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ΠΑΝΕΠΙΣΤΗΜΙΑΚΕΣ ΕΚΔΟΣΕΙΣ ΘΕΣΣΑΛΙΑΣ

Ειδικό τεύχος - Αφιέρωμα
Special Issue

**Μεταβιομηχανική πόλη:
Νέες Οικονομίες, χωρικοί μετασχηματισμοί
και νέα τοπία**

**The Post-Industrial City:
New Economies, Spatial Transformations
and New Landscapes**

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Urban Landscape, Place Identity and Their Components: A New Software Tool for Supporting the Sustainable Urban Planning and Design

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Περίληψη

Το Αστικό Τοπίο, η Ταυτότητα του Τόπου και τα βασικά στοιχεία τους: Δημιουργώντας ένα νέο πρόγραμμα H/Y – εργαλείο για τον βιώσιμο σχεδιασμό του αστικού χώρου

Η νέα δομή της σύγχρονης πόλης είναι απρόβλεπτη και πολυσύνθετη, δεδομένης και της διαρκούς ανάμιξης πολιτισμών που επιφέρει νέα στοιχεία στην ήδη σύνθετη ταυτότητα των τόπων, διασπώντας, αναμιγνύοντας και ανασυνθέτοντας την πολυπλοκότητα της αστικής ζωής. Προκειμένου να ερμηνεύσουν τέτοιους νέους τόπους και να δώσουν καινούριους ορισμούς, πολλοί ερευνητές δοκίμασαν νέες μεθοδολογίες, χάρτες, εικόνες πολυμέσων, υπερκείμενο και λογισμικό ικανά να αποδώσουν αυτή την πολυπλοκότητα και να επιτρέψουν αναγνωσιμότητα. Ένα ζήτημα όμως παραμένει ανοιχτό: Ο διάλογος αυτών των εργαλείων με τους διαχειριστές και τους ασχολούμενους με το σχεδιασμό του χώρου, αλλά και με τους μη ειδικούς, τους απλούς χρήστες του τόπου και τους κατοίκους, εξαιτίας των δυσκολιών στην εύρεση ενός μοναδικού κοινού μοντέλου αναπαράστασης. Η μέθοδος ανάλυσης του Ευαίσθητου Ανάγλυφου (Sensitive Relief) αναγνωρίζει στοιχεία του αστικού τοπίου αξιόλογα ως προς τον προσδιορισμό της ταυτότητας των τόπων και ικανά να επηρεάσουν την πολιτιστική και βιώσιμη δομή της πόλης. Τα νέα αυτά στοιχεία και η πολυπλοκότητα αυτών των τόπων αναπαρίστανται σε ένα πολυσύνθετο χάρτη. Ο στόχος της παρούσας εργασίας, που διεξήχθη στο πλαίσιο μιας συμφωνίας μεταξύ του Consiglio Nazionale delle

Ricerche (Εθνικό Συμβούλιο Έρευνας) και του *Dipartimento di Progettazione Urbana, Università di Napoli Federico II* (Τμήμα Πολεοδομικού Σχεδιασμού, Πανεπιστήμιο Νάπολης Federico II), είναι να διερευνήσει τη δυνατότητα δημιουργίας ενός ειδικού λογισμικού "PlaceMaker", για τη σύνδεση και την επικοινωνία των σύνθετων πληροφοριών που περιέχονται σε ένα χάρτη, αξιοποιώντας τα στοιχεία αυτά και ενισχύοντας τη σημασία τους. Το λογισμικό πρόγραμμα "PlaceMaker" συγκεντρώνει, επεξεργάζεται και αναδομεί τα δεδομένα από αποτυπώσεις που βασίζονται στην αναγνώριση του τόπου, την αντιληπτική οργάνωση του χώρου, τη διαγραμματική επεξεργασία της αναπαράστασης, τις φωτογραφικές και video-καταγραφές και αντιπαραθέτει τα δεδομένα αυτά με εκείνα που προέρχονται από τις παραδοσιακές χαρτογραφικές αναλύσεις, τα ερωτηματολόγια προς τους κατοίκους. Επιπλέον, για να γίνει το PlaceMaker περισσότερο προσβάσιμο τόσο στους ειδικούς όσο και στους μη ειδικούς, στόχος της παρούσας εργασίας είναι η κατανόηση του τρόπου με τον οποίο τα δεδομένα μπορούν να αναπαρασταθούν εποπτικά ώστε να αποτελέσουν εργαλεία ευέλικτα και διαδραστικά και να υποστηρίξουν το βιώσιμο μετασχηματισμό και δόμηση των πόλεων.

Λέξεις κλειδιά

Αστικό τοπίο, ταυτότητα του τόπου, το "ευαίσθητο ανάγλυφο" του αστικού χώρου, σύνθετη θεματική χαρτογράφηση με πολυμέσα και ευέλικτο πρόγραμμα Η/Υ, βιώσιμη ανάπτυξη πόλεων.

Urban landscape, Place Identity and Their Components: A New Software Tool for Supporting the Sustainable Urban Planning and Design

The new structure of the contemporary city is unpredictable and complex, especially given the continuous mix of cultures which brings new elements to the already multiple identity of places, breaking, mixing and recomposing the complexity of urban life. In order to explain such new sites and give new terms, several researchers have tested new methodologies, maps, multimedia images, hypertext, software, able to render this complexity and to permit readability. One matter remains open-ended: the dialogue of these tools with administrators and planners, but also with non-specialists of those sectors, common users of the place, inhabitants, because of the difficulties finding a single shared model of representation. The method of analysis of the Sensitive Relief identifies the elements of the urban landscape which have value for the identification of the places and are able to influence the cultural and sustainable city construction; those new elements and the complexity of those places are represented in a complex map. Starting from those premises, the aim of this work, carried out in the frame-

work of a Convention between Consiglio Nazionale delle Ricerche and Dipartimento di Progettazione Urbana, Università di Napoli Federico II, is to investigate on the possibility to create a PlaceMaker, a suitable software to connect and communicate the complex information contained in the complex map and give value and significance to those data. The Sensitive Relief assembles, elaborates and reconstructs the data deriving from surveys based on physical reconnaissance, sensory perceptions, graphical elaboration, photographic and video records, and sets this data against that provided by an overview of expectations, an analysis based on traditional cartography and a questionnaire given to local inhabitants. Furthermore, to make the PlaceMaker more accessible to specialist and non-specialists in the field, aim of this work is to comprehend how to visually represent the data to make them become flexible and interactive work tools and to support the sustainable city construction and transformation.

Keywords

Urban landscape, place identity, sensitive relief, multimedia software for thematic mapping, sustainable urban planning.

1. INTRODUCTION

The new urban features are not easily identifiable and cannot be easily represented through traditional cartography and tools of representation. To study the transitoriness and the complexity of these urban facts, new typologies of analysis and supporting tools are, at present, under elaboration and experimentation. The questions connected to the study of aspects that are not univocally translatable into objective facts regard in particular three appearances: the *scientificity*, and so the objectivity, of the results and the *repeatability* of the method in different kind of contexts; the *updating capability*, and so the possibility to add new data, to modify the existing ones, to obtain other results; the times, and so the sustainable possibility of using the results respecting the evolution of a sustainable programming and town planning process. Two main distinctions can be operated about the contemporary methods of analysis of the city places, concerning the theoretical approach and the type of instrument used to make explicit the results. Some of the principal types of approach to the analysis of the places are represented by the virtual, multiscale, lateral, configurational and nomadic approaches (Sepe, 2004), that can be split into two categories:

- the first category of approach, which includes the virtual, the lateral and the nomad, make use of atlases, maps, schemes, video to represent the products of their analyses;

- the second category, which includes the multiscale and the configurational approaches, is based on data processing tools and, in particular, software tools for the collection and the management of the data.

The study of these approaches has motivated the development of a new approach that can be defined complex-sensitive, based on the Sensitive Relief method. The complex-sensitive approach can be included into the first group with respect to the adopted methodological tools, but also in the second group as regards the supporting tool used for the analysis. The two principal categories of approaches, and the relative tools of representation, are described in the following. Then, the complex-sensitive approach is illustrated with particular attention to a new software tool, named PlaceMaker, which is under development.

2. CONTEMPORARY METHODS OF URBAN ANALYSIS

The **virtual approach** to analysing the urban places is an approach that finds its expression in the myriads of sites created through the use of the network. These are spaces, squares, architecture, platforms and gateways which, despite borrowing terms from the constructed world, are not physical places, but are able to influence movement, behaviour and habits. The resulting map is a sort of virtual architecture whose concrete meaning lies in the virtual paths that we habitually take.

City of bits by W.J. Mitchell is a comprehensive study to a new type of city, an increasingly important system of virtual spaces interconnected by the information superhighway. Mitchell makes extensive use of practical examples and illustrations in a technically well-grounded accessible examination of architecture and urbanism in the context of the digital telecommunications revolution, the ongoing miniaturization of electronics, the commodification of bits, and the growing domination of software over materialized form. Mitchell analyses the single components of the system of new virtual spaces, the superhighway of information, of social, work, cultural places, Internet meeting and of the various virtual communities that is being created, each with different attitudes, uses and needs, but joined by the virtual distance that divides them at the same time. The analysis proposed by Mitchell represents a sociological and cultural example of a reality dominated by the Net that we have experienced in the last few decades and which is now ready to change profoundly and as yet uncontrollably people's lives and the space in which they circulate. Architecture and urban planning are inserted within a context suggested by the digital telecommunications revolution so as to describe an invisible reality. The result is a picture of the change in architectural and urban space and its users/inhabitants due to the technological innovations introduced by the Net today and in the future: a sort of

underlying platform, constructed by reference to films, cities, famous people, monuments, museums, libraries, theatres, hospitals, banks, professional people, types of business on which to build the future of the city.

The **lateral approach** is an approach to interpret the urban landscape that presupposes a cross-sectional analytical approach to study an area from different points of view and at different scales of interpretation. Such an approach is also based on the perceptual, sociological or anthropological aspects or on all three together. It is an analytical method whose foundations lie in the urban studies of Lynch and Cullen, and results in maps, eclectic atlases, artworks and any tool deemed useful for representing the elements observed.

Stefano Boeri with the USE (Uncertain States of Europe), a research program on contemporary Europe, studies the change in real time of contemporary space and investigates elements testifying the changes in people's behaviour and the flows of goods and ideas in contemporary Europe. The aim is to construct a network consisting of people with various skills applied to observing the contemporary urban condition.

European cities are analyzed horizontally, vertically and cross-sectionally in order to comprehend the dynamics, desires and idiosyncrasies of the inhabitants, and the economic and cultural energies that run through them. The USE proposes to interpret the changes in society starting from indications which do not appear significant, observing places, people and cultures from the standpoint of the sociologist, artist and architect, and with the attitude of an investigator. The aim is to convert into comprehensible language the complexity of contemporary changes, offering new interpretational keys for surveying the urban landscape. The USE has produced *eclectic atlases*, which propose new ways to study the correspondence between space and society. Eclectic atlases consist of heterogeneous texts with photos, geographic descriptions, classifications, reports, which all share the same visual approach. *Eclectic atlases* produce temporary maps which represent places laterally, moving at the same time between physical and mental space; test lateral ways of viewing and representing urban areas, producing local maps and biographies of sites; narrate of an individual path in space, representing them in order to establish contact with the area.

The **nomadic approach** has its roots in the deambulations of Costant and the paths of the Situazionist and is founded on the study of an area based on knowledge gained through direct experience.

The survey method created by the Stalker group is to identify new operating categories for architecture through the action of walking; to wander in the city without control and unpredictably: a sort of archipelago of mobile geometries found in urban structures, whose map is also "mobile" like the area crossed and the tool used to cover it.

The Stalker studies the area, paying attention to areas of rejection and abandonment, to voids and urban spaces undergoing change. Such surveys are developed on various levels and with different representations of the spaces that they call Actual Territories. These are marginal areas, places of memory, space of the comparison between nature and artifice, which are difficult to define, represent and project. They can only be known by direct experience, through the use of testimony rather than representation. The Stalker crosses areas on foot so as not to have no support from mediating tools and in order to participate in their dynamics: it is a type of nomadic search for knowledge, without necessarily having to define the quest of knowledge, because the action of crossing is for the Stalker already a creative action. Intensifying one's perception and willingness to listen are necessary conditions for the areas to reveal themselves, and the empty spaces encountered are the background against which to interpret the form of the city that otherwise would appear homogeneous, devoid of complex evolutionary dynamics.

They experience the agglomerated city as a large cognitive map that is updated with continuous crossing; grasping this truth means relating to it dynamically, being able to dissect the complex design of the urban landscape.

The **multiscale approach** is an approach that presupposes knowledge and attainment of a very large body of data from different sources able to interact and supply the answers required to interpret an area. It is a type of approach that from some points of view may be described as the completion and extension of a GIS into a more dynamic and flexible form (IAAC Metapolis, 2003).

The analysis elaborated by the MVRDV group for the RhineRuhrCity research project is based on the idea that cities are complex organisms rich in inner connections. Moreover, cities must be able to ensure the coexistence of a set of diversified functions and facilities, that entail enormous economic advantages. Smaller urban areas cannot offer the same complexity of facilities with respect to cities, which have the edge in terms of supply. In order to make the former competitive, the solution of the MVRDV lies in networks, in the creation of complex systems of towns, cities and regions. Combining hard and soft resources intelligently, multicentre cities can be competitive because they combine the variety of resources of large centres with better quality of life.

The hard resources are constituted by the resources which comprise nature, commercial structures, cultural attractions, architecture, museums, monuments, while by soft resources are the population, culture, the heritage of traditions. In order to successfully network the multicentre urban areas and the cities, the two types of resources must be connected by a combination of physical and IT networks. The body of information that may be available in relation to a region is extremely large and constantly changing; integra-

tion between hard and soft features is very complex, and it is very difficult to represent the networks of interdependence for all the regions.

The MVRDV have produced a set of software called "The regionmaker" to study the region of the Ruhr, that combines the functions of a search engine, a graphic interface and a browser. These tools are able to collect demographic data and values supplied by the GIS and it is possible to consult maps, diagrams, access data banks, export satellite images, log on to the Internet, and use CAD planning. The development of the program is related to the additional representation of the movement of people, goods and information, such as the question of residential flats.

The **configurational approach** regards the study of the relations which considers the other relations in a complex. As it is shown by the Ben Hillier and its group work, Space syntax research controls the physical complexity variables treating built environments as systems of space, analysing them configurationally. Furthermore Hillier tries to uncover the patterns and structure of those variables. Space syntax techniques have also been used for research in other fields as archaeology, information technology, urban and human geography, and anthropology.

The most important aspect of Space syntax is represented by the set of methods for analysing patterns of space in the built environment to find spatial structures in cities and relate them to the way people move, stop, and interact. Space syntax models analyse some pattern of real space using simple mathematical tools that typically relate all elements to all others up to some limit. This method has been used by Hillier, including axial analysis to observe the network of streets and walkways cities, and visibility graph analysis to study patterns of visual fields in public spaces. The result is represented by an axial map of an urban area and its context. Some paradoxes may arise under certain geometric configurations of Space syntax maps, that have been highlighted by Carlo Ratti.

Furthermore, a set of software tools are now available to perform Space syntax analysis. One of the most used tools is *Axman*, an application to perform axial analysis on single buildings or entire cities (Hillier and Stutz, 2004).

The **complex-sensitive approach** studies the urban places in all its complexity; it is sensitive because it is open to all the stimuli provided by the places and seeks to identify and represent elements linked to features which are both perceptive and objective, permanent and transitory. The main method of analysis that represents this kind of approach is represented by the Sensitive Relief. The Sensitive Relief is a method for analysing the urban landscape designed to identify elements that do not feature in traditional mapping and which constitute the contemporary identity of the places, representing them in a map that renders the place intelligible. The Sensitive Relief, differently from other approaches

of analysis which study only one aspect of the site (perceptive, urban, etc...) or from other multidisciplinary approaches which collect many data with many difficulties to manage them, considers the places from all points of views and with different but comparable tools of relief. This method assembles, elaborates and reconstructs the data deriving from surveys based on physical reconnaissance, sensory perceptions, graphical elaboration, photographic and video records, and sets this data against that provided by an overview of expectations, an analysis based on traditional cartography and a questionnaire given to local inhabitants .

The Sensitive Relief analysis produces a map that provides a complex but immediately understandable reading of the sites, constituting an important instrument for sustainable construction. In order to support the method of analysis in all its phases and the creation of the map, a specific software called *PlaceMaker* is under development to connect and communicate the information contained in the complex map and give value and significance to those data.

A useful reference in the creation of the software has been the search carried out on the products and their applications which connect the GIS with the multimedia potentiality, *multimedia GIS* (Ayeni *et al.*, 2004); software for the construction of conceptual maps, *knowledge manager* and *mind manager* (ITS), software for the construction of urban interactive observatories or maps for the participation of citizens in the planning process, *citymap* (Graziano, 1999; Marinelli, 1999).

3. PLACEMAKER

PlaceMaker is a software of support to the method of analysis of Sensitive Relief and to all its phases (Sepe, 2005). The prime users of these tools are: urban planners, administrators, citizens. With PlaceMaker it is possible to represent and read the places of a territory through the realization of interactive dynamics and multimedia maps. The representation of the places is realized by means of the insertion in maps of symbols and elements connected to multimedia schedules that can be continuously updated.

3.1. Characteristics of the Software

The main characteristics of PlaceMaker are:

- flexibility,
- facility and rapidity of use,
- strong graphical impact, and
- indexing of the results.

The **flexibility** makes it possible to conserve, manage, modify and update in a particular format the multimedia data that are necessary for the creation of the multimedia schedule, connected to the symbols placed on the maps.

With simple and fast operations the creation of the maps takes place on the basis of an official traditional cartography or other kinds of maps. In map construction the cartography can be made easier by tracing the contours through the use of lines, tracing filled parts through the use of areas, or leaving these complete. The map is therefore constituted by a cartographic base on which are inserted a series of symbols to which the multimedia database is associated. The multimedia database connected to the symbols contains the data collected in the different phases of the Sensitive Relief method and in particular written texts, schedules, images, planimetries, maps, audiovisuals. Once the symbols are inserted on the map, these can be modified, moved or eliminated. In fact, PlaceMaker possesses a database that allows the creation and modification of the categories of symbols of the Sensitive Relief, used for the entire map. Every database series of categories contains one to which the symbols belong: the areas and the lines are defined according to category, name, colour and thickness; the symbols are defined according to category, name and dimension. The software contains a basic number of categories of symbols related to the Sensitive Relief, but it is possible to create others. Once the database of categories has been constructed, the symbols can be positioned on the base map, making it possible to connect the information referred to the places with the related multimedia schedule. It is also possible to connect the symbols with other symbols, maps or internet addresses. The partial maps and the created symbols for the final complex map can be overlapped and connected, the final product being characterized by a strong graphical impact. In order to facilitate the construction of the final complex map and consultation of the information when many data are present on one map, it is possible to decide the categories of areas, lines and symbols that must appear on the map and overlap the different maps in transparency. In order to render the results of the analysis objective and useful to sustainable urban construction, the software connects the symbols of the complex map to numerical indices that allow the calculation of quality, potentiality and weakness of the places represented in the map.

3.2. Supporting the Sensitive Relief Method

The Sensitive Relief is constituted by five phases and a Phase zero that consists in the construction of the grid required for the operations which are to be implemented later. With the use of PlaceMaker it is possible to collect different kind of database to contain the different types of data collected: data from the anticipatory analysis (sketches, poems,

collages, etc...); denominative and perceptive (through words), graphical (signs and symbols), photographic (fixed images), video (moving images) reliefs; the elements deduced from the study of traditional planimetries (graphic signs, symbols etc...); the questionnaire administered to visitors to the places in question (sketches, words, etc...).

Once it has been decided which categories of elements to analyse and the corresponding measurement parameters, within one year taken as the reference period for urban changes, the days which are the most significant and the time slices for the relief need to be connected to the symbols. PlaceMaker allows the construction of the map following the different categories and measurement parameters selected.

Every phase produces a map with the multimedia symbols and the related schedule. Each of the first four phases produces a partial map with symbols and the related schedule; the fifth phase produces the final complex map with symbols and related schedule of syntheses.

The first phase is devoted to an anticipatory analysis aimed at a primary investigation of the place; after the preliminary choice of the city and of the part or parts 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 before the first inspection. These notes can be represented in different ways and the result of this phase will be a map of the ideas emerging. In this phase, the data of the expectations can be inserted on the map using written text, drawings (sketch or other), images and video, always referred to a specific area. With PlaceMaker it is also possible to insert directly the text in word format or to make a sketch in electronic format. Once the analysis of the expectations has been carried out with a synthesis operation it is necessary to assimilate a text or an image or other to a symbol; if the database does not contain the adequate symbol an appropriate one must be created. Such data are necessary in order to construct the multimedia schedule to connect to the symbols. Once the symbols have been inserted on the map the first phase of the Sensitive Relief is concluded.

The second phase is that of the five reliefs (surveys). PlaceMaker makes it possible to collect the different data of those reliefs. The first relief, the denominative one, consists in the collection of the data regarding constructed elements (presence of monuments, buildings, etc.), natural elements (presence of urban green areas, trees, animals etc...), transportation mode (presence or passing 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 the quality (non-influential, pleasant, annoying perceived feeling). 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 relief is the graphical one that 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 sensitive map. Photographic and video reliefs of the whole study area are carried out, taking care to record the state of the facts rather than an interpretation of the places. The product of the five reliefs is a map visualizing the results obtained from the different reliefs. Once the five reliefs have been carried out, in addition to the nominal and cognitive database, also the sketches in digital format, the images and the video are inserted in PlaceMaker. A second partial map with symbols and related multimedia schedule is constructed from the information deduced from the second phase.

The third phase involves the analysis of the traditional cartography of the selected sites of the city. The types of maps used in this phase, and which PlaceMaker has to acquire, derive from different disciplines and depend on the nature of the place; the study is effected 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 with the identification of the components required for the description of the site that can be found only through a traditional planimetric reading. The symbols of this map will not be associated with a multimedia schedule but with the symbols of two traditional maps.

The fourth phase is that of the questionnaire administered to visitors to the area with the aim of gaining an idea of the place 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 and an inspection visit with the interviewee. The information deduced from the questionnaire will be transferred onto a map that, like the previous ones, will constitute the basis for the construction of the complex map. The information deduced from the questionnaire is transferred on the fourth partial map and the schedule associated to the symbols will be constituted mostly from images and written texts.

The fifth phase involves 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 complex map. The recorded data represent the basis for the construction of the graphical system of symbols and the related multimedia schedule.

By suitably overlapping the maps obtained from the previous phases with PlaceMaker it is possible to produce the final complex map. The symbols created for the construction of the complex map, final result of the analysis, as well as being connected to the database are translated by PlaceMaker into numerical indices to allow the calculation of data useful for the study of the sustainability of the places, such as liveability, well-being, chaoticity, etc... Finally, the map can be elaborated in relation to the changes that happen on the territory through the updating of the multimedia database and symbols. The following figures (see Figures 1 and 2) show two windows of the software regarding a complex map and a multimedia schedule related to the symbolic place.

Figure 1. PlaceMaker: the complex map

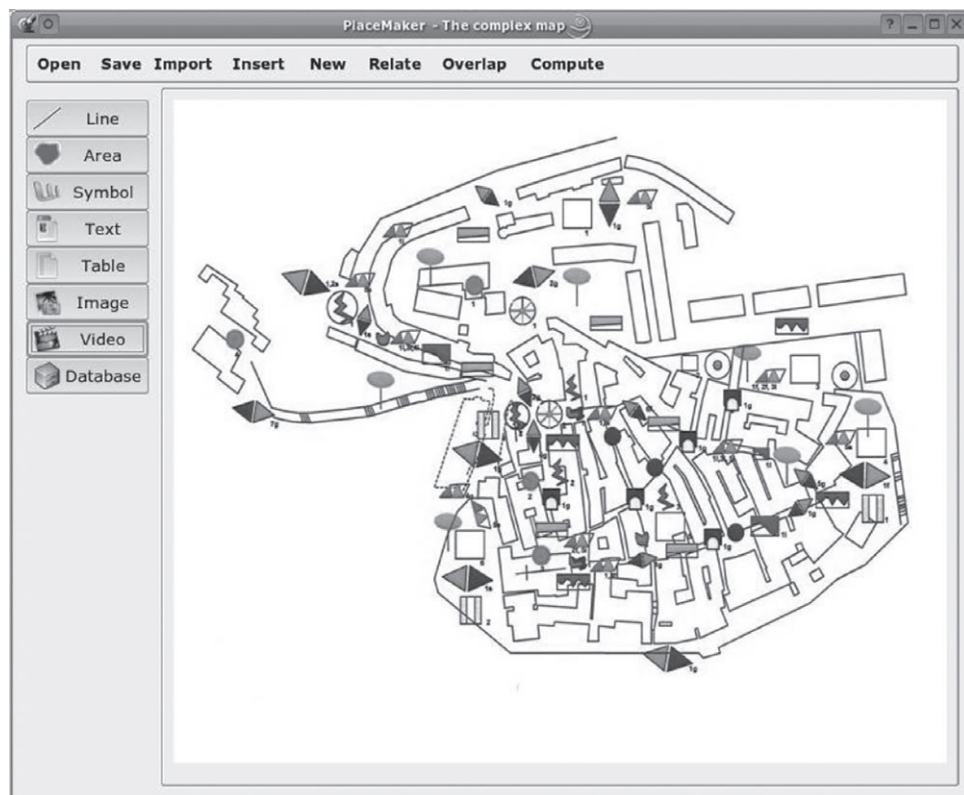
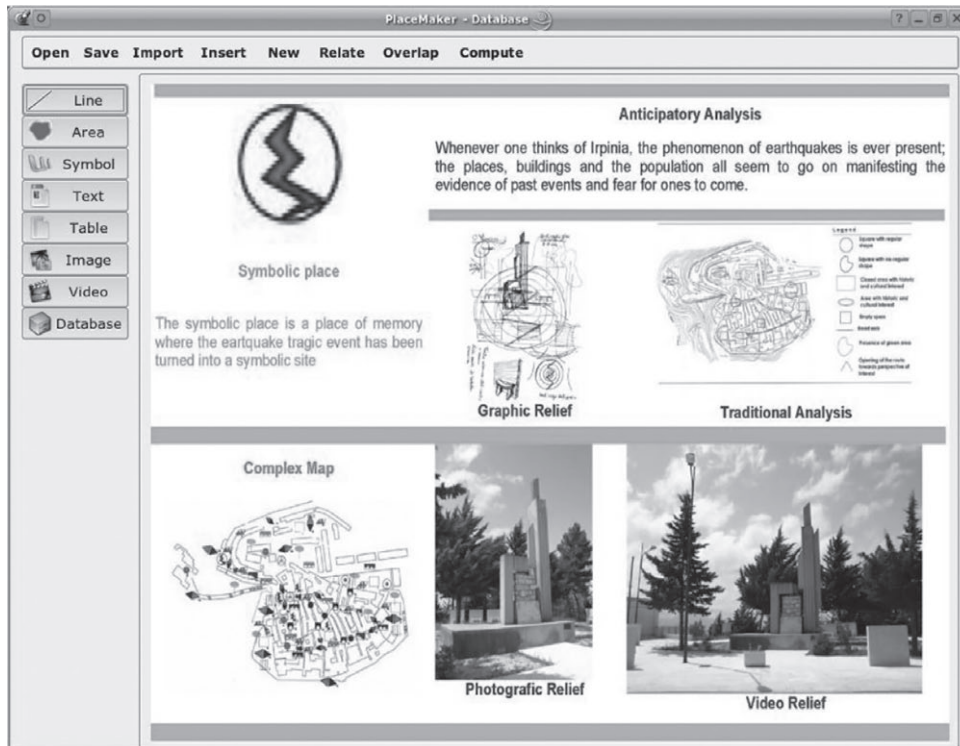


Figure 2. PlaceMaker: multimedia schedule related to the symbolic place



4. CONCLUSION

The new structure of the contemporary city is unpredictable and complex, especially given the continuous mix of cultures which brings new elements to the already multiple landscapes, breaking, mixing and recomposing the complexity of urban life. The aim of this work, carried out in the framework of a Convention between Consiglio Nazionale delle Ricerche and Dipartimento di Progettazione Urbana, Università di Napoli Federico II, was to investigate new methods for analysing the urban places and the sustainable city construction and the new tools to represent it in order to identify the new elements of the present-day urban identity, which are also able to cause cultural changes. The questions connected to the analyses which study aspects not univocally translatable into objective facts regard in particular three appearances: the *scientificity*, the updating and the times. It is observed that a category comprising virtual, lateral and nomadic approaches uses atlases, maps, video in order to represent the products of specific analyses, while another category comprising

the multiscale and configurational approaches uses software to support the collection and management of the data. The study of these approaches has motivated the development of a new approach, that can be defined complex-sensitive, which regards the method of analysis of the Sensitive Relief, which it is possible to insert inside the first category as regards the used methodological approach and inside the second category as regards the support tool to the analysis, and, in particular, the study currently in elaboration on the software PlaceMaker. PlaceMaker is a software of support to the method of analysis of Sensitive Relief and all its phases. With PlaceMaker it is possible to represent and read the places of a territory through the realization of interactive dynamics and multimedia maps.

The symbols created for the construction of the complex map, final result of the analysis, as well as being connected to the database are translated into numerical indices to allow the calculation of data useful for the study of the sustainability of the places, such as liveability, well-being, chaoticity. The main characteristics of PlaceMaker are: flexibility, facility and rapidity of use, strong graphical impact, indexing of the results.

Thanks to those characteristics, the prime users of these tools are: urban planners, administrators, citizens all involved in the sustainable city construction.

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