DOCTORAL PROGRAM
DESIGN AND TECHNOLOGIES
FOR CULTURAL HERITAGES

One of the goals of the Maastricht Treaty is to promote the harmonic, balanced and sustainable development of economic activities, and not-inflating economic growth. To achieve this purpose, the European Community worked out a collection of policies that, with special regards to culture, points out two main themes:
- cultural heritage as a tool to promote historic identities of lands;
- cultural heritage as a tool to promote a new economic development.

Following this idea, the Doctorate Course on “Design and technologies for cultural heritage” promotes the training of new specialists able to integrate the various needs in design for the usage, valorization and management of cultural heritage.

Subjects of the Course are based on a wide background, extended to interdisciplinary cultural areas and finalized to methodology and applicative tools (in cooperation with institutions, companies, governmental bodies and associations active on these items) integrated with specific approaches, giving attention to potential development of new skills.

The training program developed during the 3 years is based on:
- history, critique and technologies for the restoration and preservation of historic heritage;
- strategies and methods for heritage sharing and its accessibility;
- project and technologies for the fruition of cultural, environmental and landscape resources.

Qualifying elements of the program are the involvement of excellences with regard to the subjects, and the tight links with an advantaged testing area: Mantova, the ‘città d’arte’, and the minor cities, the river Mincio and its park, the Po river basin, are a propitious scenario for the development of valorization processes driven by innovative technologies, design and communication.

The positive and innovative results obtained until now allow to focus the new development of the scientific program of the Doctorate Course:
- sustainability of interventions with regard to cultural heritage, in relationship with the characteristics of heritage and its contexts;
- valorization of design processes in relation with assets, tools, institutional and private operators;
- economic importance of the valorization interventions in relation with productive and cultural processes.

Such items allow a more deep integration of theoretical studies within practical experimentations.

Program contents are divided following the various valorization steps:
1. analysis, safeguard, preservation of the cultural heritage, in the meaning of organic sum of cultural and landscape heritage;
2. politics, strategies and instruments of cultural, territorial and landscape planning;
3. design intervention for cultural and landscape heritage valorization;
4. promotion and communication of valorization results.

In the first area are included the analysis and valorization of historical and artistic heritage at the various scales.

"Safeguard and preservation of cultural heritage": degradation, maintenance, conservation and restoration of heritage.

Classification methods for cultural heritage and their accessibility.

In the second area there are subjects related to the correct use of cultural heritages with regard to their valorization and usability.

"Complex projects and designs" for landscape and for cultural heritage, funding methods for heritage restoration, improvement and usability of heritage.

"Building partnerships” for management and valorization of cultural heritage.

In the third area are included subjects about intervention and design for cultural and landscape heritages exploitation.

"Management of creative processes” in contexts with high operative complexity.

"Social and environmental sustainability” of interventions.

"Methods for evaluation” of the technical-economic feasibility of projects, for the management of decisions and of conflicts.

In the fourth area there are subjects related to promotion and communication of valorization results.

“Good identity” (graphics and corporate image), communication, medium selection, landscape and urban marketing and sociology.

"Methods for management and promotion” of new usability models for heritage and for cultural activities.

Technological culture applied to architectural projects has developed many methods to cope with such complexities: new project methodologies from a linear process have become a multi level activity and have imposed a revision of work methods toward solutions that allow the mix of different knowledge.

Such knowledge resources can be innovatively applied in cultural heritage projects, with different themes and scales: interventions on existing buildings, the urban project, environmental themes, territory infrastructures, the cultural dimension of development.

These themes represent an important development prospective in the activities of the Doctorate Course on “Design and technologies for cultural heritage”.

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GOVERNANCE OF CULTURAL HERITAGE
A hypothesis of strategic plan

This research starts with the analysis of strategy implications in different sectors, then it studies strategic planning in public administration and territory to find guidelines and a scheme that could be used for Mantua immaterial goods and landscape.

The term of “Strategy” has several meanings and many applications in different context; it's very difficult to discover an unambiguous and exhaustive definition; that notwithstanding, it's necessary an attempt to understand the basics and whole plan and how, at present, is a current term. The word “Strategy” comes out in military world and means generals’ art. Major writings about military strategy comes from oriental tradition. Strategy is meant as the art of military, political, economic and industrial coordination for a nation in order to prepare the country to defence and fight.

The most important treatise about strategy comes out in oriental history, in particular in China’s and Japan’s history that, although with many differences, has similar basis. So the research analyzes six treatises about strategy that were affected by most important religious beliefs of the Far East. Instead of a treatise, the most important treatise was written by Niccolò Machiavelli that gave to it title “L’arte della guerra”, where he remarked a closely relationship between military science and politics.

With years, particularly in the last decades, strategy has become more and more important in every situation. An organization and an evaluation upstream of any process make the same process more simple and governable. So the strategy enter in heterogeneous and opposite sectors and the term are coupled also with psychology and flexibility. Tightly connect with military strategy is the “theory of games”, that is the mathematical science that analyzes conflictual situations and searches competitive and cooperative solutions using models. The applications and the interactions of the theory are several; we can find it in economic, financial, military, political, sociological, biological and psychological context.

The most famous strategy game is chess. The chess’ strategy means to think and to realize a plan game in order to win the game, or at least in order to not lose it. For this reason the strategy advises the best location for the single piece or for the complete deployment to create a winner attack. The good strategy is composed by many tactics. Every tactic is composed by singular action: this is the technique. So we have: strategy, tactic and technique. Besides strategy is the most influencing of strategic management studies. In advertising, strategy is each decision linked to marketing actions. In communication planning, objectives are final desired results, while strategy is the specific action to reach results.

After analysing and understanding strategic concept and its different applications, we have to understand how strategy could be linked to urbanity, and more precisely to strategic planning.

There are two different ways of urban intervention, connected to two different ways of thinking: the former concerns territorial structure, the latter is about changing behaviour of the actors who act on the territory. This way of thinking shows a strategy implementation.

During last years urban planning has moved to a wider involvement of citizens in free or associated way. Strategic planning leads to governance from government.

Form this analysis, 14 steps of the process come out, each one pivotal if intended together with other steps, from the specification of the planning unit and of its environmental components to the show of a collective vision, given by objectives made up with unifying ideas, from indication of indicators for objectives achievement to building an economic and temporal diagram.

Found the model, we need to verify its application in different fields. We have to create a real strategic plan, objectives and operative ways of the contest. The participants to this contest are: planners, community and stakeholders.

From this analysis we can find guidelines that could be used to realize a strategic plan and a scheme applicable to different worlds. We have to introduce some notes first. For a good strategic plan we need concentration and subsidiarity, and also knowledge of stakeholders and recipients’ necessities and expectations. Planning process should be flexible enough and should be about duties that come from a precise identification of economic, social, military and political needs. Flexibility can be seen as an territorial concept, meant without defined limits. The decisional model from hierarchical becomes off-center, and people participate directly to the decisions, giving useful elements to choices. This system has many decisional centres, that are stand alone but they communicate each other, defining the system itself an open system. Strategic planning leads to governance from government.

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From the concept analysis of the term “strategy”, from its application in different fields, we find the strategic planning process, linked in a strictly way to territory and public administration and from strategic analysis of completed or still working plans, we have found a model, that could be defined universal model, that could be used in every fields and in every way, that have allowed to overcome the obstacles we have always found in managing governance and strategic planning.
A general European tendency shows how thermal baths can be the leading force of a process of a urban and social refurbishment of the whole territory where they are located, with meaningful benefits for the economic growth of the local communities. Thermal baths are in fact at the centre of a new form of “Cultural Design” as a resource that can elevate the combination thermal baths-territory-culture to a powerful tool of local development. This research proposes an intervention plan based on six actions upon which the Cultural Design for thermal baths can be developed: tutela, preservation, enhancement, management, promotion and fruizione. It becomes fundamental to promote the creation of local networks that aims to promote together the cure of: wellness, culture and local identity. The intervention programme points at a sustainable enhancement of the local territory meant both as a physical, natural environment and as a social context where the reorganization of the infrastructures and of the local services becomes of greatest importance. The thermal baths sector is experiencing its fifth phase: the so-called “Benessere termale”, where at the heart there’s a new idea of health, tied not only to physical but also to mental well-being. The traditional model where thermal baths tend to be perceived just as curative structures similar to hospitals, becomes obsolete and a new “integrated structure” has to be sought, where the therapeutic services are combined with wellness services different than those provided by the common health spas, as they are enhanced by the exclusive advantage of the unique properties of the thermal waters. In this sense, the only solution passes through a structural renewal of the thermal facilities and a new general approach which could be able to deal with the innovative demand faced by the sector. The above underlines the need of a multidisciplinary and proactive approach. The reference is to the joint use of tools as: “Proactive Marketing” which has to anticipate the needs and desires of the market; Design, which assumes a strategic role in that it helps the marketing in creating visions (through its new research methodologies, which look at daily life of common people whose changing behaviours are not always properly interpreted by traditional market researches) and to put them immediately into practice. The aim is to identify the thermal baths as a “marketable product”, thus implying an effort of communication and promotion. The design and the development of a Brand able to communicate the identity of the local territory are needed. This research explores the Italian and European thermal baths sector, with the purpose of encouraging its enhancement through procedures, tools, and initiatives within strategies of local development. The well-known concept of “Heritage Interpretation” (as expression of a form of interaction between architecture and territory) is a system of communication useful to represent the cultural heritage as a historical, artistic and environmental resource. The current role of heritage interpretation is to propose a variety of keys of reading of the heritage itself. It is important to make the local communities aware of their proper historical identity, in order to develop “il senso dei luoghi” (the sense of belonging to a specific territory). Thermal baths represent an important cultural value: they tell us about past life styles, the evolution of the idea of the two fundamental elements for human beings’ existence, that is water and health. The actual need of accessibility emphasizes the importance of building a coalition between sectors and functions. The definition of “Turismo integrato” (integrated tourism) is based on a wide concept of welcome, which includes the ability to understand the different needs of the users. The thesis job wants to evidence as the cultural and social members of a territory are emerging with force like main lever for the development. The social meaning of culture sends back to the history and the identity of a community, to its having testimonies civilization value, to the social benefit to which the population it can reach. In the same time, the culture concept includes also the existence of pushes of cultural movements that are the expression of the will to identify and to hand on the roots of a community, to facilitate the processes of knowledge, new internalization and sensitization towards or old values and cultural horizons. Extension, therefore, the necessity to introduce a new way to operate on the territory to the aim to answer to the trial-like dynamic new, focusing the attention on the retraining, strategic fulcrum of the participations, to the aim to increase the recognize of places and local communities. Acting parallel to expansion politics, the governance is oriented towards calibrating re-use of the existing: the valorisation of the city cultural patrimony turns out to be the product of a measured interaction between necessity of strategic conservation and design of development. Flexible and multi-scale technologies of process oriented to the potentiality optimization and opportunities inborn in the territory, meant are delineated as it arranges total equipped of geographic specificities, cultural, social and economic. A new approach governed from the link between spontaneous demands for conservation of the existing and economic dynamics of the territory is born. The thesis aspires to propose an participation program that moves from an action aimed at the structural development of the section, orienting itself to a sustainable valorisation of the territory meant not only like physical and natural atmosphere but also economic and social weft, of which the development of the local communities, the reorganization of the land and infrastructural order, the reticulcar planning of the systems of city services, the integrated management of the transports and the construction of local nets become of primary importance. In such scene a model of founded cultural-entrepreneurial grouping is coned on the promotion, valorisation and use of the asset; such procedure reveals a real resource, central in the maintenance of actions of coherent local development with the patrimony linked to the territory. This plan is based on a design of reticular development, coherent to the organic change with the patrimony linked to the territory. Extension, therefore, demands new modalities of reading of the tourist-cultural asset, drawing origin from the natural and intrinsic vocations of the territory, until landing to the district form understanding like place of affiliation, able to coagulate and to develop the original vocations, the attractions, the present equipments and services in the area. What it comes to show is a “cultural district”, different from the traditional district form, as not characterized by product exchange but from a cross-sectional in which the process of valorisation of the asset add itself to the planning of infrastructure production and with other connected productive fields to the process. The research, in synthesis, aims at the definition of promotion strategies and valorisation of the thermal section, interpreted like identity cultural patrimony of local civilizations that recognize in its historical matrix and in its social value a civic tradition that constitutes more originates territorial brand. Through the analysis of the physical members, of the immaterial factors and the agents in the planning and the management of the thermal structures, the search is oriented to the location of productive fields, of the immaterial factors and of the assets, interpreted like from the important city presence, to the aim to promote strategies of planning integrated for the fruition of the territory and its assets.
Monuments and documents are the material supports by which memory gets real, whereas museums, libraries and archives are the places where memory can be preserved and protected. The former can be tested and observed without needing a direct contact between user and work, and can be “remotely” perceived. Instead the latter, because of the intrinsic fascination associated with the information they conceal as well as the extrinsic fascination associated with the material support representing them, have to be unfolded, handled and analyzed very carefully to be understood and appreciated in their complexity.

To be useful for perpetuation of historical memory, documents have to be kept in appropriate places, with specific structural, climatic-environmental and logistic characteristics. Owing to paper overproduction, archives encounter increasing difficulties to meet high qualitative standards in providing services associated with preservation, protection and fruition of archive material. The present Thesis, within the Cultural Heritage context, investigates dynamics and modalities of archive material preservation, fruition and exploitation. The research is part, with an innovative approach, of the broader debate on direct and indirect preventive preservation of document heritage, exploring for the first time at national level the consequences of AS/RS (Automated Storage and Retrieval System) application in archives. The combination of conservative issues associated with archives discipline and innovative issues associated with automatized technologies places the research within an experimental interdisciplinary scenario. The Thesis is mainly aimed at defining an operative framework able to provide designers and archivists with useful indications for implementing AS/RS systems for use in archives. By adapting the storage structure to peculiarities of archives containing and preserving writing supports, it is actually possible to reduce the risks associated with document automatic handling, to improve the heritage fruition modalities and to implement the saturation capacity of storages, fully respecting values and ranges of temperature and dampness appropriate for document preservation. Besides, AS/RS systems allow to cancel the age-old opposition of preservation versus fruition, hence enabling Archives to pass from a product-oriented approach, characterized by an excessive document protection, to a customer-oriented approach, aimed at meeting users’ requirements and needs. Main target of the Thesis is identifying a series of actions focused to enhance users’ fruition demand of supplementary services in order to produce additional income to governmental funds to be invested in exploitation activities of archives heritage preservation and protection. Subject complexity and experimental nature of research are treated by subdividing the work into three sections. The first is devoted to understanding the reality of archives in modern society. Constituent and developmental structure of archives, meant as an organic complex of documents, is described as well as the internal organization of archives, meant as an Institution. Hence engineering professionals are provided with a careful and precise overview of the path the documents have to follow to become part of archives heritage and the activities to be undertaken to ensure an appropriate management of collective memory. The second section studies automated systems for storage and retrieval of bibliographic material, currently called AS/RS. Then, consequences of application of such systems on management and organization of library storage are analysed as well as possible implications for use in archives. Reading of paradigmatic cases allows to draw a developmental path of AS/RS technology application in libraries. First, Thesis reports the first attempt made in Italy to use AS/RS systems in a library storage (Bologna University Library). Then the evolution of AS/RS system is investigated focusing on mass-customization panel of heterogeneous and multisectorial experts: hence the multidisciplinary approach of the present Thesis. Finally, upon the application-proposal stage, marketing traditional principles and tools have been introduced in the archives management strategy. Therefore, the conservative approach could be replaced by a fruition approach that considers Archives as a subject producing economic resources to financially support actions exploiting the institutional functions entrusted by the Legislator.
META MODELING FOR THE CONSERVATION OF THE CULTURAL HERITAGE


Emad Hani Ismaeel

Making decisions for adopting the appropriate tool that offers the precise outcomes to successfully manage the broad range types of documentation, information and data bases related to procedures of long-term conservation of cultural heritage activities is become very difficult due to multiple technologies, techniques, and tools involved in such processes, their objectives, in the process of tackling such difficulty, stakeholders impact models can compromise stakeholder objectives and lead to costly design repetitions or entire failures. Planners can overcome these problems by placing meta modelling approaches for representing and investigating the knowledge during procedure decomposion and definition. The necessity for a common language for exchanging information between modelling tools lead to think about the modelling objects, which represented by meta models.

The urgent requirements of resolving protection problems of present situation of Iraq cultural heritage need comprehensive and sophisticated approaches. The Old City of Mosul (OCM) as a case study suffers from urban deterioration resulted from long negligence which led to the ruining of buildings; that might cause a loss of the cultural and traditional position the city represents as it is considered one of the important cities among Islamic and Arabic cities. The research attempts to study the issue of the documentation, representation, protection of the cultural heritage in Iraq, and in more details, undertakes OCM as a special case study to focus on documentation and conservation. In this research, Meta-modelling approach is proposed to suggest a general framework of forming a concept to define, explore and analyze the required data for creating various models of documentations for different actors, participants and stakeholders involved in the conservation field. Meta modelling is a precise definition of the constructs and rules needed for creating semantic models. It is very good at abstracting from lower-level details of integration and interoperability, and help in partitioning problems into orthogonal sub-problems of conceptual data, physical data optimization, and control flow. In this respect, Meta models are an ideal helper for complex related projects. The accurate identification of the objective could be the guide of the documentation process, and gives the surveyor the motivation to provide further information by using the same techniques, or by using other technologies that provide additional interesting data to fill the gap in the final results. The constraints and the main conditions associated with the process of surveying at all various aspects should be identified, and determining what can be passed or overcome through the accessible proposals and the alternatives, both hands of tools and technologies, laws and legislation, or on the finance and administration. To highlight the role of stakeholders in the process of decision making by meta models, the main features and their relationships should be defined. An instrument must be created to facilitate the process of tackling such difficulty in the decision, that herein, by meta models, acceptable and satisfactory results can be achieved to most parties, if not all of them, through analyzing all the components inherent in the maintaining process including the goals of the participants and their expected results. Capturing manageable documentation is especially important in large-complex activities because the framework in which key decisions are made will be misplaced when different actors are engaged in different aspects of the conservation process; critical mistakes are commonly made in formulation and resolution of decisions, but they are often unnoticed in the absence of a comprehensive managed documentation. By creating a meta model for the project, the fit between the project requirements and the characteristics of a standard could be evaluated. The meta model is to be used at an early stage of a standard implementation project and aims to facilitate early problem identification. Meta model is an effective tool in identifying and detecting conflicts or intersections points of partnership between the members, and it is usually used efficiently in projects that include multiple decision-making. Successful collaborative activities require a co-evolution of personal understanding according to the changing circumstances of the documented object, that is documenting a city other than documenting a monument building, which also differs from documenting an element of a historical building. It also changes depending on the time inherent in the process of documentation, since what was appropriate yesterday is not enough to the process today, what is suitable in the present would be inadequate for future. It will also vary due to the objectives and targets, that documentation based on defining the constructional situation of the building differs from what is used to define the architectural elements of the structure, which as well differs from that is used to determine the typology of the building or for monitoring and managing preservation activity.

The integrated meta model should be certified against the questions noted in the individual opinion specifications and against the opinion relationship plan, to guarantee that all goals of stakeholders and information requests are encompassed. Consequently, meta models can be created at the same time that reflect the interests of multiple stakeholders. If planners cannot efficiently manage project complexity, they might overlook important project details and dependencies. Mistakes can compromise stakeholder objectives and lead to costly design repetitions or entire failures. Planners can overcome these problems by placing meta modelling approaches for representing and investigating the knowledge during procedure decomposion and definition. The necessity for a common language for exchanging information between modelling tools lead to think about the modelling objects, which represented by meta models.
Over the past decade there has been an explosion in the deployment of pervasive systems such as cell phone networks and user-generated content aggregators on the Internet that produce massive amounts of data as a by-product of their interaction with users. This data is related to the actions of people and thereby to the overall dynamics of cities, including how they function and evolve over time. Electronic logs of cell phone calls, subway rides, GPS-enabled buses, and geotagged photographs are digital footprints that today allow researchers to better understand how people flow through urban space, and could ultimately help those who manage and live in urban areas to configure more livable, sustainable, and efficient services for the valorization of Cultural Heritage.

The urban landscape in all its complexity and diversity is now being investigated and understood through a new set of urban actors that allow us to gather increasingly detailed, widespread and dynamic information. Using information gathered from smaller urban actors, such as cell phones, Bluetooth, RFID and others, we are able to generate representations of dynamic localized flows. Overlaying these representations onto traditional maps offers insights into human social behavior, as it reveals people’s activities in terms of both place and time. The process of collecting, monitoring, modeling and creating/synthesising services is described briefly in the image (Fig.1).

The digital footprint refers to a system of monitoring an urban area directly from activities of its population; with spatio-temporal observations it is possible to develop an interface for viewing the information collected. This exploration of the data includes a spatial distribution of the population over time yet fails to identify the cause and effects of certain outcomes, for example the reactions of people to special events. From the density and the population movements we are able to define urban indicators (indices of attractiveness, similarity, popularity and connectivity). One of the most promising features of urban actors is its sensing ability. Sensor abilities are currently diffuse; they measure detailed location information, physiological variables (heart rate, galvanic skin response), or activities (accelerometers can be used to distinguish walking from running or sitting). In the near future, however, we will likely witness a convergence of these abilities into one sensor. The cell phone is the best candidate to realize this convergence, as it works at the center of everyday life, interconnecting local sensors with collective services. The mobile phone is the new gateway to people-centric urban sensing, a new sensor-networking paradigm that leverages humans as part of the sensing infrastructure. Each device can capture, classify, and transmit many types of data with exceptional granularity. The perfect platform for sensing the world is already in our hands and houses an increasing number of built-in sensors: ambient light, orientation, acoustical, video, velocity, GPS. These sensors and an increasing number of others in mobile phones present new opportunities for defining places; ambient sound, light, and color convey a photographic-acoustic signature. In-built accelerometers in some phones may also be useful to infer broad classes of user motion, often dictated by the nature of the place. By combining these optical, acoustic, and motion attributes, it may be feasible to construct an identifiable fingerprint of the place.

The digital skin (Fig.2) is the sign of human presence in the digital dimension, media façade that write the map of implicit interaction in the real dimension. These anthropic elements embody the aesthetic vectors essential to the transformation of digital environment into landscape. Urban space and cartographic space are inseparable: starting originally from rudimentary grids and later aerial perspectives to burgeoning digital mapping technologies of today, the cartography of urban space is always an important component in people’s mental map of the city. The map has become a popular interface in illustrating data sets drawn from our increasingly digitally-enabled urban infrastructures including GPS, cell phone networks and other objects equipped with radio frequency ID tags. The purposes behind these types of visualizations vary from purely artistic endeavors to traffic monitoring to uncovering emerging patterns of urban activity.

The Real Time Copenhagen project (Fig.3) aims to adapt a common format for interchanging real-time location-based data and a distributed platform able to collect, manage and provide such data in real time. In this way, the city’s most informative real-time map can be created, letting users broadcast their location and have site-specific information pushed on them per request. Real Time Copenhagen can be divided into a number of manageable channels (layers) such as mobility, events, GPS and aggregate information. Instead of implementing the project with a top-down approach, e.g. the definition of standards, we consider a bottom-up approach in terms of a case study that allows for experimenting with the platform.

[Images of digital footprint, spatio-temporal observations, and urban indicators are shown as part of the text.]
THE SCIENCE AND TECHNOLOGY PARK PST AS A STRATEGY FOR THE ENVIRONMENT AND TERRITORY HERITAGE VALUE IMPROVEMENT WITH A SUSTAINABLE APPROACH

Maria Giovanna Romano

The research moves its actions in the theme of the strategies in value improving for the environment and territory, at a local level and with a sustainable approach. Particularly, the infrastructure’s project sector is the key element on which the PST was introduced, as a kind of infrastructure acting as the engine of the processes in revaluing and developing the territory, because it creates value and knowledge, spreading the culture in the area.

The work make a proposal for a new approach in the methodology of the definition of some parameters with which it is possible to evaluate the value of an infrastructural project with aim to increase the value of the territory.

The globalization process has generated many important changes in the world economy and asked to city and territories to be into a competitive approach in order to increase the value of their resources, becoming enterprise of their own. The PST has been analyzed under a new point of view, as an net of enterprises operating in a wider district in a system of cooperation between different subjects with the aim of reinforcement and diffusion of new business activities in their area; as a market reference on the entry/use of technologies and services by all the actors/subjects involved in the innovation project: universities, research institutes, enterprises (local, national and international), financial institutes and the local territory on which they can be installed.

Under this optical lens the Park becomes an Innovation System for the Territory, an organized system including subjects and processes acting to organize an innovation stream reinforcing the competitiveness of the enterprises and the develop of the area’s systems. The synergies inside the territory can generate the base point factors and resources in order to activate a technology transfer and to reach a competitiveness and sustainable economic status. The concept of industrial, technological and cultural districts is used as process strategy for the re-evaluation of the territory, to encourage the use of integrated projects instead of localized actions and to identify a system that, starting from the district point of view, could put in place value improvement actions. This also reinforces the link between the cultural industry and the other industrial sectors in the same area.

It is necessary to address all the projects concerning the territory at the common aim to increase the value of the parameters related to the area. The values, defined as “value added of the territory” are the starting point for the sustainability development. The value added given to the area is the durable wealth added to the territory affected by the project. The success of a project, whatever defined, in giving or removing the value from an area by the human activities and is the same subject who will get the benefits or disadvantages from them.

From literatures and case studies it has been defined a numbers of parameters measuring the success of a PST. The success of a Scientific park is linked to the mission is carrying out, particularly on the part related to the value added it is going to give to the territory on which the park is located.

This approach come from the definition of a PST as an infrastructure influencing the values’ parameters of the territory. The assumption is that the good performances of the park mean success on the territory through the analysis of the level of achievement of the results planned and the corrective action in order to guarantee the success.

The success of this methodology come from the identification of concrete, achievable and measurable goals. In this application the goals come from the value added given to the territory through the infrastructure of the park. The role of the PST become a catalyst between the public and private resources, the facilities inside the park and over the park, the universities, the authorities at the different levels and social associations in the processes of creation, diffusion, learning and application of the new knowledge. They are structures that can reproduce the special conditions that permit the creation of realities like the industrial districts, and the territory affected by the installations become a common asset between the new enterprises and the public authorities.

The project involving the city of Milan in occasion of the Expo 2015 will include a deep urban regeneration process further the launch of a series of architectural projects in the aim of recovering dismissed areas and will reinforce the infrastructural system, with the renew of the city image. The aim has been to study the entire process, highlighting the main critical issues and identifying a potential scenario on which the output could be the installation of a science and technology park: a tool of re-evaluation of the area in the post – expo time. The heritage of a Mega Event is never accurately defined, and the literature demonstrated how some of them don’t leave positive effects on the territory. It could be interesting to perform the check list for a generic infrastructure, like a road, to highlight how the science and technology park definition is close to the definition of an infrastructure and how a generic infrastructure can be seen like a tool of evaluation of the area on which it is going to be located, not just a link between A and B with negative effects on the area which is passing through.
The research is an attempt to map the contribution of project culture in the specific branch of cultural goods of religious interest: the churches of modern times in the diocese of Milan between the 1950s and the 1960s. The research is based on the hypothesis that the elements of design and architecture can be both the object of the development of cultural goods and a tool for the development of the development of this last. The contribution of project culture has been summarized in the expression “sacred design”, by which a complex of goods is meant: they have a double status, both material and intangible that connotes all the artifacts that “participate” in the practice of Catholic religion inside the building “church”.

The singling out for each church that has been taken into consideration during the analysis, of a group of ambits to be valued such as architectural elements, liturgical furniture, art works and handicraft works, has been useful to formalize a content platform to testify the context in which the cultural good has settled (its social and territorial capital).

The design elements above mentioned are no longer only structural or functional elements, or artifacts that belong to the category of cultural good for juridical and aesthetical reasons but they present themselves as artifacts that supplement the emotional and relational fruition of the good itself. Five fundamental stages have been scheduled for the research path: the study and comprehension of what is today the role of the culture of project in the improvement of cultural goods; a research to limit the discipline field where to place the profile of a cultural good of religious interest; a survey tied to the twentieth-century events among disciplines like architecture and applied arts and the study and application of liturgy; an historical analysis of the social and religious events that involved the diocese of Milan after the Second World War with reference to important events from the historical and cultural point of view such as the reconstruction after the Second World War, the Second Vatican Council, the architectural debate, the birth and development of the design masters; an analysis of five case studies considered paradigmatical for the project authorship, for the presence of a shared literature, for the relation with the context - intended as religious community, manufacturing tissue (companies, craftsmen, etc.), training system (art schools, universities, etc.), institutions (local and public authorities, museums and foundations, etc.) – and finally for the presence in tourist-architectural itineraries and in the circuits tied to the tourist-religious communication.

A particular interest was dedicated to the concept of a cultural good as a relational good; to the identification of goods in terms of value of use, exchange and relation since when a good has a value of use and of exchange, it is a cultural incurring valued good (Celaschi, 2007); and finally to the theory of optimum experience (Inghilleri, 2005).

A special importance was devoted to this last aspect also for the closeness of the described experience to the one that was the object of my research, that is the experience accomplished by getting in contact with a cultural good of religious interest.

The development of the concept named emotional intelligence (consciousness of feelings, comprehension of non-verbal behaviours, capability to catch the affective resonance from environmental stimuli) is such in meaningful spheres. The optimal use of cultural goods foresees the rising of experiences possessing a subjective sense and a belonging of the relation with the cultural good. Moreover, this process identifies in design expressions some elements that promote and start the subjective identity and the cultural one of the community.

My action protocol has been based on the deepening of this approach and on the one linked with strategic design, in particular with the capabilities put into the field – “to absorb, coordinate and combine” (Zurla, 2006) different information and contents in order to justify design when undertaking researches that are usually a prerogative of ethnological subjects, of social sciences and of semiotics and less of disciplines of culture of project.

In this phase the choice of Milan and its diocese as a reference point has been a paradigmatical option exactly for the remarkable concentration of cases of relations among religious assignors, the designers and the reference communities that have carried out in a more or less conscious way many processes of shared projects. The comprehension of many themes that are developed in modern sacred design has been useful both to trace the differences that characterize different authors and approaches and their spontaneous in the vision of architecture and design, and also (and above all) to make clear the different aspects that contribute in creating the modern idea of designed “sacred”.

In the beginning the analysis of case studies has carried to the singling out of development spheres tied to the historical-artistic branch of architectural artifacts and of other artifacts realized by the designer for the civil and religious functioning of the building.

It has been a direct analysis if considered according to the questioned sources during the research and referable to the main criteria for the case selection.

My research has been based on the development of these aspects by trying to identify the presence of a template of shared design, to outline the borders of the projects if they are present in order to make clear which ones could be the spheres of value development of a certain cultural good of religious interest and the guidelines that the culture of project could integrate in the development process of the good itself. A separate chapter is devoted to Chile and to Santiago because the city has been living many similitudes in the same years of the main reference context of my thesis (Milan in modern years).

Churches have been built and in them the interior design has an aesthetic and formal value, a functional and liturgical one and it is the main expressive element of a community that is the beneficiary of the building but especially sees in the church the tridimensional restitution of its spirituality, of its being a new urban unity and a new actor in the city geography.

Both in Santiago de Chile and in Milan and its neighbourhood, the new built church is a theatre where the community life is performed. The architecture and design were tools to build this theatre and nowadays, after fifty years, they are also cultural goods for the public jurisdiction but most of all they are builders of conditions to communicate, to set a value development strategy that is based on a panel of new elements: historical in their meaning, new in their signifier, innovative in their communication performance. As a consequence, the research is not only an historical survey but it also describes which can be the potentiality of the historical relation between the project culture and the sacred in Milan context and partially in Santiago one. The potentiality can be noticed in the translation of a church first of all in a cultural good of high relational value and secondly of an unquestionable concentration of historical-artistic-architectural value expressed in multiple ways.
DESIGN OF CULTURAL HERITAGE FOR VALORIZATION AND INNOVATION OF GOLDSMITH SECTOR IN ITALY

Vanni Scolozi

This research focuses on the theme of jewelry and goldsmith as an heritage that needs to be preserved and valorized. The culture that characterizes the world of jewelry is deeply concerned with the universe of traditions and knowledge that is typical of a specific territory and of the society that lives it.

Ornament, in fact, can be intended as a system which is able to give sense and value to a society. It can be viewed as an instrument that carries on the identity of the user, who tends to wear ornaments in order to express his personality to the outer world, together with social status and cultural background.

If we translate this concept from the single to the collectivity, it is possible to state that in a specific social system the act of wearing jewels becomes an expression of cultural identity. Though a codified system of shapes, signs and symbols, the ornament becomes an indicator of social distinction, context. But jewels become also values, and cultural instances of taste, giving meaning about the universe of jewelry, in fact, can be considered as cultural heritage; because of its capability on describing both the specificity of a territory and the social system which had grown on it.

Considering the specificity of this sector in Italy, this is traditionally characterized by his structure related to the territory. This organization can be viewed in large scale, an in the case of industrial district, but also in small scale, thinking about material and techniques that are typical of a specific place. In details, together with the industrial gold district – Arezzo, Marcianise, Valenza e Vicenza – is possible to recognize specific traditions linked to some materials and some techniques, which, especially in the past, had characterized the specifications of some territory. In some cases they’re still able to give sense to the typical culture of a site. For instance, coral manufacturing in Torre del Greco, near Naples, granulation in Tuscany area, filigree in Sardinia, represent the traditional excellence in Italian gold manufacturing and goldsmith. This is a challenge for the projective disciplines, as design, to start thinking about actions focused on the preservation of those important traditions and more, trying to make the strong culture in Italian manufacturing available to the collectivity.

From this point of view goldsmith traditions seems to represent an appropriate instrument to catalyze the identity of specific territories and areas. So Italian jewelry can be considered a cultural heritage describing the various scenario of local traditions and cultures which are able to well express the typical spirit of excellence that characterized Made in Italy.

For this reason Italian jewelry sector is considered as a cultural heritage describing the various scenario of local traditions and cultures which are able to well express the typical spirit of excellence that characterized Made in Italy. For this reason Italian jewelry sector is considered as a cultural heritage describing the various scenario of local traditions and cultures which are able to well express the typical spirit of excellence that characterized Made in Italy.

1. Serial Production
Although industrially setted, those production still maintain an artisanal character, especially in the final steps as finishing, gem setting and polishing. The principal jewelry districts in Italy are located in the cities of Arezzo, Valenza, Vicenza and Marcianise. Each one focusing on specific kind of production.

2. Traditional Goldsmith
Craftsmanship and handy skills survive in the regional ornamental traditions, like the filigree in Sardinia or the coral engraving in Torre del Greco and Sicily. For those production is possible to recognize a regional peculiarity in the use of specific materials and techniques.

jewelry sector in Italy can be considered as a cultural heritage especially concentrating on the immaterial value of those different production as well as by focusing on the relation which takes place between a productive system and the local territory in which it takes place. Research ends with some guidelines that should help any further project in order to clarify those characters which mostly need innovative actions in order to solve most part of the urgent problems that afflict the whole sector. First of all a project which involves traditional craftsmanship: by creating a D.O.C. mark for the artisanal production, is intended to give tradition a chance to vivify its power trough a path of operations and actions which are intended to recognize and increase their value. Then a guide to develop a project for all those enterprises that suffer a critical status due to external problems like the entrance of the big brand of luxury and fashion in the sector, as well as internal structure problems like the reduced dimension that characterises most of the companies.

In the end the research intends to introduce to the discipline of project the world of goldsmith and jewelry by creating a join with the scenario of cultural heritage, in order to demonstrate that both handy tradition and serial production can be considered part of the excellence that face out Made in Italy and it’s important heritage.