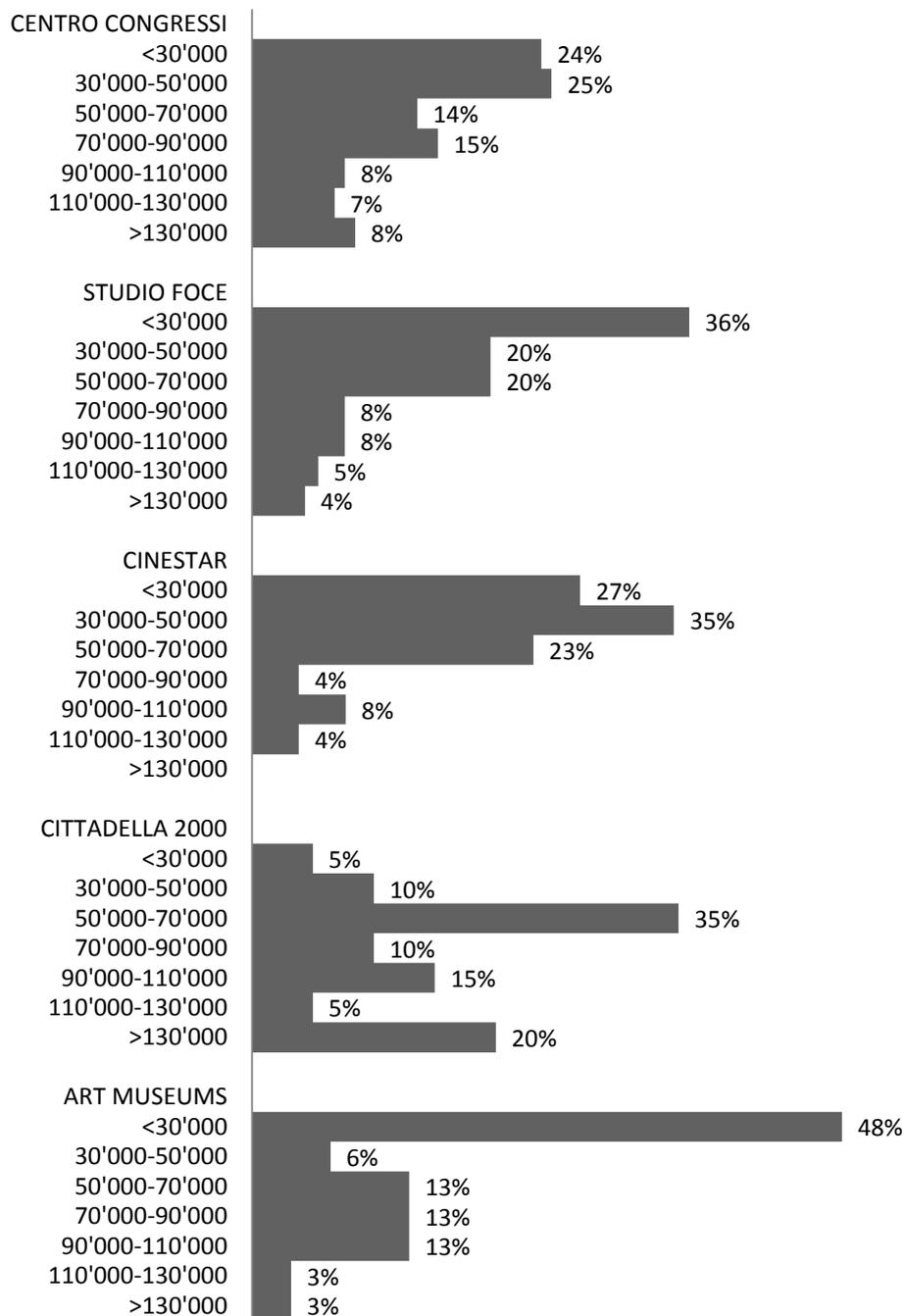


Source: Urban Relativity Dataset April 2013

3.3.3 Income distribution

In general terms, official statistics (FSO 2009) show that people with a high income are more likely to consume cultural activities.

Figure 5 Income Distribution: Urban Projects



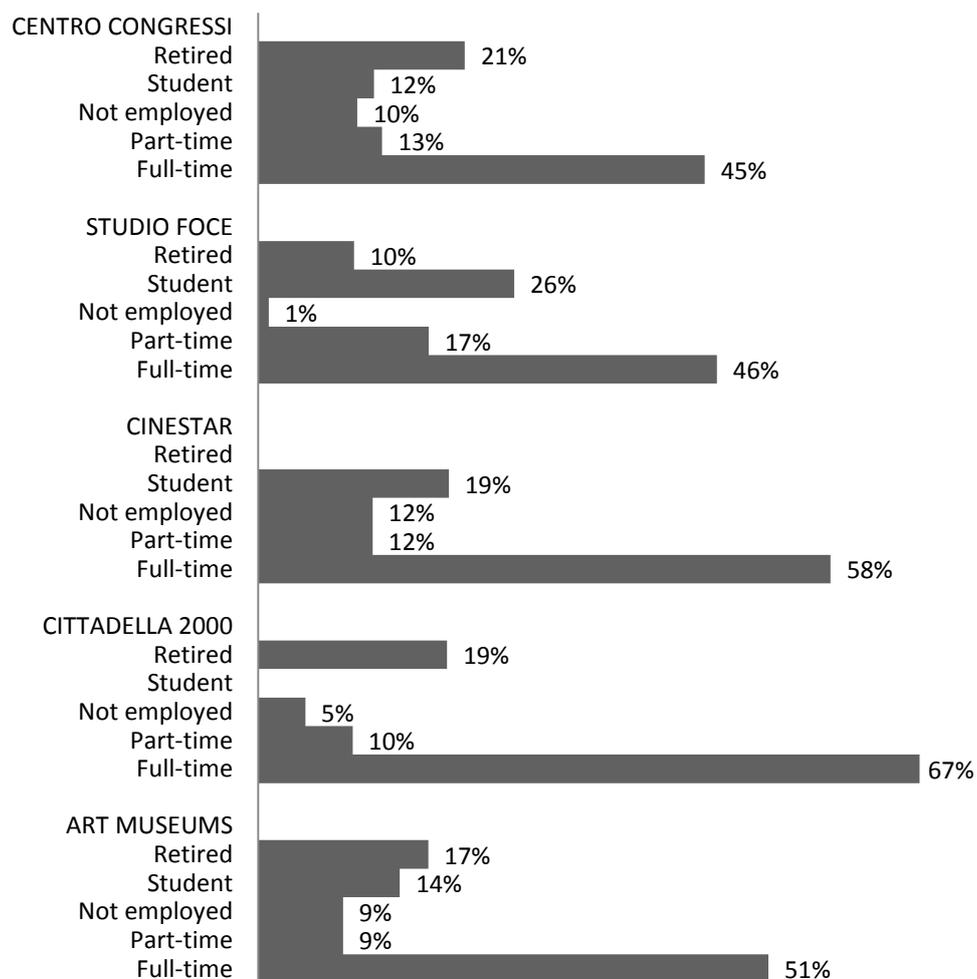
Source: Urban Relativity Dataset April 2013

As mentioned before, in the context of Lugano, the situation is slightly different. In fact, cultural events are accessible for many users groups: there are both people with high income and people with lower incomes. As said for the age distribution, there are signs of heterogeneity among urban projects as shown in Figure 5. Studio Foce is directed to a younger

audience, so it stands out the 36% of people who have a personal income of less than CHF 30,000. However there are 40% of individuals with income between 30,000 and 70,000. Theatre Cittadella 2000 was attended by 20% of people with a level of income over CHF 130,000, as well as by people with income between 50,000 and 70,000 (35%). As said before Centro Congressi attracts a large audience, so the income classes are distributed more uniformly because of different type of events. Almost one in two people who attended the art museums have an income of less than CHF 30,000, although there are people with higher income. It must be said that to participate in the inauguration of these exhibitions is not necessary to pay a ticket.

3.3.4 Employment

Figure 6 Employment: Urban Projects



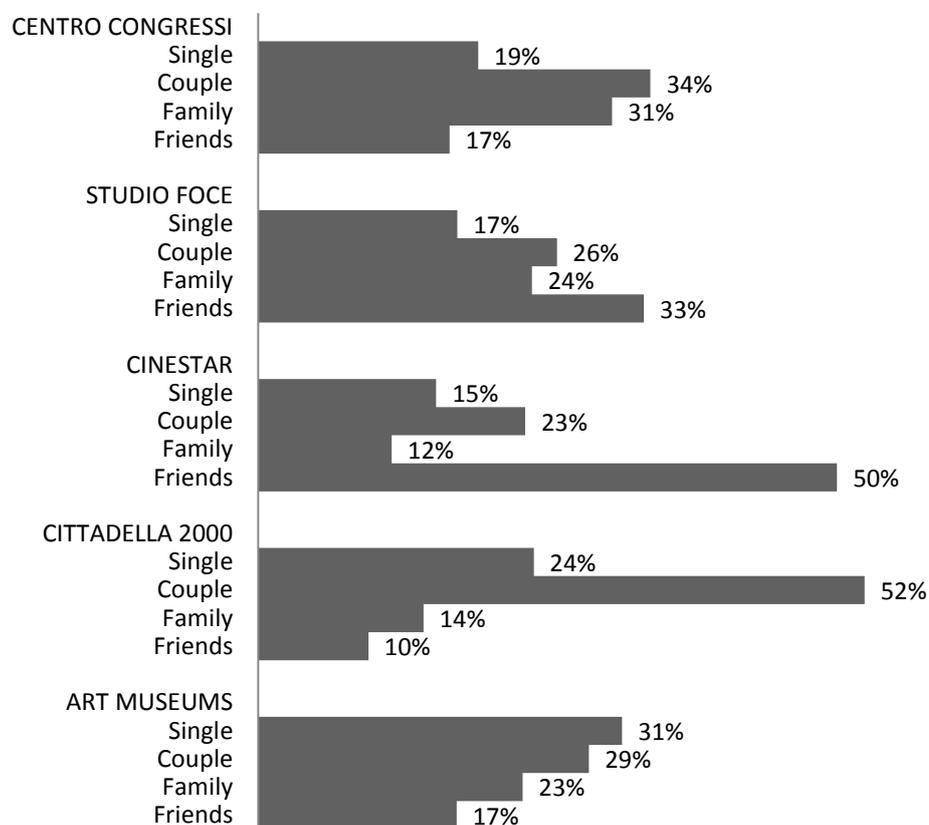
Source: Urban Relationality Dataset April 2013

In general, visitors are most full time workers (see Figure 6). However, it is noticeable a larger proportion of retirees in Centro Congressi (21%), Cittadella 2000 (19%) and Art museums (17%). On the other hand it can be seen a greater proportion of students at Studio Foce (26%) and Cinestar (19%).

3.3.5 Group

The composition of the group considered is divided into people who come to the event alone, as a couple, with the family or with friends (see figure 7).

Figure 7 Group characteristic: Urban Projects



Source: Urban Relativity Dataset April 2013

The data show that there is a higher percentage of couples for Centro Congressi (34%) and also for Cittadella 2000 (52%). At Cinestar (50%) and Studio Foce (33%) there is a higher percentage of groups composed by friends. Therefore at Cinestar and Studio Foce it is noticeable that the users are younger and they come to the event with friends. For art museums stands out the percentage of people who arrive alone. This is probably due to the

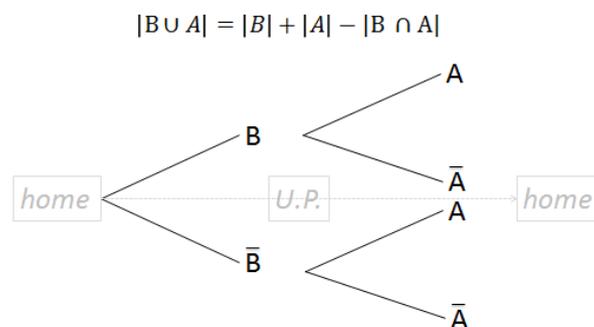
nature of the inaugurations, where people during the exhibition have the opportunity to interact with each other.

3.4 Urban Projects and Relationality

The approach followed is based on the analysis of how people behave before-and-after a visit to a certain urban project (u.p.), in order to study its “degree of relationality”.

We identified 5 zones of interest in the city of Lugano. We consider 8 possible choices that individuals can make before the event, while only 7 after the event. Before the event they can undertake an activity (bar, restaurant, outdoor activities and so on) outside of Lugano, in one of our zones of interest or directly at the Urban Project. We consider that the choice set after the event is restricted. Individuals can undertake an activity outside of Lugano or in one of the zones of interest, but the u.p.-alternative (bar or restaurant at the u.p.) is no more available. Obviously we also consider that they could not undertake an activity neither before nor after. In this way we are allowed to assume that individuals make two sequential choices and we have also a “combination of activities”.

Figure 8 Combinations of activities



Source: Urban Relationality Project April 2013

By looking at how people behave before-and-after a visit to a certain urban project we can study its “degree of relationality”, i.e. the relationality between u.p. and the urban context. Considering before-and-after the visit two separate moments of choice is not entirely correct. The decision maker may select as a destination an area to practice a complementary activity to the cultural event just before, just after, or both before and after. In this way we get a combination of activities that is merely the union of the two decision-making moments as

shown in Figure 8. The decision maker makes two choices: (a) whether to undertake an activity before the event, including the eventual activity directly at the urban project (B), or nothing (\bar{B}) and then (b) whether to undertake an activity after the event (A) or not (\bar{A}). The outcome to which aims the definition of relationality is given by the case of undertaking at least one activity, whether before or after or in both moments. Therefore, as shown in Figure 7, for our purpose it should be counted the cardinality of the outcome “undertaking an activity before or after”, i.e. $|B \cup A|$.

Table 2 Activities before (rows) and after (columns) the u.p. (in % of total individuals)

BEF/AFTER	Home	Restaurant	Bar	Cultural activities	Outdoor activities	Other activities	<i>TOTAL BEFORE</i>
Home/Work	32.1	3.1	9.4	0.7	1.0	1.0	47.3
Restaurant	9.8	0.3	1.7	0.7	0.3	0.3	13.2
Bar	14.9	1.4	5.1	0.7	0.3		22.3
Shopping	1.7	0.3	1.4	0.3			3.7
Cultural activities	0.7			0.3			1.0
Outdoor activities	4.7	1.7	1.0		0.7		8.1
Other activities	3.0	0.7		0.3		0.3	4.4
<i>TOTAL AFTER</i>	66.9	7.4	18.6	3.0	2.4	1.7	100.0

Source: Urban Relationality Dataset April 2013

In Table 2 it is remarkable that only 32.1% of respondents did not undertake at least one activity. The most frequent combinations of activities (except do nothing) are:

1. Bar – u.p. – Home: 14.9%;
2. Restaurant – u.p. – Home: 9.8%;
3. Home/Work – u.p. – Bar: 9.4%;
4. Bar – u.p. – Bar: 5.1%;

and so on.

It is clear that these users groups choose to practice an activity in almost 70% of cases, but how many of them choose Lugano as a zone-end destination?

In the next chapter there are defined the zones (destination choices) and then the activities that are mainly undertaken in them.

3.5 The Zones

As said before we identified 5 zones of interest in Lugano (see Figure 9):

1. Via Nassa
2. Piazza Riforma
3. Quartiere Maghetti
4. Parco Ciani
5. Foce – Lanchetta

Besides we also considered an Outside zone (Zone 6), which represents the zone-end destinations of people that decided to go outside of Lugano in order to undertake a complementary activity.

Figure 9 Zones of interest in Lugano

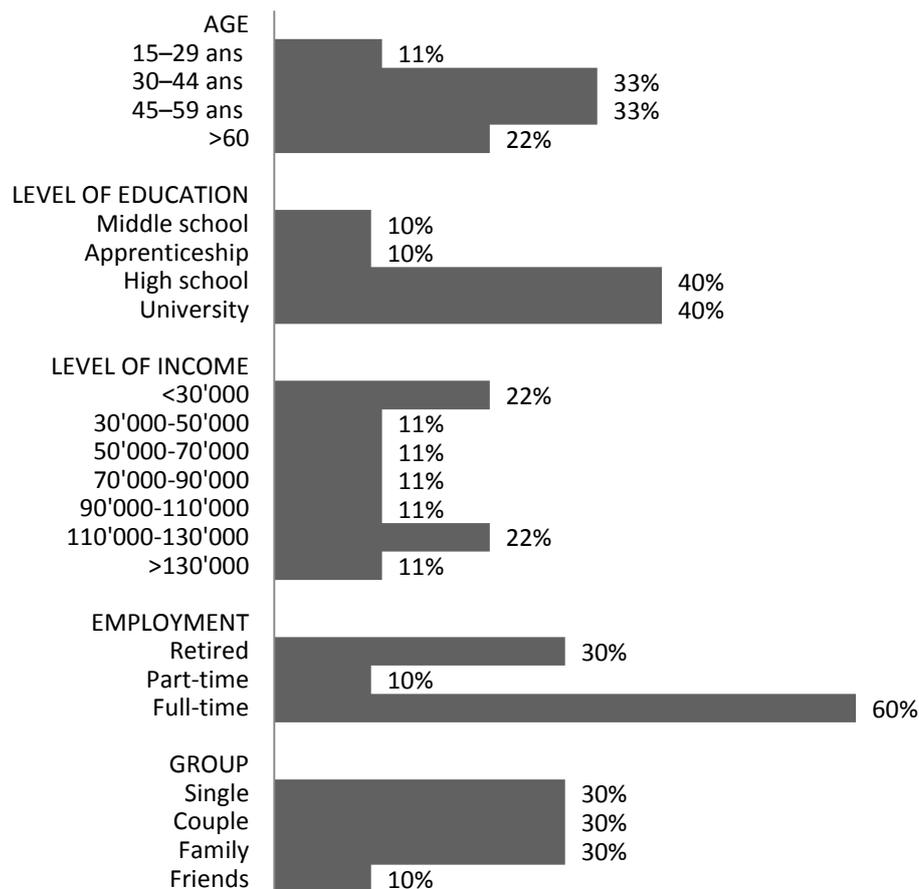


Source: Urban Relativity Project April 2013

3.5.1 Zone 1: Via Nassa

Via Nassa, the also called "shopping street" is one of the historic streets of Lugano. It has 270 meters of old arcades along the lake where one can find all kinds of shops, from jewelry to clothing, from food to antiques stores.

Figure 10 Socioeconomic characteristics: Zone 1-Via Nassa



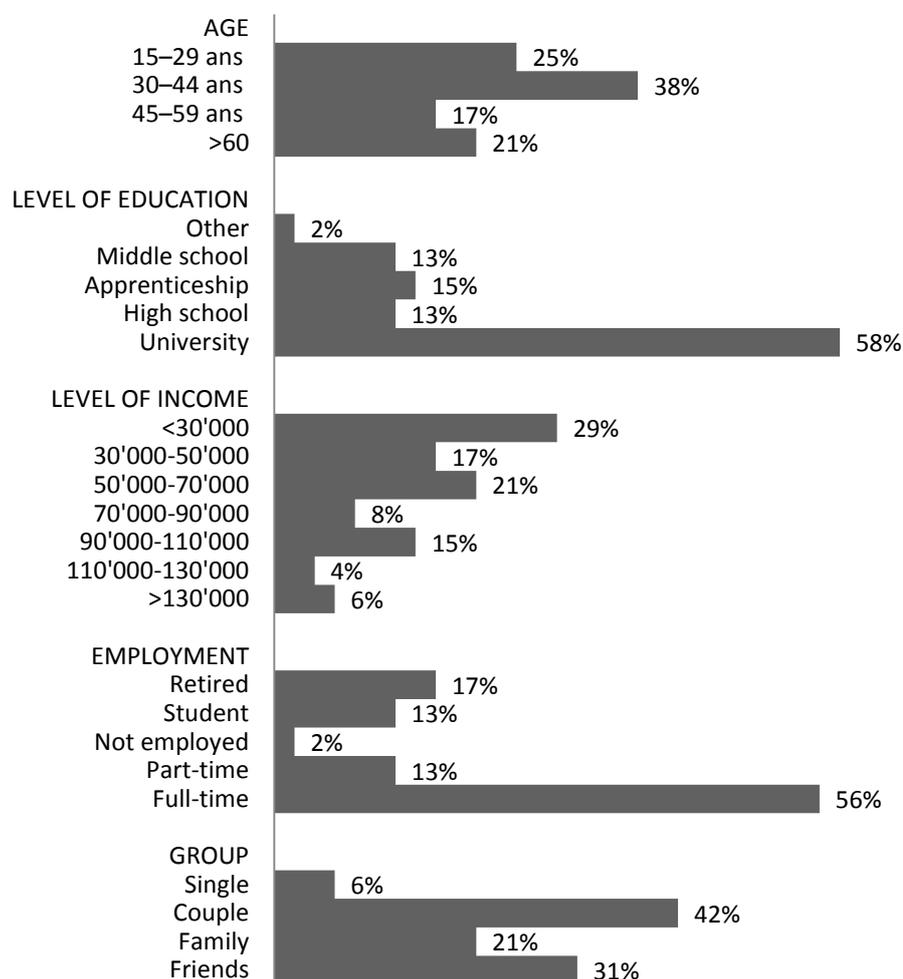
Source: Urban Relationality Dataset April 2013

As show in Figure 10, Via Nassa is mainly chosen by people aged 30-59 years old, with high educational degree, by full time workers (60%) and by retired people (30%). The most frequent income classes are "less than 30'000" and "110'000-130'000" with each 22%.

3.5.2 Zone 2: Piazza Riforma

The square is the hub of the city's activities and attracts customers from all over the world to enjoy the view of the ancient buildings and the movement of many people going through it, comfortably seated in one of the many bars and restaurants that surround it. The square and the surrounding perimeter are a very important area for our purpose. In addition to being a link with the Via Nassa, in the area of this zone it is also included Piazza Dante, which is also a very important place for shopping and for restoration.

Figure 11 Socioeconomic characteristics: Zone 2-Piazza Riforma



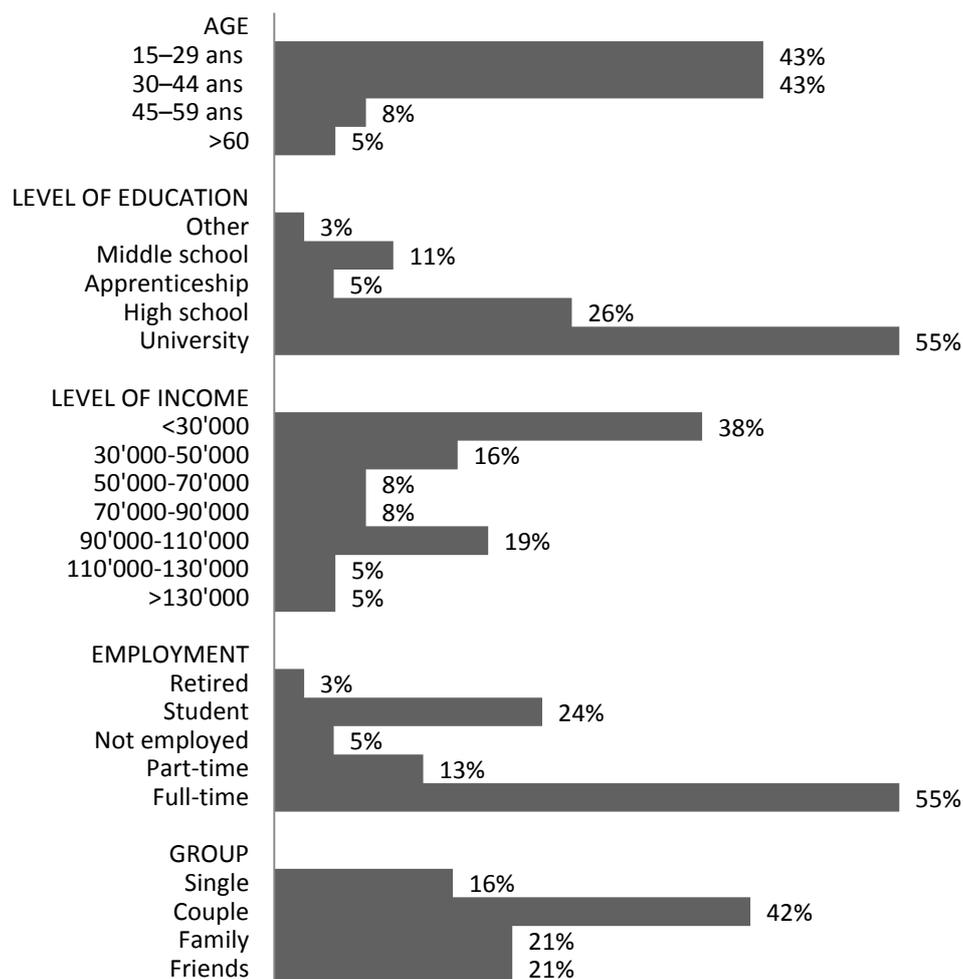
Source: Urban Relativity Dataset April 2013

Piazza Riforma, as shown in Figure 11, is also mainly attractive for people aged 30-44 years old (38%), full time worker (56%) and for people coming to the event as a couple (42%) and with friends (31%). There are present people with different income classes.

3.5.3 Zone 3: Quartiere Maghetti

Quartiere Maghetti is a district of Lugano, which also serves as a meeting place, as it has many facilities such as bars and restaurants inside. Nearby there are also the Church of San Rocco and the Cantonal Art Museum (Museo Cantonale d'Arte). In the defined area (see Figure 8, area 3), there is also included the Casino of Lugano.

Figure 12 Socioeconomic characteristics: Zone 3-Quartiere Maghetti



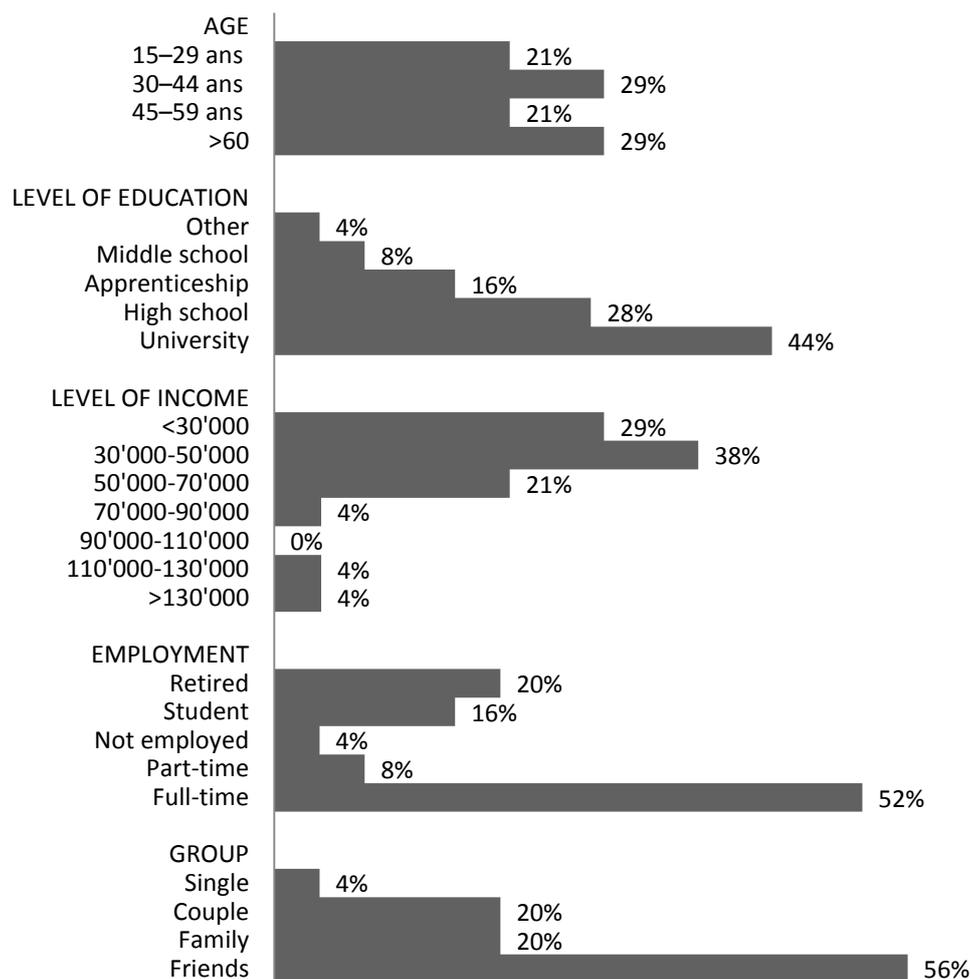
Source: Urban Relativity Dataset April 2013

Quartiere Maghetti (see Figure 12) seems to be a destination for people aged between 15-44 years old, who come mainly in pairs (42%). There are relevant percentages of full-time workers (55%) and students (24%) with income classes more frequent of "90000-110000" (19%) and "less than 30,000" (38%).

3.5.4 Zone 4: Parco Ciani

Parco Ciani is the city park and is therefore a large green space in Lugano. It is beside the lake and it is perfectly connected to the city center. With its 63'000 sqm is a place of walks for residents and tourists. This area also includes some nearby restaurants, Centro Congressi, the Villa Ciani and the Cantonal Library.

Figure 13 Socioeconomic characteristics: Zone 4-Parco Ciani



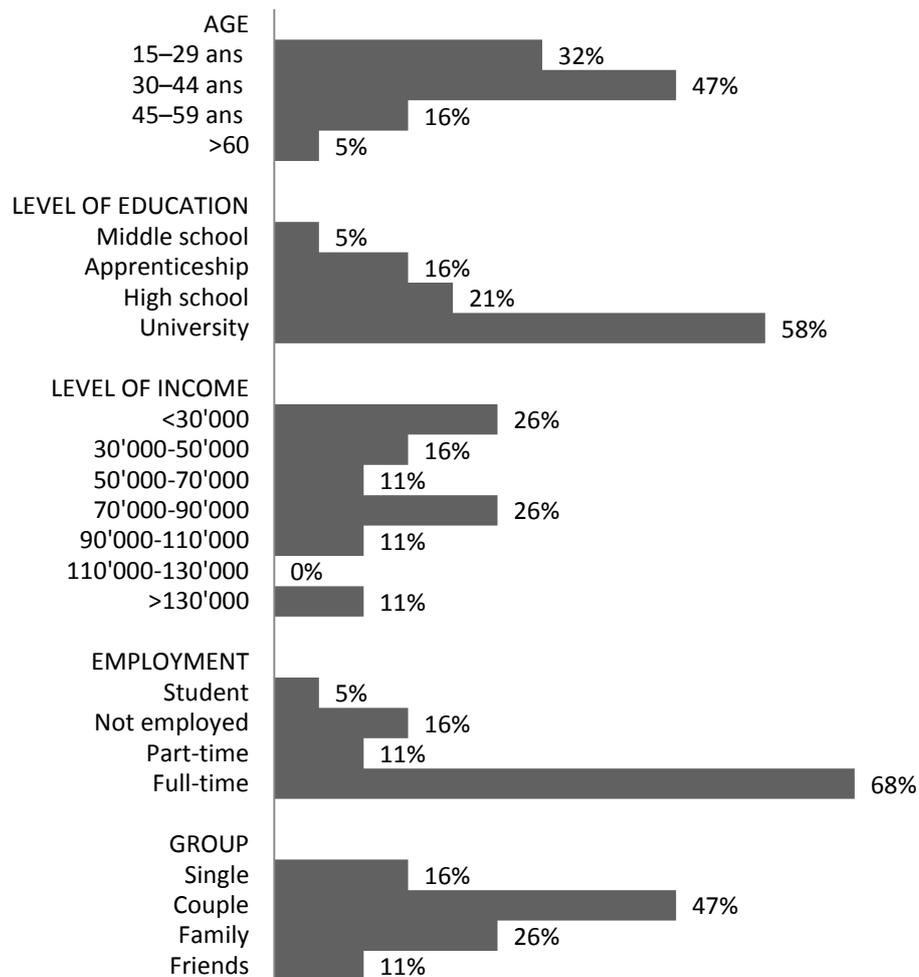
Source: Urban Relativity Dataset April 2013

Parco Ciani (see from Figure 13) seems to be a destination for all age groups, the income classes more numerous range from 30,000 to 70,000 (88% cumulative), there is a significant proportion of people that goes with friends (56%).

3.5.5 Zone 5: Foce-Lanchetta

The area Foce-Lanchetta extends beyond the river Cassarate, in eastern Lugano. This area includes the Studio Foce, the Exhibition Center, the Lido of Lugano and especially the restaurant La Lanchetta.

Figure 14 Socioeconomic characteristics: Zone 5-Foce-Lanchetta



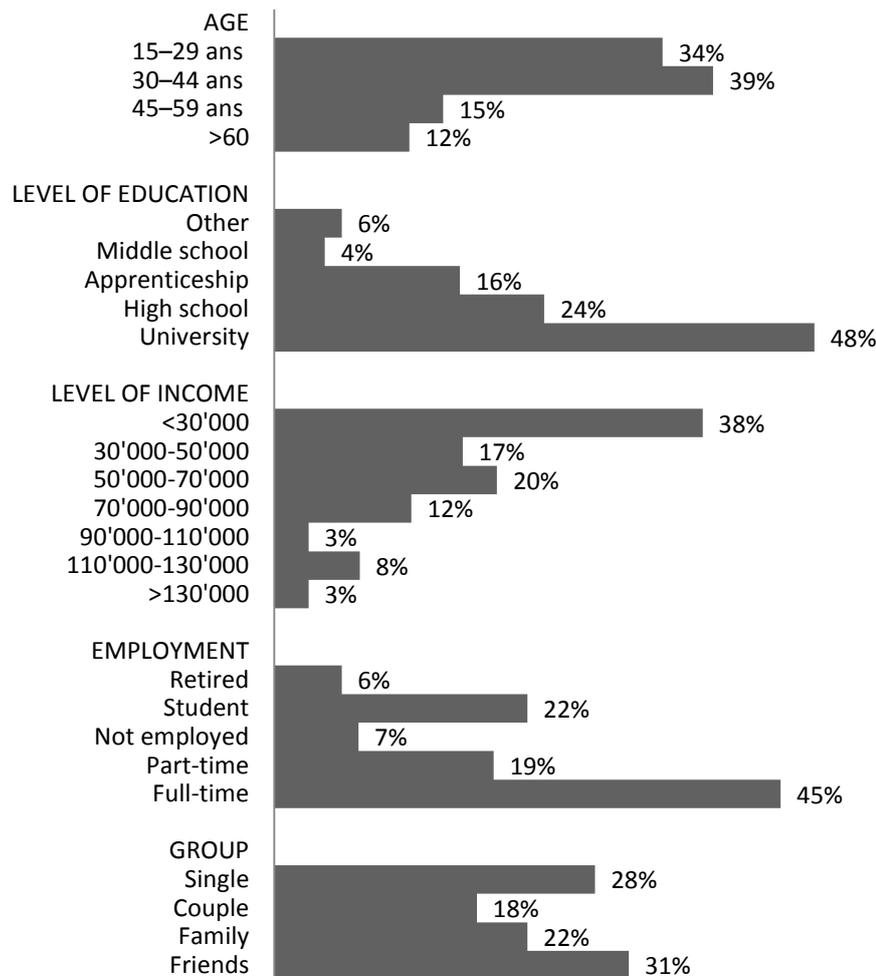
Source: Urban Relationality Dataset April 2013

As shown in Figure 14, people who choose Zone Foce-Lanchetta are mainly age between 30-44 years old (47%). There stand out the classes of income "less than 30,000" (26%) and "from 70000 to 90000" (26%). Visitors are mainly in pairs (47%).

3.5.6 Zone 6: Outside of Lugano

This area is taken as a convention to indicate all activities that are not undertaken in the city center of Lugano.

Figure 15 Socioeconomic characteristics: Zone 6-Outside



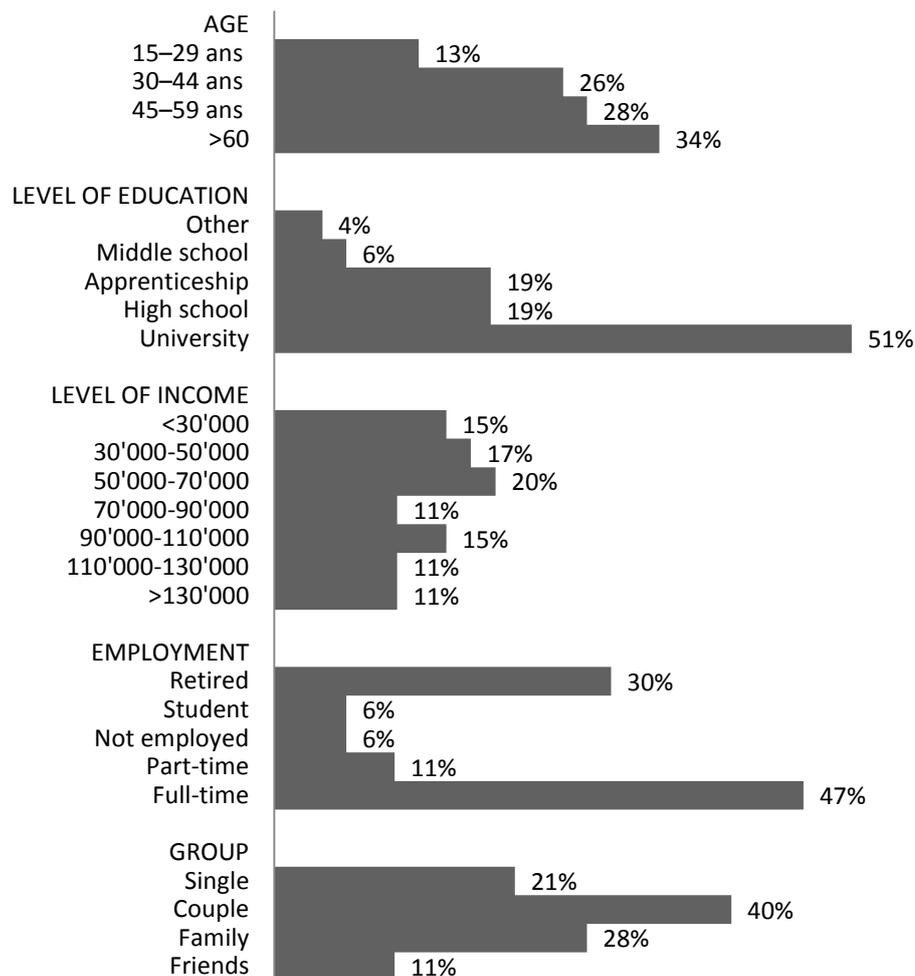
Source: Urban Relationality Dataset April 2013

As it can be seen in Figure 15, individuals who choose for example to go to the bar or to the restaurant outside of Lugano, are most people who go to events alone (28%) or with friends (31%), mostly 15-44 years old (73% cumulative) and with an income of less than 30,000 (38%).

3.5.7 The Urban Project alternative

The alternative to consume directly at the urban project has been considered since many people do not undertake activities in a particular area, but rather at the refreshment area of the u.p. This alternative was available only for Centro Congressi, Studio Foce, Cinestar and Cittadella 2000 as these institutions have this service that is directly measurable as an activity.

Figure 16 Socioeconomic characteristics: People who undertake activities at the U.P.



Source: Urban Relativity Dataset April 2013

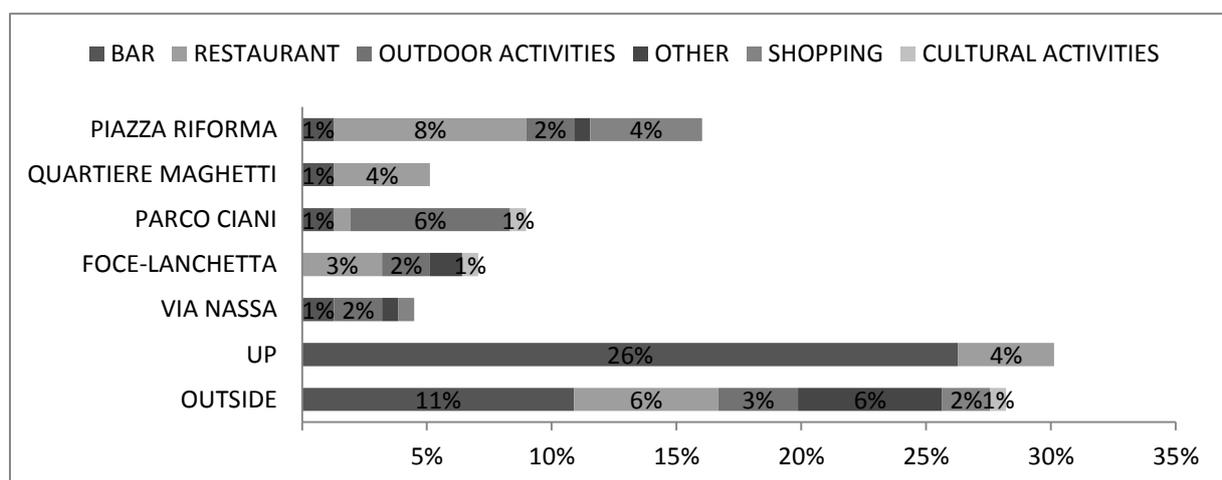
From Figure 16 it can be seen that people who decide to come directly from home to consume at the U.P. they are mainly older people, with a cumulative percentage of 87% of people aged more than 30 years old. There are not significant differences between income classes and it can be seen that they are mostly retired people (30%) and full-time workers (47%), as indeed suggests the age distribution.

something before and after, respectively, or the intersection or the union of the two events, that is the concept behind the study of relationality. From the sample it emerges that:

- $|A \cup B| = 201$ individuals undertook at least one activity, while
- $|B| = 156$ before the event,
- $|A| = 98$ after the event and
- $|A \cap B| = 53$ of which both before and after.

To study the “Zone-activities” composition we must refer at the Before and at the After in a such a way to distinguish the two moments, in order to avoid activities overlapping. As shown in Figures 18 and 19, the percentages about the Before are expressed on 156 individuals, and then the After on 98 individuals.

Figure 18 Sample: Zone-end choices and activities Before the event

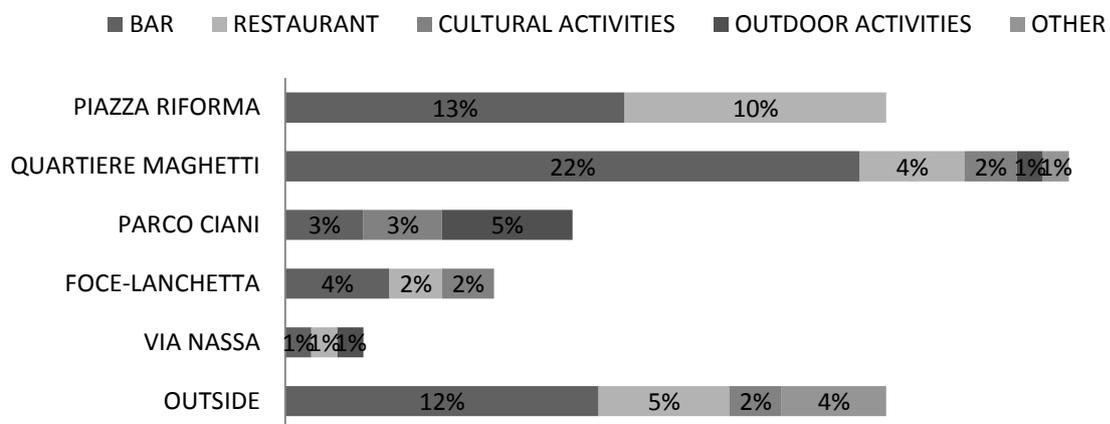


Source: Urban Relationality Dataset April 2013

We note that before the event there is a 26% of the people who has been practicing an activity that has chosen as destination directly the refreshment-area of the urban area project to go to the bar (Figure 17). Looking at the 5 areas of interest it can be seen that the mainly choice is Piazza Riforma, where people go mainly for restoration (8%), although there are also undertaken other different activities, such as bar, outdoor activities, shopping and cultural activities. 6% of these people instead practiced outdoor activities in the area Parco Ciani.

With regard at the After-the-event we see that people are less attracted by the alternative Outside of Lugano, by going mainly to the bar in Quartiere Maghetti (22%) and Piazza Riforma (13%). Then we see that the ones who decided to go to the restaurant chose especially Piazza Riforma (10%).

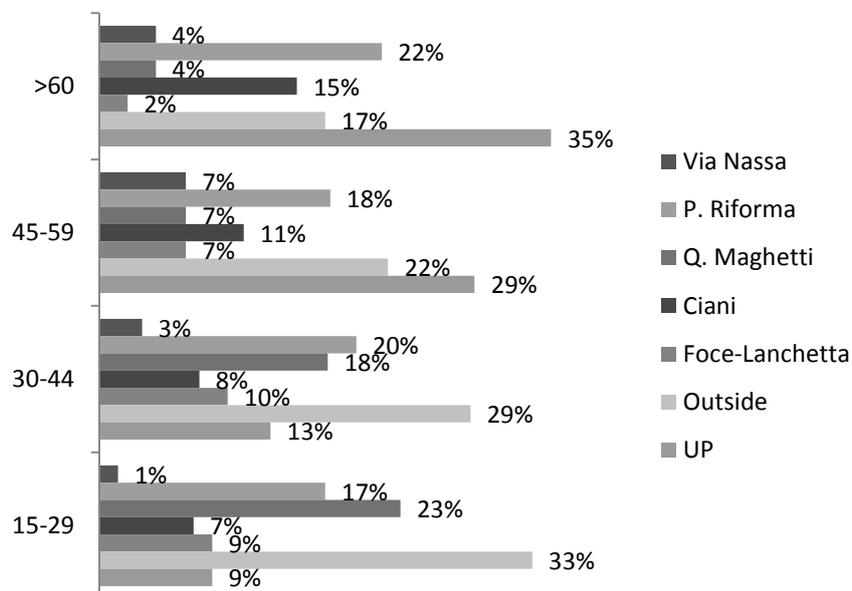
Figure 19 Sample: Zone-end choices and activities After the event



Source: Urban Relationality Dataset April 2013

3.6.1 Selected socioeconomic characteristics and zone-end destination

Figure 20 Age distribution and zone-end choice

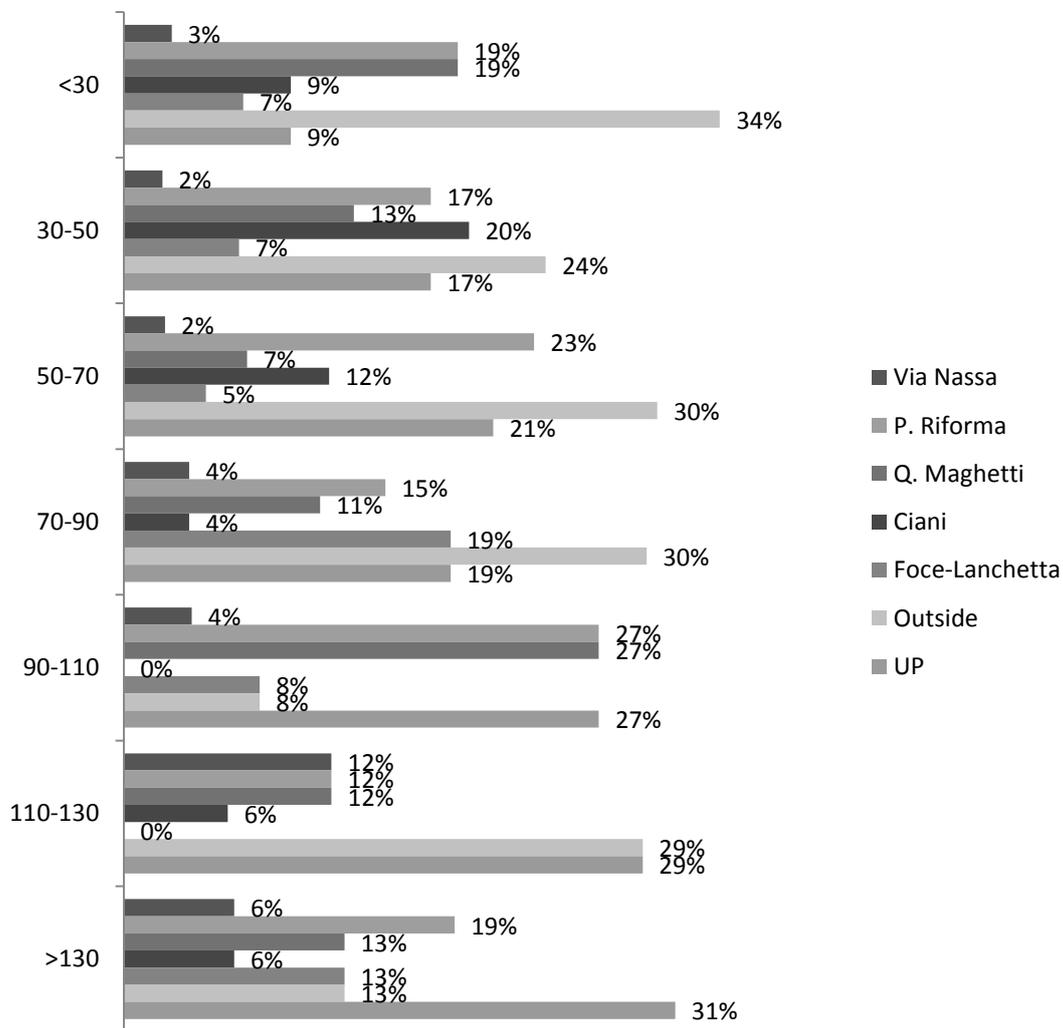


Source: Urban Relationality Dataset April 2013

Thanks to a cross-sectional analysis we can study what is the likelihood of a certain age group, class of income or group type to choose one area rather than another.

By looking at the age (Figure 20) it can be seen that young people (15-29) are more likely to go outside of Lugano (33%) or in Quartiere Maghetti (23%). People aged 30-44 years old have preferences for Outside (29%) and Piazza Riforma (20%), while we see that the majority of people aged 45-59 and more than 60 years old are more likely to choose to consume at the urban project.

Figure 21 Income (in 1000 CHF) distribution and zone-end choice



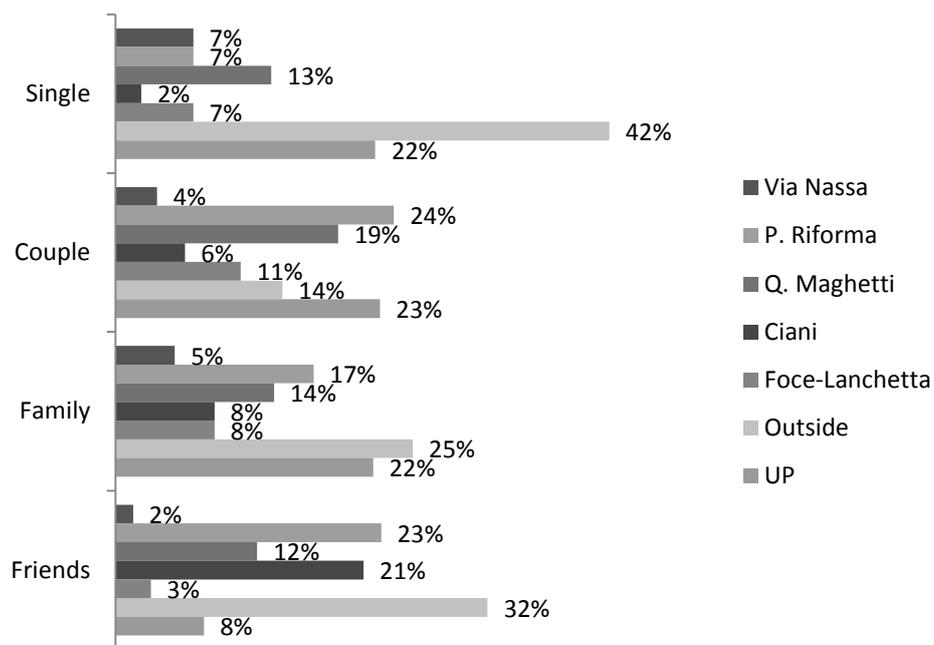
Source: Urban Relativity Dataset April 2013

Looking at the income (Figure 21) the restoration-at-the-up-alternative would seem very most common for people who have higher income levels (for example, one in three of people who

earn more than 130'000 choose bar or restoration at the urban project). Subsequently it can be shown for example that Piazza Riforma is chosen much more frequently by people with income classes of: 50-70'000 (23%), 90-110'000 (27%), more than 130'000 (19%). It seems more likely to choose the Quartiere Maghetti for individuals with 90-110'000 of income (27%).

Figure 22 clearly shows that couples choose to stay in Lugano for practicing an activity with more likelihood in respect of other groups (only 14% goes out) and Piazza Riforma is the most likely choice (24%). Piazza Reform is a very likely for all groups except the single, which prefer Quartiere Maghetti (13%) or the u.p. (22%). Another interesting fact is that a lot of friends choose to go to the Parco Ciani (21%).

Figure 22 Group composition and zone-end choice



Source: Urban Relativity Dataset April 2013

3.6.2 Urban Projects and zone-end choices

In Tables 3,4,5,6,7,8 it can be seen how many people have chosen a certain combination of the available choice – alternatives per Urban Project. These tables are used to simply show the combinations of choices made by individuals before and after the event. The possible choice set before the event includes 8 alternatives only for Centro Congressi, Studio Foce, Cinestar and Cittadella 2000, since in them the alternative "consume in the urban project" is available, while for museums it is not available. The possible choice set after the event is always equal to 7 for all urban projects. In this way it is possible to have a perspective on the alternatives chosen by the respondents depending on the urban project where they were. In this way we are able to determine how users relate with the territory of Lugano, observing how often they undertake activities in the 5 areas of interest. Total Before are the marginal frequencies that represent the total number of individuals who chose an alternative before the event, for example by observing the Table 3 we see that 8.3% of respondents of Centro Congressi has been practicing an activity in Piazza Riforma. The same applies for Total After, which represents the marginal frequencies of the alternatives chosen after the event. The crossover frequencies instead represent the combinations: for example, 4.1% of respondents before the event was in Piazza Riforma, then they return back home after the event (Nothing).

Table 3 Choice before (rows) and after (columns) for visitors of Centro Congressi

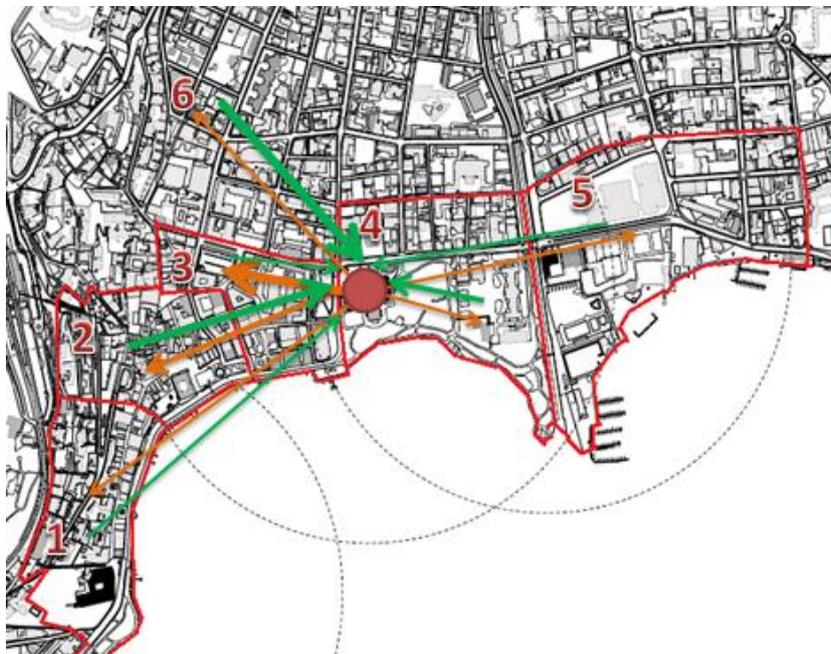
BEF/AFTER	Via Nassa	Piazza Riforma	Quartiere Maghetti	Parco Ciani	Foce - Lanchetta	Outside	Nothing	<i>TOTAL BEFORE</i>
Via Nassa			0.8				0.8	1.7
Piazza Riforma		1.7	2.5				4.1	8.3
Quartiere Maghetti					0.8		1.7	2.5
Parco Ciani	0.8	1.7				0.8	4.1	6.6
Foce - Lanchetta		0.8					2.5	4.1
U.P. Bar/Rest		1.7	2.5	0.8	0.8		18.2	24.0
Outside						2.5	6.6	9.1
Nothing		2.5	3.3	1.7	0.8	1.7	33.9	43.8
<i>TOTAL AFTER</i>	0.8	8.3	9.1	2.5	2.5	5.0	71.9	100.0

Source: Urban Relationality Dataset April 2013

If we exclude the combinations Nothing-Nothing (33.9%), Nothing - Outside (1.7%), Outside - Nothing (6.6%), Outside - Outside (2.5%) and then also UPBar / Rest - Nothing (18.2%), we obtain that 37.1% of the individuals chose to undertake an activity in the 5 zones of interest.

This situation is also visible in the map shown in Figure 23, that shows the movements of people before and after an event at Centro Congressi. It is possible to notice that a consistent number of people went to Quartiere Maghetti and Piazza Riforma, and less people in the areas most away (1 and 5).

Figure 23 Centro Congressi urban relationaliy



Source: Urban Relationality Dataset April 2013

If we do the same for Studio Foce by taking as reference the Table 4, we get that 46.2% of visitors of this cultural institution has decided to practice an activity in Lugano. This share would seem to be higher than that of Centro Congressi.

By looking at Figure 24, we see that the Studio Foce would seem to be more connected with Quartiere Maghetti, Parco Ciani and then Piazza Riforma.

Table 4 Choice before (rows) and after (columns) for visitors of Studio Foce

BEF/AFTER	Via Nassa	Piazza Riforma	Quartiere Maghetti	Parco Ciani	Foce - Lanchetta	Outside	Nothing	<i>TOTAL BEFORE</i>
Via Nassa							1.1	1.1
Piazza Riforma				1.1			5.4	6.5
Quartiere Maghetti			1.1		1.1			2.2
Parco Ciani				1.1			4.3	5.4
Foce - Lanchetta			1.1				3.2	4.3
U.P. Bar/Rest		1.1	3.2	1.1		2.2	4.3	11.8
Outside		1.1	3.2	3.2			9.7	17.2
Nothing	1.1	5.4	3.2	1.1	3.2	4.3	33.3	51.6
<i>TOTAL AFTER</i>	1.1	7.5	11.8	7.5	4.3	6.5	61.3	100.0

Source: Urban Relationality Dataset April 2013

Figure 24 Studio Foce urban relationaliy



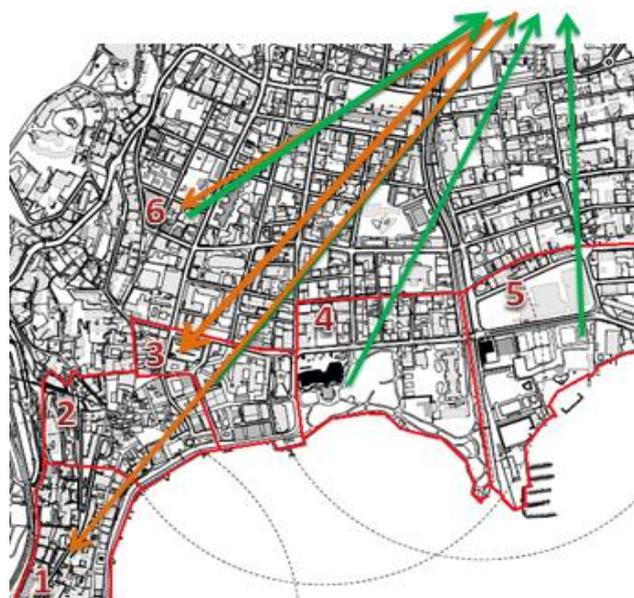
Source: Urban Relationality Dataset April 2013

Table 5 Choice before (rows) and after (columns) for visitors of Cinestar

BEF/AFTER	Via Nassa	Piazza Riforma	Quartiere Maghetti	Parco Ciani	Foce - Lanchetta	Outside	Nothing	<i>TOTAL BEFORE</i>
Via Nassa			3.8				3.8	7.7
Piazza Riforma							3.8	3.8
Quartiere Maghetti								
Parco Ciani								
Foce - Lanchetta						3.8		3.8
U.P. Bar/Rest			7.7					7.7
Outside							34.6	34.6
Nothing	3.8						38.5	42.3
<i>TOTAL AFTER</i>	3.8		11.5			3.8	80.8	100.0

Source: Urban Relationality Dataset April 2013

Figure 25 Cinestar urban relationaliy



Source: Urban Relationality Dataset April 2013

Cinestar is located very far from the center of Lugano and hence from the 5 areas of interest, in fact there is only 26.9% of respondents who said they had undertaken an activity in the center of Lugano (see Table 5). It is still a good result, which shows that the center of Lugano influence more than one in four people's decision to choose the center as a destination, although they are far from it. As shown in Figure 25 they are particularly attracted from Piazza Riforma and Quartiere Maghetti.

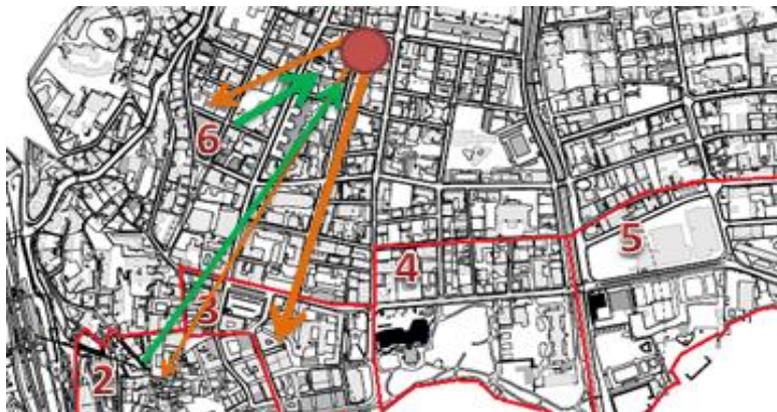
The same applies for Cittadella 2000 (Table 6), because compared to other urban projects is not near the center. In fact, only 23.8% of respondents chose the center of Lugano: as it can be seen from Figure 26, particularly Quartiere Maghetti and Piazza Riforma. However it must be said that the share of people who has consumed directly to urban project is substantial (23.8%), as well as those who have gone "outside". Many people in fact chose to practice an activity near Cittadella 2000, because there are also popular facilities, e.g. bars.

Table 6 Choice before (rows) and after (columns) for visitors of Cittadella 2000

BEF/AFTER	Via Nassa	Piazza Riforma	Quartiere Maghetti	Parco Ciani	Foce - Lanchetta	Outside	Nothing	<i>TOTAL BEFORE</i>
Via Nassa								
Piazza Riforma							9.5	9.5
Quartiere Maghetti								
Parco Ciani								
Foce - Lanchetta								
U.P. Bar/Rest							23.8	23.8
Outside			4.8				14.3	19.0
Nothing		4.8	4.8			4.8	33.3	47.6
<i>TOTAL AFTER</i>		4.8	9.5			4.8		100.0

Source: Urban Relationality Dataset April 2013

Figure 26 Cittadella 2000 urban relationaliy



Source: Urban Relationality Dataset April 2013

Taking the Table 7 as reference for Museo Cantonale d'Arte, the sum of the frequencies of the combinations of activities of people that have opted for the center of Lugano is 54.6%. They especially preferred Piazza Riforma and Quartiere Maghetti, as shown in Figure 27).

Table 7 Choices before (rows), after (columns) for visitors of Museo Cantonale d'Arte

BEF/AFTER	Via Nassa	Piazza Riforma	Quartiere Maghetti	Parco Ciani	Foce - Lanchetta	Outside	Nothing	<i>TOTAL BEFORE</i>
Via Nassa							4.5	4.5
Piazza Riforma							22.7	22.7
Quartiere Maghetti								
Parco Ciani								
Foce - Lanchetta								
Outside						9.1	9.1	18.2
Nothing		9.1	13.6	4.5		13.6	13.6	54.5
<i>TOTAL AFTER</i>		9.1	13.6	4.5		22.7	50.0	100.0

Source: Urban Relationality Dataset April 2013

Figure 27 Museo Cantonale d'Arte urban relationaliy



Source: Urban Relationality Dataset April 2013

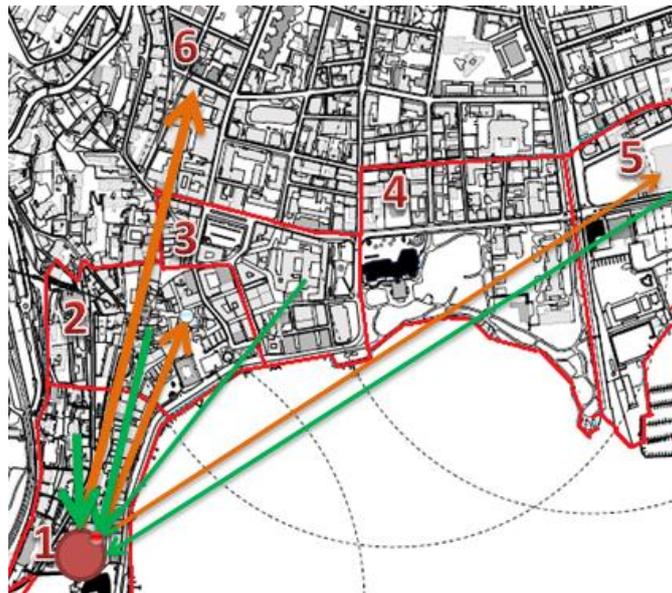
With regard to Museo d'Arte Malpensata the observations are still too small to have scientific rigor (13 observations). In any case, in a preliminary way we can say that 61.5% chose the center of Lugano as a destination (Table 8), preferring Piazza Riforma (Figure 27). We also have someone who has practiced some activities in Quartiere Maghetti and in the area Foce-Lanchetta.

Table 8 Choices before (rows), after (columns) for visitors of Museo d'Arte Malpensata

BEF/AFTER	Via Nassa	Piazza Riforma	Quartiere Maghetti	Parco Ciani	Foce - Lanchetta	Outside	Nothing	<i>TOTAL BEFORE</i>
Via Nassa		7.7					15.4	23.1
Piazza Riforma						15.4		15.4
Quartiere Maghetti		7.7						7.7
Parco Ciani								
Foce - Lanchetta					7.7			7.7
Outside								
Nothing		7.7				15.4	23.1	46.2
<i>TOTAL AFTER</i>		23.1			7.7	30.8	35.5	100.0

Source: Urban Relationality Dataset April 2013

Figure 28 Museo d'Arte Malpensata urban relationaliy



Source: Urban Relationality Dataset April 2013

3.7 Perception of territory

Another very important set of independent variable is characterized by the perception of the territory, i.e. psychological variables related to the perceptions of different zones and projects.

It is logical to assume that the behaviour of individuals, for what concerns the relationality with the territory, may be affected by a latent variable represented by the perception of the territory. This set of latent variables can be measured by the evaluation of some sites of Lugano, selected according to their importance in the urban reality. Obviously what the researcher observes is an evaluation (likert scale), which then is transposed into a set of latent variables that it might be defined according to different preferences for the areas containing historical sites, rather than modern, and so on.

The selected sites include:

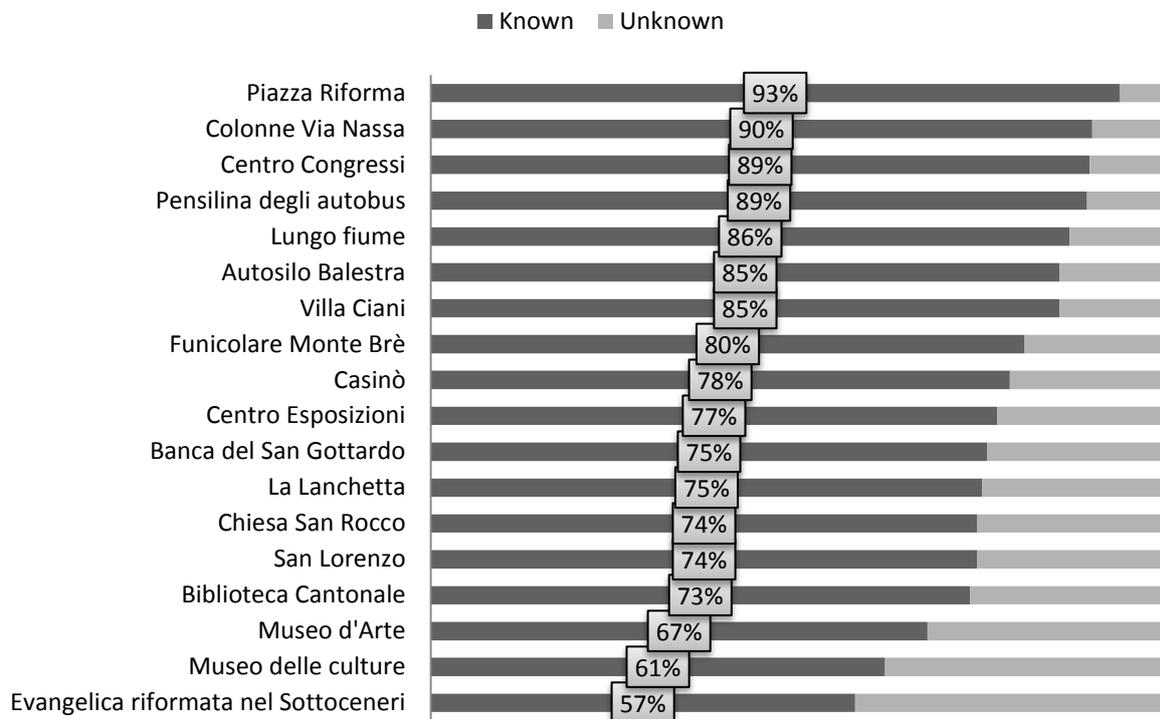
- a) open spaces, such as Piazza Riforma (square), Lungo Fiume (long river);
- b) transport related infrastructures, such as Autosilo Balestra (car park), Pensilina dei Bus (bus shelter);
- c) infrastructures with historical features or directly recalling different concepts, such as the Pillars of Via Nassa (recalling Via Nassa, the “shopping street”) or Villa Ciani, Funicolare Monte Brè;
- d) religious infrastructures of various types, which obviously have a certain visual and emotional impact that vary across individual groups (Chiesa San Rocco, San Lorenzo, Evangelica Riformata nel Sottoceneri);
- e) cultural institutions, i.e. Centro Congressi, Centro Esposizioni (exhibition center), Biblioteca cantonale (cantonal library), Museo d’Arte (Art museums), Museo delle culture (exhibitions about cultures);
- f) other infrastructures with high physical impact on the territory, i.e. Banca del Gottardo, La Lanchetta, Casino of Lugano.

All these sites are well distributed in the territory of Lugano, then their positive evaluation could have a significant impact on going to practice activities in their neighborhoods, obviously for people who attend these cultural institutions.

From Figure 29 it can be seen which are the most popular (known) sites of Lugano. The most known are Piazza Riforma (93%) and the Pillars of Via Nassa (90%), while the less well-known sites are religious infrastructures such as the Evangelica Riformata nel Sottoceneri (57%) or some cultural institutions like Museo delle Culture (61%) and Museo d’Arte (67%).

In figure 30 there are reported the evaluations of these sites, only if they were known.

Figure 29 Known sites of Lugano

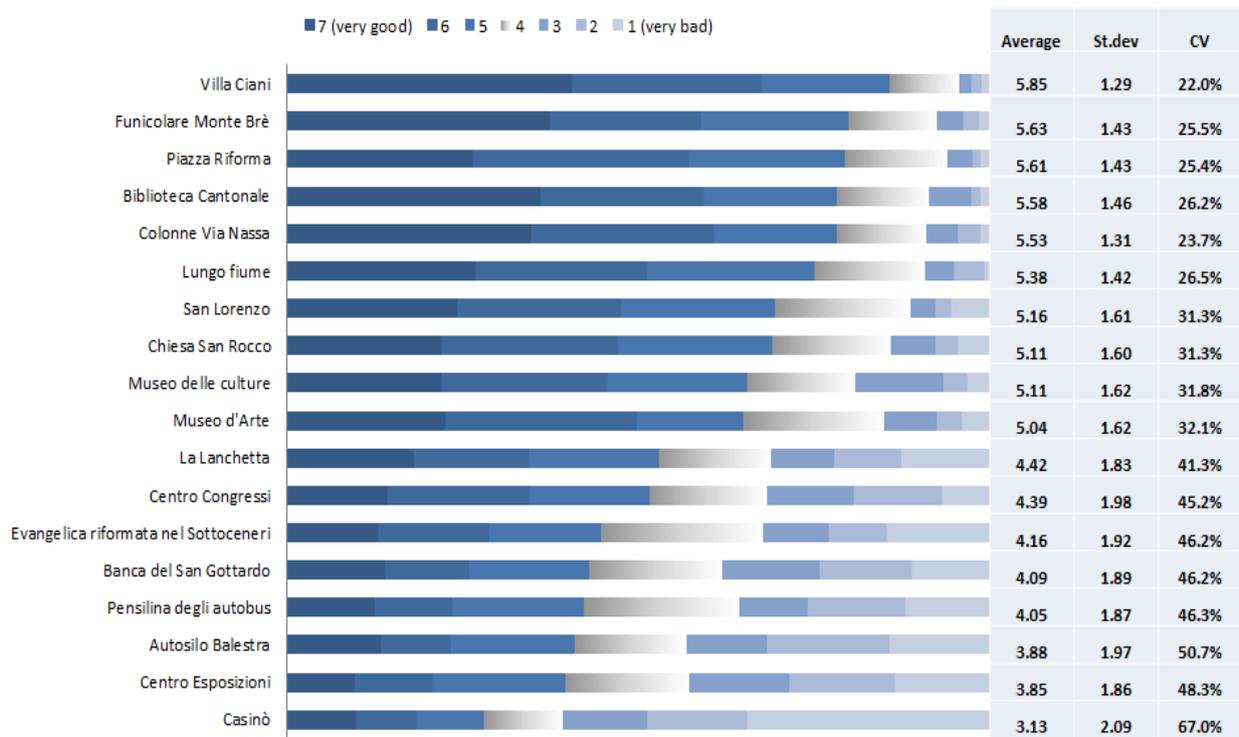


Source: Urban Relationality Dataset April 2013

The sites that are evaluated in the best way are Villa Ciani (average 5.85), Monte Bre funicular (average 5.63) and Piazza Riforma (average 5.61), probably because they have an architecture that arouses positive impression in the culturally active people. While we see that the Casino of Lugano (average 3.31) is evaluated very negatively. This negative evaluation is not probably due to an aesthetic issue on average, but rather to a moral point of view, since they are people culturally active. Subsequently it can be seen how the evaluations on the transport-related infrastructure are purely indifferent, e.g. Pensilina dei Bus (4.05), Autosilo Balestra (3.88). In fact their particular architectural styles may not like, but this is compensated from the point of view of their usefulness. Therefore these evaluations can provide a very interesting starting point for analysis to find the potential existence of factors or attributes of these sites that attract people in an area rather than another.

In fact, as mentioned previously the existence of latent preferences for attributes such as historical, modern or open space could be significant for the modelling of the destination zone-end choice.

Figure 30 Sites Evaluation, only if known



Source: Urban Relativity Dataset April 2013

4. Objectives

As already mentioned, the final objective is to modeling the dependent variable given by the destination (or zone-end) choice dimension of itineraries of individuals. As described in the descriptive statistics individuals take two sequential choices: whether to undertake an activity before and after and therefore the place, given by our defined zone-end-alternatives.

The choice set before the event contains the following alternatives: Nothing, an activity directly at the refreshment area of the urban project, the 5 zones in the city center of Lugano or Outside of Lugano. While the choice set after the event only contains: : Nothing, the 5 zones in the city center of Lugano or Outside of Lugano.

By giving a panel structure at the model, we are able to study the impact on the choice of the following independent variables:

- a) the characteristics of the decision maker (e.g. age, income, education, group composition, distance of place of residence);
- b) the characteristics of the urban project assumed as scenario (e.g. large or small project, far or not from the city center, type of cultural events organized);
- c) alternative-specific attributes of the zones (e.g. average prices, number of restaurants and bars, green spaces, distance from the urban project);
- d) psychological variable given by the perception of the territory, i.e. a set of latent variables like different tastes for modern/historical buildings, open spaces and so on;
- e) an error component in the model, i.e. a correlations among tastes for the alternatives, e.g. choosing Lugano as a zone-end choice and therefore one of the 5 zones.

By thinking in this way and possibly by getting a statistically significant model, the result would be the guidelines to the factors that make a city a better urban designed place in respect of the relationality.