A DYNAMIC APPROACH TO THE MONITORATION OF THE MASS TOURISM IMPACT ON PLACE IDENTITY

THE PLACEMAKER METHOD

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Abstract

Massive use of places with strong tourist attraction with the consequent possibility of losing place identity produces harmful effects on cities and their users. In order to mitigate this risk, areas close to such places can be identified so as to widen the visitor's range of action and offer alternative activities integrated with the main site. The aim of this work is to propose PlaceMaker as a dynamic method of urban analysis and design which both detects elements that do not feature in traditional mapping and which constitute the contemporary identity of the places, and identifies appropriate project interventions. In order to illustrate the method's potential, the results of the experimentation carried out in the Trevi-Pantheon route in Rome and the appropriate interventions to decongest the area are illustrated.

1. Monitoring the anthropic risk effects

Anthropic risk may arise from many factors which are hard to identify due to the dynamic and often uncontrollable nature of phenomena linked to the presence of humans (Boissevain 1996; Frers and Meier

2007; Gunn 2002; Haldrup, Larsen and Urry 2004; Urry 1995). These include: demographic dynamics, how and when the monument is used and its context, user consumption patterns and management arrangements.

In this regard, some useful elements of the urban context to analyze human load include: large concentrations of people; the presence and often the increase in inappropriate commercial activity which can lead to olfactory, visual and noise pollution; urban degradation due to neglect or vandalism (poor maintenance of the built environment, graffiti, etc.), susceptibility to theft. These elements are able to influence the environmental and cultural quality of places and hence its identity, by which is meant the sense of individuality and uniqueness, in which the construction of relationships between objects and urban facts with the observer plays a fundamental role as well as the practical or affective meaning they induce in the observer (Lynch 1960).

Present-day studies in the field of anthropic risk have rarely focused on questions linked to place identity, probably due to the difficulty in obtaining objective results. In order to mitigate the risk in question, areas close to these sites can be identified so as to extend the visitor's range of action and offer alternative activities integrated with the main site and in continuity with its identity. The purpose is to distribute the main site over a wider range, with activities closely connected to the site so as to decongest it. The cultural places and appropriate activities can be identified using a method of analysis and design able to trace the identity of the places, their characteristics and potential, to provide a sustainable and integrated enhancement (Appleyard 1981; Carter, Donald and Squires 1993; Castells 1997; Christensen 1999; Dickens 1990; Hague and Jenkins 2005; Nasar 1998). Identification of elements that constitute the identity of a site permits a complex reading of a place within an area and, at the same time, makes it possible to interpret its meaning and value for the purposes of its stewardship and enhancement on the one hand, and its design and reconstruction, on the other (Gospodini 2004; Massey and Jess 1995; Nijkamp and Perrels 1994).

Based on these considerations, this work aims to illustrate the use of the PlaceMaker method (Sepe 2006a), developed in the framework of a Convention between National Research Council and Urban Design

and Planning Department of the University of Naples Federico II, and specific research projects with the I.R.A.T. – Institute for Service Industry Research – C.N.R. This dynamic method of urban analysis and design gathers, processes and reconstructs the data deriving from nominal, perceptual, graphic, photographic and video surveys, and compares these data with those provided by an analysis of expectations, an analysis of traditional cartography and a questionnaire administered to local inhabitants. The information collected during the phase of analysis constitutes the basis for constructing guidelines for sustainable design and planning (Sepe 2007). Unlike analytical approaches mainly geared to observing how people move around spaces (Gehl 2001; Whyte 1981), or others which study only one aspect of the site (Lynch 1960; Careri 2002), or again multi-scale approaches (MVRDV 2002) – which collect extensive data but have difficulty collating them –, PlaceMaker considers places from all points of view, with different yet compatible tools of detection. A summary of the experiment carried out in the Trevi-Pantheon area in Rome, in the framework of the research project «Sustainable enhancement and fruition of Cultural Heritage: incidence and monitoring of anthropic factors» of the National Research Council Institute for Cultural Heritage Conservation and Promotion – Rome, and the European Project Culture 2007-2013 «Preserving places. Managing mass tourism, urban conservation and quality of life in historic centres» (Coordinator: ICVBC CNR Rome Division) is provided below. The aim of the case study is to detect the identity of the places in question as well as their characteristics and potential, and identify cultural sites and appropriate activities in order to provide sustainable and integrated fruition and enhancement of the site. The information collected during the project will constitute the basis for constructing planning guidelines for sustainable de-congestion. Place identity will be considered the main resource for sensitive stewardship and enhancement of the cultural heritage in the study area. The paper is organized as follows: section 2 illustrates the PlaceMaker method and section 3 shows the Trevi-Pantheon case study, divided by phases.

2   The PlaceMaker method

PlaceMaker method comprises eight phases – five of analysis and three of design – and a Phase 0 that consists in constructing the grid required for the operations which are to be implemented later (*Tab. 1*). The different types of database have to be created to contain the different types of data collected: there are data from anticipatory analysis (sketches, poems, collages, etc.); the denominative and perceptive (through words), the graphical (signs and symbols), the photographic (fixed images), video (moving images) surveys; the elements deduced from the study of traditional planimetries (graphic signs, symbols etc.); the questionnaires administered to visitors to the places in question (sketches, words, etc.). It is necessary to decide the categories of elements to analyze, which are particularly connected to the urban events identified above, and the corresponding measurement parameters. Moreover, it is necessary to establish which days are the most significant and the most appropriate time slices for surveys.

The *first phase* of PlaceMaker is devoted to anticipatory analysis aimed at a primary investigation of places; after the preliminary choice of the city and of the part(s) to be analyzed, the ideas about that particular area can be described using any type of instrument or tool of expression, using the information known prior to the first inspection. These notes can be represented in different ways and the result of this phase will be a map of the emerging ideas.

The *second phase* is that of the five surveys. The first, the denominative one, consists in collecting data regarding constructed elements (presence of monuments, buildings, etc.), natural elements (presence of urban green areas, trees, animals etc.), transportation mode (presence or transit of cars, buses etc.), people (presence of tourists, residents, etc.). The localization of all these elements and the kind and amount, expressed as a low, medium or high percentage, are indicated. As well as the denominative data base there is a cognitive one which constitutes a kind of flexible input, where it is possible to insert elements which are not decided previously, but deduced during inspection. The second relief is perceptive; a survey is carried out of the smell, sound, taste, touch and visual sensations, and of the global perception, focusing on

the localization, type, amount (present in low, medium, high percentage) and quality (non-influential, pleasant, annoying). The survey of the amount and quality of the data, the three options regarding, respectively, the percentage of presence and the feelings induced, are intended to summarise the processing of data that can however be extended during collection. The next survey is graphical: it consists in sketching the places; the sketches will represent the area in question according to a visual-perceptive standpoint and will be supported by annotations where necessary. This operation constitutes a preliminary study for the construction of the graphical symbols for the complex map. Photographic and video surveys of the whole study area are carried out, taking care to record facts rather than an interpretation of the places. The product of the five reliefs is a map visualizing the results obtained from the different surveys.

The *third phase* involves the analysis of traditional cartography of the selected sites in the city. The types of maps used in this phase derive from different disciplines and depend on the nature of the place; the study is carried out at the urban scale, in order to identify the characteristic elements and their relationships with that particular area, and at the areal scale, in order to identify the relationships between the site and the whole city. The result of this phase is a map identifying the components required for the site description that can be found only through a traditional planimetric reading.

The *fourth phase* is that of the questionnaire administered to visitors to the area in order to gain an idea of the place as perceived by those who are not involved in the study and are not specialists in related fields, but only perceive the site as users, at various levels: the inhabitant, the passer-by, the tourist. The questionnaire consists of questions asked on the basis of images of the area or an inspection visit with the interviewee. The information deduced from the questionnaire is transferred onto a map that, like the previous ones, will constitute the basis for the construction of the complex map.

The *fifth phase* is that of assembling the collected information. In this phase, we test the maps produced, the congruence of the various collected data, and choose the useful elements to construct the final map of analysis. The recorded data represent the basis for the construc-

tion of the graphical system of symbols to represent the elements of the urban landscape and the elaboration of the complex map of analysis (Sepe 2006b).

We then have three design phases. The *sixth phase* is devoted to surveying identity resources in the study area. During this phase, the complex map of analysis drawn up with the PlaceMaker method is used as a basis to detect the resources available for the project. The sixth phase is realized through three measures. The first is the identification of the identity potential, namely of the elements of the complex map which characterize the area in question in order to recognize those which may assume a focal role in the project. In this respect, both the comprehensive presence of a specific type of element (e.g. how many points of visual perceptions are present) and the quantity measured for each of them (e.g. such an element is assigned a certain size of symbol depending on its visual importance: namely medium size = presence of a given element in a medium percentage). Then there is the second action where the identity problems are highlighted. The activities are devoted to observing places in the complex map with the presence of unsustainable elements and annoying points of perception. With the aim of identifying these places the relationship among the different elements in the map need to be observed. An element may be sustainable in itself, for example a shop which sells typical products; but the presence of several of them may create a site with a concentration of businesses which is unsustainable with respect to place-identity. The goal is to understand the impact of people, things and activities and relative issues. The third action is the survey of identity quality. The actions to be performed here involve noting places within the complex map of analysis with the presence of sustainable elements and points of pleasant perception. The elements which contribute to defining that sustainable place or perception will need to be analyzed. In this case the aim is again to detect the impact of people, things and activities and relative relationships which are sustainable for identity of places. The product is a synthesis derived from interpreting the complex map of analysis where the identity resources available for the project are represented: a sort of map of intents, the first step for the construction of the complex map for the identity project in question.

Tab. 1
PlaceMaker scheme.

Phase	Objectives	Actions	Products
0	Construction of the analysis grid	Choice of categories Choice of parameters Choice of significant days Choice of time slices	Database grid
1	Anticipatory analysis	Preliminary observations made prior to the first inspection of the place	Map of the preliminary ideas of the place
2	Perceptive and denominative description of the elements	Denominative survey Perceptive survey Graphical survey Photographic survey Video survey	Map visualizing he results obtained from the survey
3	Identification with traditional cartography of the elements required for area description	Analysis of traditional planimetry at urban scale Analysis of traditional planimetry at territorial scale	Map with the components of the site deduced from analysis of traditional maps
4	Identification of place elements perceived by users of places	Questionnaire for visitors to the place	Map visualizing the results of the questionnaire
5	Processing the collected information	Overlay of the maps with the different elements observed from the anticipatory and effective analysis	Graphic system construction
		Check of the different elements observed from different analysis tools	Complex map of analysis
6	Identification of identity resources	Identification of the identity potential identification of identity problems Identification of identity qualities	Map of identity resources
7	Identification of identity resources by users of places	Questionnaire for visitors to the place	Map visualizing the results of the questionnaire
8	Identification ofthe project proposal	Overlay and elaboration of data collected	Graphic system construction
		Definition and localization of design intervention	Complex map of identity project

The *seventh phase* is the survey of the identity resources by users of places, locals, passers-by and tourists. A questionnaire designed to elicit information emerged from the previous phase will be administered. The questions aim to ascertain whether the data observed until now are consistent with aspirations, desires and thoughts of the users of the area in question and to collect further suggestions and proposals. The product of this phase is a partial map which will represent the identity resources from the perspective of users of places and/or privileged actors.

The *eighth* and last phase consists in the overlay of data collected during the previous phases and identification of the project proposals. In this phase we identify the places around which the project hypothesis to be conducted to enhance the identity resources are focused and the relative interventions. The products of this phase are a suitable system of symbols which represent the project activities and the construction of the complex map for the identity project. This map is the last step in the design process, where the information contained in the complex map of analysis, after being filtered and transformed into resources, gives rise to proposals for the construction and enhancement of a sustainable place identity.

3. The case study of Trevi-Pantheon in Rome

The PlaceMaker method was conceived in 2001 as a method of analysis and has been regularly updated since its pilot case studies started in 2002 in urban sites in Europe and elsewhere (Sepe 2009a). Since 2008 it has been upgraded and tested as a method of analysis and design (Sepe 2009b).

In order to study the urban identity of places, the areas selected for experiments are mostly of historical importance and at all events highly representative of the city and of its changes, alterations and redesign. The main users to whom the method and the complex maps are addressed are urban designers and planners, and administrators, while a simplified form of the complex map is addressed to local citizens, place users and visitors. By way of example, a summary of the experimentation carried out in the Trevi-Pantheon area in Rome is provided below.

3.1. *The analysis phases*

First Phase: the anticipatory analysis. Phase one was devoted to anticipatory analysis. The tool used was the written word. The selected area contains fine monuments of outstanding historical and architectural interest. The expectations concerning the monuments and in particular the Trevi Fountain and the Pantheon involves the memory of these sites, whereas the expectations involve the route linking these two places, created using a logical and deductive approach. The selected area is a preferred tourist destination, located at the heart of Rome's historical centre. The buildings are historical and in a good state of conservation. The streets are narrow, for pedestrians only, and receive natural light for only a few hours a day. The area is heavily used by tourists and residents. There are many shops, particularly selling souvenirs, as well as cafés, bars and restaurants. The Piazza with the Pantheon is highly evocative, an almost magical place where history, art and sacredness are united. The Piazza with the Trevi fountain constitutes a sort of counterpart to the Piazza with the Pantheon, the place of the «profane», its imagery linked to Rome in films, where people go to toss a coin into the water and express a wish. History and art somehow seem to recede into the background, giving pride of place to the emotions. The study-itinerary is thus a sort of link between the sacred and the profane. The Piazza with the Hadrianeum is spacious, enhancing the magnificence of the monument. Rome is an international city and this characteristic is clearly perceived in these places; with tourists from all over the world, public notices are put up in at least two languages. The most common perceptions concern, visually, the major monuments, in particular the Pantheon and Trevi fountain; for touch, the paving in flint cubes or large stone slabs; for taste and smell, the presence of cafés, bars and restaurants selling local specialities but also fast food; for hearing, voices and footsteps, and repair work in progress. The global perception is very agreeable, even if there is occasionally some chaos and confusion.

Second Phase: the denominative and perceptual identification of the elements. The second phase involves the denominative and perceptual identification of the elements that make up the identity of place using five types

of surveys. Here we first give a summary of the *nominal and perception surveys*. The route links two major monuments located in two piazzas, Piazza della Rotonda and Piazza Trevi, and we might characterise it as a (musical) piece of the city which leads from the *sacred* (point) to the *profane* (counterpoint). The most significant *break* along the route comes in Piazza di Pietra which in historical terms is no less important, but which has to some extent escaped the magnetism of a tourist, cultural and commercial attraction. In spite of its impressive appearance the Hadrianeum is less of a tourist pull, so that passers-by may pause here briefly but then go on to visit other monuments. By contrast, the *break* represented by Via del Corso is merely an interruption rather than a change in pace on the route.

The streets linking the piazzas constitute a sort of *recurrent motif* with similar characteristics. Via di Pietra, Via dei Pastini, Via delle Muratte are primarily thoroughfares with several possibilities for eating and souvenir shopping. Along the sides the paving is in porphyry and down the centre special paving has been laid for the blind. There are also some modern steles made of burnished metal which recount the history of this *route of Hadrian* in Italian, English and Braille, with a plan of the itinerary (see the complex map symbols indicating the steles and special paving for the blind). In some points there are graffiti on the facades. The most striking perception of the whole area is the noise of the water cascading in the Trevi fountain (see the complex map symbols indicating sound perception). Even before you reach Piazza di Trevi, you catch sight of the scenic Trevi fountain in white marble with ramps and the statue of «Ocean» as its centrepiece. The fountain is built against one side of a building. There are flights of ramps both inside and outside, giving different perspectives and encouraging people to linger. Walking into the piazza you feel you are taking part in a scene or an event rather than merely arriving somewhere. The scene is made up of the spectacular fountain but also the enormous quantity of people (see the map symbols indicating high concentration of people) who throng the piazza observing, admiring, listening, taking photographs, throwing coins into the water, eating ice cream or a sandwich, sketching, taking it easy, dangling their feet in the water, or buying souvenirs. There are hawkers selling souvenirs and other goods, a water seller,

men dressed up as gladiators who tourists can be photographed next to, living statues, cripples begging (see the map symbols indicating hawkers and living statues). The paving is in porphyry cubes, the urban décor streetlamps and litter bins in decorated metal, with angular iron benches around the fountain. The tactile perceptions involve: the paving material and slight differences in slope, probably due to the constant tramping; the materials and sculptures of the fountain; the water in the fountain, which people often use to cool down. The visual perceptions: the churches of San Vincenzo e Anastasio and Santa Maria a Trivio, and the aedicule at one corner of a building. The acoustic perceptions: the predominant noise of running water, and the voices of the people who throng the piazza. The perceptions of taste and smell concern the products of the cafés, ice cream parlours and fast-food outlets which hang in the air without being oppressive (see the map symbols indicating perceptions). The pace is slow. Although it has different elements, Piazza della Rotonda appears comparable to the Trevi fountain. It is a typical location for traditional socialization; its conformation, the extraordinary beauty of its monuments, and the pleasant atmosphere ensure a constant throughput of people. The first element that catches the eye is the Pantheon, an ancient religious edifice, circular in shape, which dominates the scene and somehow embraces it. The voices of visitors and the noise of the constant tramping of feet constitute a strong acoustic perception (see the map symbols indicating transient sound perceptions). Not only those who come to visit the monument but also passers-by often pause for a while outside the monument, sitting at the foot of the columns or on the perimeter walls, chatting or having a snack, creating a scenario which gets rather chaotic, as remarked by some respondents. A large nondescript throughput of people ebbs and flows in front of the Pantheon, which invariably includes hawkers, perhaps selling concert tickets dressed in historic costume or souvenirs or miscellaneous goods. In front of the Pantheon a fountain with an obelisk and dolphins forms a focal point which not only characterises the piazza and adds to the overall scenario but becomes a place of socialization for many visitors and tourists. The steps around the fountain encourage many visitors to pause or stop for lunch, photographing the fountain and the Pantheon or reading a guidebook or feeding the pigeons. The ground floor of

the buildings is occupied by bars and restaurants with outdoor tables that are always thronged with people. One of the restaurants emanates the unmistakable smell of fast food, while smells of food and coffee colour the atmosphere. A grocer's selling local products on one side of the piazza attracts many tourists. In spite of the large throughput, the overall pace here is moderate and tranquil (see the map symbols indicating pace). The urban décor comprises old-style street lighting, litter bins and round metal bollards marking off the concourse; the paving, in small porphyry cubes, slopes at different angles and makes for a pleasant tactile perception.

After the denominative and perception survey came the *graphic survey*, which involved elaborating graphic-perceptive sketches of some of the places we considered significant for our analysis (*Fig. 1*). They could then be correlated with notes taken during the inspections, providing the first indications of symbols for use in drawing up the final complex map.

For the *photographic survey*, some 400 photographs were taken during the various site surveys and along the whole itinerary, recording all the elements which could contribute to the analysis (*Figg. 2-3*).

Finally for the *video survey* the episodes filmed served a dual purpose: registering data concerning the paces and time-scale of the places, and recording sound data.

Third Phase: the traditional analysis. The third phase aims to identify the elements that characterise the place, using traditional maps on the urban and territorial scale. Here we sum up the findings.

On the urban scale, the section from Piazza della Rotonda to Piazza di Pietra reveals a predominantly irregular layout. The urban grid for the route appears to comprise successive stratifications of the blocks with various prospects and orientations. The major axis of Via del Corso divides the study itinerary into two parts. The subsequent section, Via delle Muratte, is characterised by a more regular layout featuring rectangular blocks in the first stretch. Continuing along Via delle Muratte the route becomes narrower but maintains its prevalently straight orientation. The maps show blocks of different shapes, most with internal courtyards.
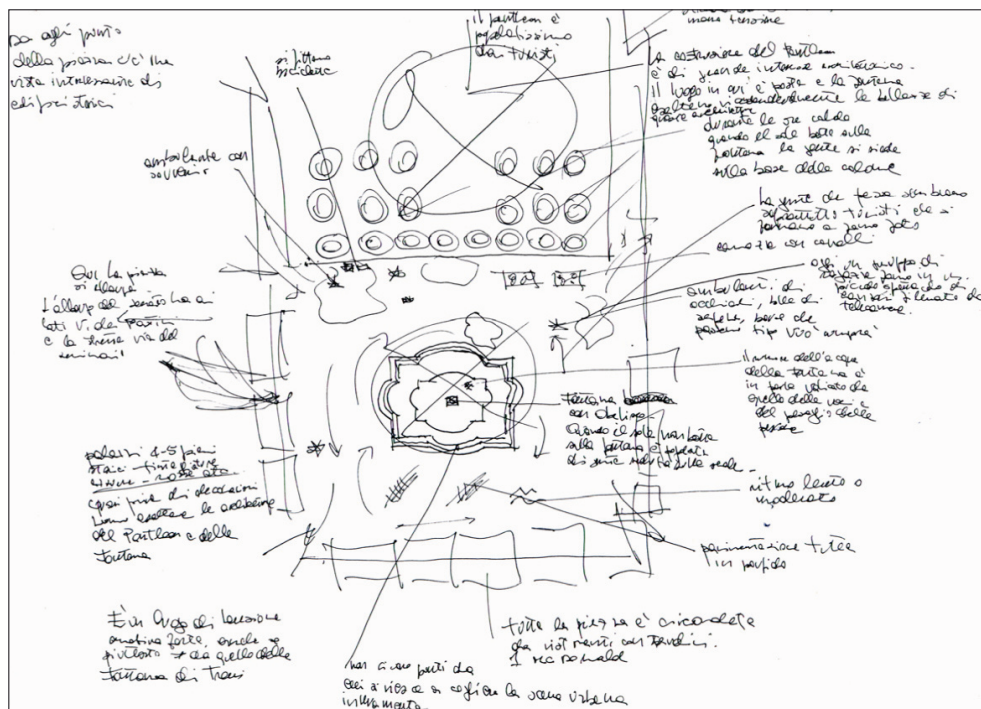
Fig. 1 - Graphic survey, Piazza della Rotonda.

*Figg. 2-3
Photographic survey, Piazza Trevi
and Piazza della Rotonda.*

There are two religious buildings. The first is the Pantheon, with its round central chapel, a predominant feature in the layout of the piazza. This concourse is irregular in shape, being at the confluence of streets coming from different directions. It functions as a catalyst and focus for the various tensions that characterise the adjoining streets. The second religious building is the church of San Vincenzo e Anastasio in Piazza di Trevi: the cartographies indicate its importance in the construction of the piazza. Here the route marks a pause, and its continuity is interrupted. This is due to the Piazza di Pietra with the monument known as the Hadrianeum. This concourse has a regular, rectangular shape but is «empty», since the Hadrianeum and adjacent buildings seem to have been designed to ensure the regular site conformation.

There is in fact a clear distinction between Piazza di Pietra and Piazza della Rotonda, whose form is the result of the juxtaposition of various strata. The interruption in continuity is due to Via del Corso, an imposition which is out of scale with respect to the study itinerary. This interruption is clear not only in the breadth of the street and the typology of the buildings but also for the diversity of the first section of Via delle Muratte, where the blocks are very regular.

In Piazza Trevi the focus of attention seems to lie in the fountain; the lozenge-shaped concourse, made up of the façades of the buildings and the church together with the conformation of the fountain, seems to be off-centre, in the confluence of the four adjacent side streets. There are no areas of vegetation.

Analysis on the territorial scale suggests that the route gets lost in the dense urban layout that characterises this area. It borders on the so-called «trident» departing from Piazza del Popolo and comprising Via di Ripetta, Via del Corso and Via del Babuino. Via del Corso is particularly evident as a «major thoroughfare». The study itinerary does not stand out on the map partly because of both its regular slope and the lack of any vegetation. It features three piazzas: Piazza di Trevi, Piazza di Pietra and Piazza della Rotonda, while, outside its precincts, lie the nearest Piazza dei Crociferi and Piazza Sant'Ignazio, and Piazza Venezia, Piazza di Spagna, Piazza del Popolo and Piazza Navona. There are various areas of historical interest bordering on the study area. The major monuments observed by the analysis inside the study area are:

the Trevi fountain, the Pantheon, the fountain in Piazza della Rotonda and the Hadrianeum. The significant monuments situated outside the study area are: the nearest churches of Sant'Ignazio and Santa Maria in Trivio. While, outside its precincts, the monuments include: the «Vittoriano» (or «Altare della Patria»), the Obelisk in Piazza del Popolo, the church and steps of Trinità dei Monti and the church of Sant'Agnese and the fountains in Piazza Navona. With respect to the visual perspective of interest obtained from traditional cartography, a fine prospect stretching from Via del Corso to Piazza Venezia and Piazza del Popolo is observed. At a certain distance from the area there is also the River Tiber.

Fourth Phase: the «analysis» questionnaire. The fourth phase comprises the questionnaire. This is designed to take between 10 and 30 minutes to complete and it consists of the questions listed hereunder together with a reasoned summary of the answers obtained.

(0) Nationality, age. Passing through the study area: (1) What elements strike you most (persons, things, etc.)? (2) Is there one or more elements which produce a particular sensation? (3) Is there any one element which brings to mind a moment important to you for any reason? (4) Are there any things which bother you? (5) Is there any one element which produces a strong sensation? (6) If you could change anything, what would you do? (7) Is this area comparable to another area of Rome or elsewhere? (8) If so, why? (9) What is the symbol of this city?

Questions were posed to people who used the site during the analysis without making any kind of distinction with respect to age, nationality or otherwise. Most of the respondents were tourists, who represent the majority of the throughput, and come from the USA and Europe (Italy, France, Britain, Austria, Sweden, Holland); English was the language used above all for foreigners, and Italian for the Italians. About 30 people were interviewed, with an age range from 20 to 60. The questionnaire was proposed above all in the three piazzas in the study area, and all the people approached took a genuine interest. There was a notable uniformity in the answers in spite of the difference in age and provenance.

The first question asked what were the most striking elements, and the replies were evenly distributed: the monument that was in front of them at the time, meaning the Pantheon, Trevi fountain or Hadrianeum;

the atmosphere; the presence of crowds; the history of the site; the urban scenario and the architecture.

The second question asked which elements evoked a particular sensation, and the replies were above all: the Pantheon, for the aperture in the dome, its grandeur and the size of the columns; the Trevi fountain and the architecture of Piazza di Trevi; the Hadrianeum, for the contrasting styles of architecture and the state of conservation of the buildings. The third question asked whether there was one element that brought to mind an important event for whatever reason, and the replies were mainly generic, referring to holidays with parents or a book that talked about these places; a smaller percentage replied that there was no element bringing to mind an event; and one or two indicated the water in the fountain. The fourth question asked whether there was anything that constituted a nuisance, and half the respondents answered in the negative; the other half gave replies that were evenly distributed between the crowds, the litter, the fact that people sit on the columns and damage them, the lack of vegetation. The fifth question asked whether there was one element that caused a strong sensation, and the replies mainly referred to the sheer size of the Pantheon and its columns, seen by some as a power symbol; the Hadrianeum. Some chose not to answer.

The sixth question asked what people would change if they had the chance, and half the respondents answered nothing, while the other half indicated the presence of many tourists and the fact that the areas around the monuments were not kept clean. The seventh question asked whether respondents could compare this site to somewhere else in Rome or another city, and this produced a great variety of answers. Most people, irrespective of age and provenance, indicated the Colosseum. Some from the USA named Washington DC, other respondents named Piazza Navona, or gave a list of monuments in Rome and Europe in general including St Peter's in Rome, the Parthenon, the temples of Agrigento, Les Invalides in Paris, the Duomo in Milan. Nobody was able to say why these monuments were comparable to the study area; some gave the generic answer that it was on account of the crowds (eighth question).

For the last question almost all respondents indicated the Colosseum as symbolising Rome, followed by the Pope and St Peter's and religious power. One person chose the Trevi fountain.

Fifth Phase: the complex map of analysis. The fifth phase involved elaborating the data collected to construct the system of symbols and draw up the complex map of analysis (*Fig. 4*). Prior to constructing the system of symbols, the information gathered during surveys was processed and the elements useful to synthesize the various types of data collected were selected. The form of the symbols, strictly related to the meaning of the different kinds of places, was then created, bearing in mind two components: the signs of the graphical survey and the comparison of the sign with the meaning. Another criterion adopted concerns the size of the symbols; three sizes were designed (small, medium and large) referring to the various percentages quantifying the presence of that given element (low, medium or high). We also matched the symbols with a number in order to indicate in the legend the element to which it referred. For the symbols connected to perception, two fundamental types were created: one for permanent perceptions and one for transient ones, the former being denoted by symbols with a full line and colour, the latter with a dotted line and half-coloured. The 10 perception symbols recall shapes of body parts connected to the respective actions of seeing, touching, smelling, feeling and tasting. Finally it was decided to categorize the feelings about the elements perceived into: non-influential; pleasant; annoying and surprising; and place beside each number the first letter of these words. The strong and contrasting colours that were used aim to attract attention and activate visual perception. For the symbols denoting pace, we used signs that recall the speed to which they refer and the perceptions that derive from them. The full closed circles are symbols that were chosen to visualize the concept of space, linked to the idea of a circumscribed area. For the places of casual socialization, instead of a precise shape, we chose an imprecise curved shape, which recalls the idea of aggregation. The uncoloured square is used to recall the sense of empty space. The concave–convex symbol suggests a place that receives and rejects at the same time. The square with coloured vertical bands around a central colourless band is used to indicate a strong limit and/or boundary. For the symbols of the natural elements we used the stylized real reference images. As to the symbols specifically created for the map of the Trevi-Pantheon area, to indicate traders selling local souvenirs the symbol

LEGEND

place of historical and artistic interest
1- Pantheon, 2- Fountain with obelisk, 3- Palazzo Cini, 4- Hadrianeum, 5- Telecommunication building, 6- Fontana di Trevi, 7- Church

space with commercial function

space with residential function

places with offices and residences

places of commerce selling local souvenirs

places of commerce selling local e non-local souvenirs

place of traditional socialization
1- Rotonda Piazza and Fountain, 2- bars and restaurants with outdoor tables, 3- Piazza Trevi

place with high concentration of people
1- Pantheon, 2- Pantheon colonnade, 3 -Piazza Rotonda Fountain, 4- bars and restaurants with outdoor tables, 5- Via dei Pastini, 6- Via delle Muratte, 7- Fontana di Trevi, 8- Piazza Trevi

place of new socialization
1- fast-food

place of random socialization

empty place
1- Piazza di Pietra

place of limit
1- bollards marking off the concourse

place open toward the outside

permanent visual perception
1- votive aedicule, 2. Piazza Rotonda with Pantheon, fountain, buildings, 3- floral decoration, 4- Hadrianeum, 5- Piazza del Popolo, 6- Piazza Venezia, 7-Galleria, 8- buildings perspective, 9-Fontana di Trevi, 10- Church

transient visual perception
1-panel conceals the refurbishment work in progress

permanent taste perception
1- paving in porphyry

transient smell perception
1- horses, 2- smells from cafeteria and restaurants

permanent taste perception
1- grocer's local products, 2- typical coffee

transient taste perception
1- tastes from cafeteria and restaurants

permanent sound perception
1- water from fountain

transient sound perception
1- acqua fontana, 2- voci di persone, 3- mezzi di trasporto

n no-influential perception

p pleasant perception

a annoying perception

s surprising perception

stele marking the route for the blind

hawkers selling souvenirs

live statue

horse-drawn carriage

graffiti

special paving for the blind

continual flow of people of different culture

quiet pace

regular pace

hectic pace

pigeons

small size of symbol = presence of given element in slight percentage

medium size of symbol = presence of given element in medium percentage

large size of symbol = presence of given element in considerable percentage

Fig. 4 - Complex map of analysis and legend of Trevi-Pantheon.

of a place of commerce was chosen placed in a square showing that the goods take on a symbolic value. To indicate hawkers selling souvenirs a symbol with three coloured rectangles was chosen, the fan-shape suggesting the seller displaying his various wares. To indicate living statues a circle was chosen containing an irregular shape in movement suggesting the indefinite dynamic of the scenes being mimed. To indicate a horse-drawn carriage a symbol with two large wheels was chosen placed in a rectangle evoking the carriage. To indicate a continuous throughput of people of different cultures the basic symbol of a busy pace was chosen, with additional colours suggesting the different cultures.

To indicate the special paving for the blind a symbol was chosen representing paving placed in a rectangle with an arrow indicating the route and the symbol of tactile perception. To indicate the symbol of graffiti a stylised image of a wall marked by graffiti was used. To indicate the steles marking the route in Italian and English, and in Braille with a map for the blind, the stylised form of the stele was chosen. Once we had created the symbols, we placed them on the map, whose graphic base consisted of the outline of the area, at the points where they were noted. When reading the map, attention must be paid to the size of the symbols (indicating the elements' quantitative presence), their meaning as given in the legend, and the meaning that may derive from the proximity of two or more symbols. For example, a large symbol indicating a place of traditional socialization (such as a square) shows that the square itself is large. But if this symbol is close to one indicating an empty place, this means that although the place should serve for socialization, in reality it is not functioning as such.

3.2. *The design phases and the complex project map*

Sixth Phase: identification of the identity resources. Then we have the six, seven and eight phase which constitute the part of the PlaceMaker method in which we drawn up the project interventions. The three design phases enables us to identify their deep structure, and the elements, places and monuments of interest, and to draw up the complex

map of identity project which was achieved by identifying elements which characterize the place identity as well as observing the number of them, both with respect to the percentages of each element and to the number of elements of each kind that are present.

Identity resources were identified through observation of: potential; places with a presence of non-sustainable elements and annoying perceptions; places with a presence of sustainable elements and pleasing perceptions. Various interesting features of the whole route are not immediately apparent. With respect to the potential, the streets linking the three monuments are regarded merely as thoroughfares in spite of the presence of historic buildings. Some monuments, such as the church of Sant'Attanasio in Piazza Trevi and the nearby churches of Santa Maria in Trevi and Sant'Ignazio, and the Galleria in Santa Maria in Via do not seem to be given enough attention. Then again, nobody seems to notice the remarkable religious icons scattered along the route. The lack of vegetation, remarked by some of the respondents, is another element to be evaluated. In spite of the creation of a route for the blind, it does not seem to be used.

The main problems are due to the increasing use of this area by mass tourism rather than residents and locals. This has led to the concentration of various kinds of trading activities – sometimes of low quality – that is slowly diminishing the perception of the identity of place and the cultural enjoyment of the area. Indeed, this trend is triggering a series of events where, paradoxically, the culture is becoming a *cause* of impoverishment of the quality of places rather than the *engine* of sustainable development: from the increase in fast-food outlets, street vendors and non-local souvenir shops, to the wearing out of the historical pavement and monuments; from an inappropriate use of colour in facades to frame ground floor shops, to the spread of the open-air tables of cafes and restaurants.

With respect to the identity qualities, due to the great historical, architectural and urban interest of this place, such qualities are various and clearly deducible from the complex map of analysis: namely not only the squares and historical monuments, buildings and urban fabric, but also the pleasing and sometimes surprising visual, acoustic and tactile perceptions and the slow pace which pervades this route.

Seventh Phase: the «project» questionnaire. The identity resources identified in the sixth phase were developed in the form of questions listed hereunder to be administered in the questionnaire to users of the places as the first test of project interventions to be proposed.

(0) Nationality and age. Passing through the study area: (1) What do you think about inserting breaks in the path (2) Would you be interested in alternative paths with the aid of multimedia guides? (3) What do you think about the quality of this place? (4) Do you think that the presence of too many people, street-sellers, open air cafés and restaurants etc… diminishes the benefits of this place and its perception? (5) Did you know that there is a path for the blind (the visually impaired) which doesn't work? Do you think it would be better to restore it? (6) Did you feel threatened at any point? (7) Do you think that there are any point where there is a perception of dirtiness? (8) Did you notice any graffiti? (9) Did you notice the state of the road paving? (10) Do you think that the presence of shops selling souvenirs not only of Rome creates problems for the preservation of place-identity? (11) What site have you come from and where are you going now? (12) Do you think it could be useful to insert gardens or urban green in this area?

The questionnaire was administered to tourists, both foreign and Italian, and local residents. Most foreign respondents were from Europe (Italy, France, UK, Belgium, Czech Republic, Netherlands and Luxembourg) and the United States, with a few from Australia. In this respect the language used was mainly English for foreigners and Italian for Italians. About 35 people were interviewed with an age range between 25 and 65. The «project» questionnaire, like the «analysis» questionnaire, was proposed in the three squares, due to the difficulty in asking questions and especially receiving sufficient attention to the responses in the rest of the route where there are no points for a break. Most of those interviewed showed interest in the questionnaire. The responses provided supported in most cases the hypothesis of the project explained below. One may notice a certain difference between the answers given by respondents of Italian nationality and those of other nationalities. While the former have mostly observed the effects of mass tourism, the latter only detected the presence of too many people.

Eight phase: the complex project map. And finally, we constructed the complex project map with highlighted the project interventions to be made to allow for sustainable enhancement and fruition of this place and mitigate anthropic risk (*Fig. 5*). Differentiating and restoring, slowing down, introducing vegetation, denoting and giving identity to what is transitory, virtualizing are some of the interventions which, if duly integrated, should prove beneficial.

One might well start from the differentiation of routes. This might involve: creating different linking routes between the monuments of the Pantheon and the Trevi fountain – a short route (Hadrianeum) and a longer one featuring the stratification of the urban fabric as well as the monuments; creating alternative routes focusing on the elements of perception –this solution may well prove both educational and sustainable: it would show visitors how pleasing perceptions can be easily blotted out by unpleasant ones; restoring the route for the blind – perhaps adding other perceptions; and creating integrated historical-cultural-perception routes meeting specific requisites – by introducing routes featuring the sound of water playing in the fountains, the ancient materials found along the route, admiring religious icons, buildings, churches, architectural features which pass unobserved in a hasty visit, sampling local produce, breathing in the *scent* of Rome. The second intervent is differentiating and restoring traditional activities. This intervention might include restoring handicrafts producing local products, including high-quality goods, so as to reduce the commercial confusion in these streets and rescue vanishing skills. Furthermore, we suggest the design of a coordinated project for shop signs and windows, above all as regards the streets which connect the squares, eliminating graffiti on the facades and respecting their traditional colour. In this way, re-designing the critical points would ensure greater balance in the set-up of spaces and organisation of the various activities, it would act as a dissuader to additional fast food outlets and would pressurise those already in place to conform. A third intervention designed to reduce the excessive physical and emotional load is the creation of breaks, to be introduced in: Piazza di Pietra, the only true moment of relaxation, where one might build – for example – a little conceptual garden, also serving an educational function, where people can pause and indulge
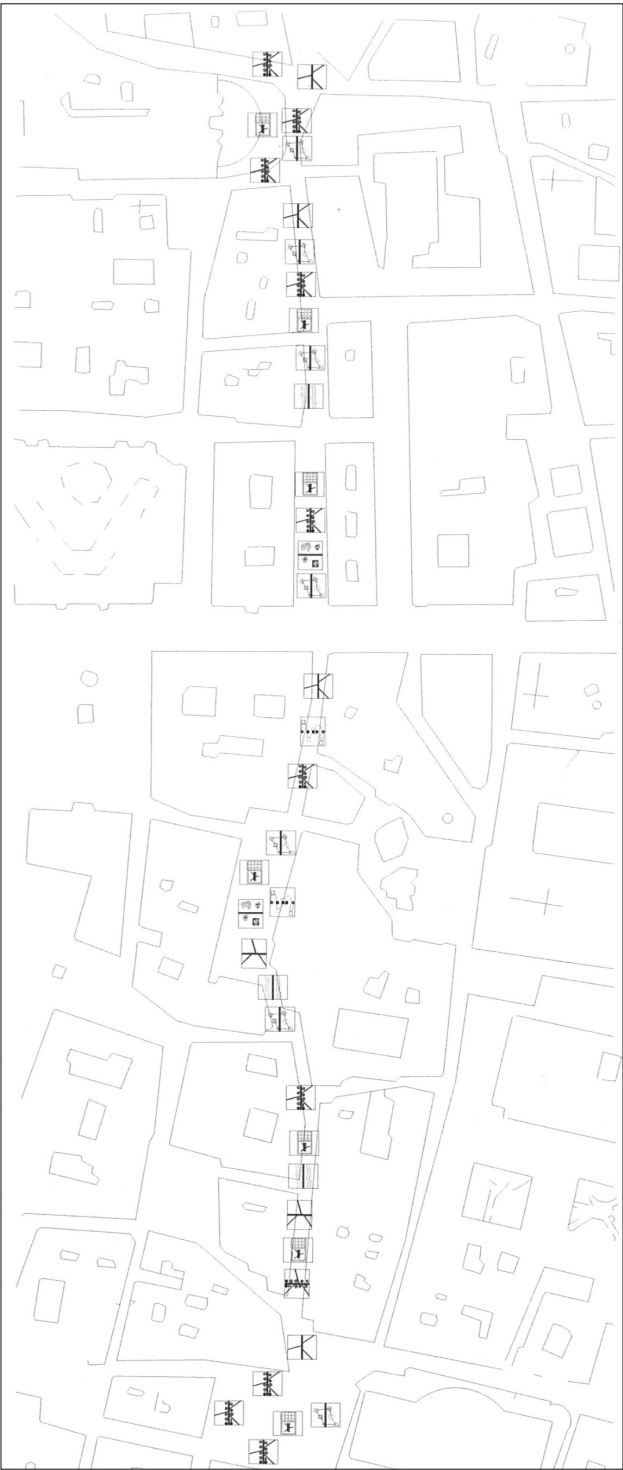
L E G E N D

differentiating and restoring routes
1- creating different linking routes between the monuments of the Pantheon and the Trevi fountain to learn about the stratification of the urban fabric as well as the monuments
2- creating integrated historical, cultural and perception routes meeting specific requisites, with information about the history and identity of the places
3- restoring the route for the blind, also adding other perceptions

differentiating and restoring activities
1- differentiating activitie s
2 - restoring handicrafts producing local products, including high-quality goods
3- coordinating shop signs and windows

slowing down
slowing down the excessive physical and emotional impact of the route through the creation of *breaks*, to be introduced at some points such as Piazza di Pietra and the *Galleria* in Santa Maria in Via

giving identity to what is transitory
creating lightweight multifunctional structures to be introduced at the focal points of monuments and street commerce, where artists, hawkers, living statues and others can create their own fluid and dynamic spaces

making more natural
introduction of vegetation in a small garden in Piazza di Pietra; in small well-defined spaces, for example at the start of Via delle Muratte, and also close by the study area such as at the end of Via del Seminario and in Piazza Sant'Ignazio

virtualizing graffiti
developing an equipped pavement which allows the creation of virtual graphic signs which may visualize visitor footprints

virtualizing the path
creating multimedia guides with multimedia texts and maps to orient visitors towards alternative and personalised routes

Fig. 5 - Complex «project» map and legend of Trevi-Pantheon.

their perceptions and then proceed, in the central space of the Hadrianeum; the *Galleria* in Santa Maria in Via, currently under-used, not strictly on the route but close by, could serve as a break with the inclusion of exhibitions, featuring the route of Hadrian for example, and other functions.

A fourth intervention involves the introduction of vegetation, currently lacking in the area: in a small garden in Piazza di Pietra; in small well-defined spaces, for example at the start of Via delle Muratte, and also close by the study area such as at the end of Via del Seminario (parallel to Via di Pietra) in Piazza Sant'Ignazio. A fifth intervention consists in giving identity to what is transitory by: creating lightweight multifunctional structures to be introduced at the focal points of monuments and street commerce, variable in extension and dimension, opening and closing, where artistes, hawkers, living statues and others can create their own fluid spaces within a dynamic, light grid which nonetheless constitutes a framework. This form of urban décor can be equipped for various functions including multimedia. A sixth intervention involves virtualizing the graffiti and the path. In the first case at some points, where there are more graffiti and the historical pavement has been replaced by a recent one, a special pavement could be inserted which allows the creation of virtual graphic signs which may visualize the steps of visitors. In the second case it involves going on line with the creation of multimedia guides. The various routes can be presented and made more user friendly by means of multimedia guides via satellites accessible for example from cell phones. In this way visitors can be oriented towards alternative personalised routes which they can follow with the help of multimedia texts and maps.

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Riassunto

Il rischio antropico di un sito a forte valenza turistica, con la conseguente possibilità della perdita di identità del luogo, costituisce elemento di pericolo per l'opera di interesse e per l'area dove insiste. Per poter mitigare il rischio, una soluzione è rappresentata dall'individuazione di aree vicine a quelle in oggetto in grado di ampliare il circuito di interesse del visitatore, offrendo attività alternative integrate con il sito primario. A questo scopo, obiettivo di questo lavoro è presentare un metodo originale di analisi e progettazione urbana chiamato PlaceMaker, il quale identica elementi che non sono individuabili in planimetrie di tipo tradizionale e che costituiscono l'identità dei luoghi e individua interventi di progetto in continuità con i risultati dell'analisi. Per presentare le potenzialità del metodo, il lavoro illustra i risultati della sperimentazione effettuata nel percorso Trevi-Pantheon di Roma e gli interventi per la mitigazione dell'impatto antropico.