

Sculptural reproduction of architectural ornamentation as a way for conservation of traditional craftsmanship

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Abstract

Traditional craftsmanship as a part of intangible cultural heritage needs to be conserved as defined in the UNESCO 2003 Convention and Living Human Treasures System. In architecture, traditional craftsmanship is embodied on architectural ornaments in historic buildings by local builders; and the conservation of it necessitates its transmission process from generation to generation. In the traditional building production period, the transmission process had been guaranteed by master-apprentice relation, but nowadays, it has been interrupted together with the drastic change in building technology; and the knowledge, skills of building craftsmen and cultural expressions This creates problems both in the conservation of traditional craftsmanship in building activities and in the restoration process of historic buildings. This study aims to develop a specific conservation approach by revitalising the methods of study of building craftsmen through the reproduction process of architectural ornaments in monumental stone buildings by sculptures in the Faculty of Fine Arts in Selcuk University.

Keywords: Traditional craftsmanship, architectural ornamentation, reproduction, intangible heritage, conservation.

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1. Introduction

Traditional craftsmanships in traditional environments are completely the products of the master builder's knowledge and creativity in using local building materials and handling environmental features. In this regard, their conservation and continuation in modern building technologies is directly related to the sustainability of the activity of masters in historic environments, which has mainly been sustained in master–apprentice relationships for centuries. Together with the dramatic changes in building technology in twentieth century and especially with the introduction of reinforced concrete construction system, the natural continuation of the local building traditions in historic environments has got difficult.

Traditional craftsmanship is a part of intangible cultural heritage of humanity to be conserved as pointed in the UNESCO 2003 Convention (UNESCO, 2003). Today, the cultural heritage of humanity is accepted as a whole composed of intangible cultural heritage like traditional craftsmanship, social practices and performing arts besides tangible heritage like buildings. Accordingly, an accurate and holistic conservation approach for historic environments and buildings necessitates developing the ways for the conservation of traditional craftsmanships as well as physical conservation approaches.

UNESCO established specific convention for safeguarding intangible cultural heritage in 2003 to outline the scope and content of heritage and general identification and conservation ways like transmission and revitalisation; and a Living Human Treasures Systems for conserving craftsmanship, organising craftsmen and transmitting their knowledge to new generations. These general approaches are also valid for traditional craftsmanship as a part of intangible cultural heritage. But, they need to be developed more and diversified for different cases. UNESCO 2003 Convention described the intangible cultural heritage with all its dimensions related with the different disciplines and also explained safeguarding measures such as 'the identification, documentation, research, preservation, protection, promotion, enhancement and transmission particularly through formal and non-formal education as well as the revitalisation of the various aspects of such heritage'. In the safeguarding of intangible cultural heritage, the continuity in carrying out cultural practices and their transmission for next generations possess a critical importance. In this respect, supporting the traditional ways of building practices which are continued by the local building masters is a necessary measure for the conservation of 'traditional craftsmanship'. UNESCO Living Human Treasures System¹ is a significant way for organising the masters and transmitting of their information on the traditional techniques, skills and meanings. UNESCO encourages all state countries to nationalise the general principles in Living Human Treasures System by filtering through their local characteristics.

This article presents such a kind of an adaptation of these general rules to the local conditions in an educational institution focusing on a specific conservation course about traditional craftsmanship in the department of sculpture. Throughout this specific course, the similarity between the techniques of traditional craftsmanship embodied in architecture and sculpture is investigated to reproduce the architectural ornamentation of monumental stone buildings by sculptor students throughout the studio work.

2. Traditional Craftsmanship and the Activity of Masters in Traditional Architecture in Anatolia

Anatolia has a long building tradition, which has constituted by various contributions of different cultures and continued for many years, and embodied on the variety of the traditional buildings in historic environments. Anatolia's historic environments have been produced by the handling style of builders' of the local specifics, which are created by the mutual interrelations between environmental factors and cultural practices and expressions (Karakul, 2011, 2015). The diversity of local building

¹ See the website of UNESCO Living Human Treasures Program, <http://www.unesco.org/culture/ich/index.php?pg=00061&lq=EN>

cultures has been generated by the traditional knowledge and the skills of builders transmitted by the master–apprentice relationship from generation to generation. Actually, local building culture is constituted by the production process of the traditional buildings as a communication system between craftsmen and apprentice and inhabitants (Marchand, 2007). Traditional buildings representing local building culture are the products of a complex process through which builders handle environmental characteristics and the needs, expectations and values of local people by their skills and know-how and express their creativity.

Besides traditional dwellings, Anatolia also has a huge number of still standing historic monumental buildings like mosques, madrasas, khans and caravansaries, which were mostly built in Seljukid and Ottoman Period, embody the symbolic messages of rulers to be given to society shaped under the hands of master craftsmen. Monumental buildings from Seljukid Period had been constructed as a part of a continuing building tradition formed as a synthesis of different cultures, under the effects of Greek, Roman, Persian and Mesopotamian art (Arseven, 1952, p. 2069). The buildings include a great variety of architectural ornamentation made in different techniques like carving-out or relief, and different materials like stone and timber by the collaboration of building masters and artisans. Especially the monumental buildings constructed in Seljukid Period (1071–1296), specifically, madrasah, caravansarayies, khans, display a great variety of the embellished building and architectural elements carved from stone. In Seljukid Period, monumental buildings were designed like as a sculpture as a whole, and especially portals and certain architectural elements were decorated with a great variety of geometrical and floral motifs.

Using their mental schemata organised related with culture, traditional building craftsmen produce original interpretations for various problems determined by users and environmental factors. Bringing building materials to construction sites, and after processing, putting into their place in the building, techniques and tools particular to this process are some of the physical works carried out by craftsmen related to his technical skills (Bingol, 2004, p. 22; Blagg, 1976, p. 154; Marchand, 2007, p. 182). On the other side, expressive needs are related to ‘mental representations’ (Marchand, 2007, p. 191) and the process in which the design process organised in the mind of craftsman is conveyed to the physical characteristics. The expressive aspects of craftsmanship are the reflection of the cultural values, values judgment and worldview of builder and society and at the same time, it also includes the individual diversities and creativities (Aran, 2000, p. 122).

Folk design method is carried out exclusively in the mind of builders and continued by tradition—the handing down of information by word of mouth, observation, replication and apprenticeship. Certainly, the transmission of the knowledge of masters to their apprentices has assured the continuation of the local building tradition in historic environments. Today, this transmission system has been degraded because of the drastic changes in building technology and the activity of master craftsmen in new technology has been diminishing. Therefore, as determined in the legal documents of UNESCO, it is necessary to document traditional craftsmanship and seek specific ways for the revitalisation of the master–apprentice relationships in building cultures. This article evaluates the relations between disciplines of architecture and sculpture and the similarities between the methods of work of sculptors and building masters to define a new domain for conservation and revitalisation of traditional craftsmanship embodied buildings.

3. Relations Between the Disciplines of Sculpture and Architecture from the Perspective of Conservation

Until the Renaissance Period, sculpture which had mostly been created to express certain political and religious meanings had been an integrated and organic part of architecture (Karaaslan, 2005, p. 290). Sculptures which had dominantly represented religious beliefs and political power have mostly been used to ornament buildings as reliefs; and sometimes have been used as a functional structural element as column. Actually, in Antique Greece and Roman Period, there were not any sculptures created as independent from the buildings. Sculpture in Antique Greece had been created as a

structural member or to embellish architectural elements of the buildings; and can be called as 'architectural sculpture' (Ridgway, 1996, p. 2). Throughout the Greek and Roman Period, sculpture had mostly seen as an element depending on architectural space, and had mostly been used for ornamenting architecture, except from *Caryatids*, a sculpted female figure serving as an architectural support taking the place of a column or a pillar supporting an entablature on her head located in the Temple of Erechtheion on the Acropolis of Athens constructed between the years of 421–405 B.C.E.

Through the Renaissance Period, the religious and political meanings attributed to sculpture disappeared and the location of sculpture within the sacred buildings started to change to interrupt the intimate relations with architecture (Karaaslan, 2005). Actually, sculpture started to define its own space and to be an element organising its environment after the end of the Renaissance Period (Tanyeli, 1194). As an element organising space, sculpture was firstly used by Michelangelo placing his sculpture of Marcus Aurelius at the centre of the Campidoglio Square in Rome. Until 1950s, the function of sculpture as a spatial focus continued through the different architectural approaches (Tanyeli, 1192). Today, like as architecture, sculpture can also create its own space, and be as an element forming a changing spatial perceptions with regard to the movability of its own and its viewers besides continuing the examples of sculptures attached to and dependent with architecture (Tanyeli, 1192).

Interrupted relations between the disciplines of sculpture and architecture can be revitalised by understanding their organic and integrated relations through Archaic Period. The harmonious relations between sculpture and space can be achieved by creating their integrity (Senyapili, 39). Sculpture needs to be an integrated part of architecture, not to be used as a decoration to achieve a harmonious whole.

With regard to structural obligations, like three-dimensionality and the priority of volume, sculpture is the art showing the most similar characteristics with architecture (Kuban, 2012, p. 59). Actually, the disciplines of sculpture and architecture also exhibit similar characteristics on the methods used through the process of producing a finished product (Rockwell, 1994, p. 89). Throughout history, architect, building craftsmen and sculptors have used similar techniques and methods in handling various materials like stone, timber and creating their works. This similarity in techniques and skills can be evaluated as a way to participate sculptors into the restoration process of the monumental buildings. This study intends to revitalise the intimate relations of sculpture and architecture focusing on the ornamentations of monumental buildings.

The conservation process of architectural heritage is a multidisciplinary area in which the conservation architect works with the people experienced in conservation from different disciplines with regard to the quality and problems of cultural heritage (Karakul, 2015). Representing one of these disciplines, building masters have significant roles in restoration activities besides the production of traditional buildings. Nowadays, the building masters experienced on traditional techniques cannot be easily found; and we are confronted with the disappearance of the knowledge related to traditional construction techniques. Therefore, during the restoration works, a variety of problems appears related to the implementation of traditional construction techniques. From this respect, the documentation and transmission of the knowledge and skills of the traditional building masters is critical for the conservation process of historic buildings.

This study presents a specific educational programme in the department of sculpture to document the architectural ornamentation as the product of building masters and artists arising from the similarities in techniques and materials between the disciplines of sculptors and traditional craftsmen.

4. Revitalisation of Traditional Craftsmanship Embodied on Architecture in the Department of Sculpture

Conservation of traditional craftsmanship needs to transmit the diversity of local building cultures to the next generations. Therefore, certain safeguarding measures for conserving local building

cultures and their enactors, master builders, need to be integrated in conservation studies. Considering the UNESCO 2003 Convention and UNESCO Living Human Treasures System and Turkey's local conditions, conservation proposals for the sustainability of traditional craftsmanship can generally be grouped under five titles: documentation, raising public awareness about local building technologies, educational programmes, the organisation of masters, active participation of masters to building and restoration activities.² This paper mainly focuses on the educational programmes to revitalise the master's working methods which has formed through tradition in long years. In this respect, this paper mainly focuses on a specific conservation course designed for revitalising the methods and techniques of masters by the students of the Department of Sculpture in the Fine Arts Faculty of Selcuk University.

4.1. A specific conservation course in Department of Sculpture: Restoration of stone buildings

In the Department of Sculpture, Faculty of Fine Arts, Selcuk University, to regenerate the methods of the Anatolia's master craftsmen of the traditional buildings, a specific conservation course has been given by the author of this paper, a conservation architect, since the fall semester of 2011–2012 academic years. The aim of this course is mainly to raise the general awareness about the conservation of the historic buildings among the students of sculpture. It is intended that students need to understand the significant role of sculptures in the construction process of historic buildings during history, the similar aspects of the working methods of sculptures and building craftsmen, particularly, on making architectural ornaments; and to raise awareness about their probable roles to play in the current conservation and restoration works of historic buildings, and the conservation problems of sculptures and historic buildings. The course mainly consists of theoretical and practical sessions.

4.1.1. Theoretical session | Lectures | Monumental buildings in Anatolian Seljukid Period

Lectures were prepared especially for raising the general awareness of the students on the historic monumental buildings with regard to their design, construction and restoration processes. Therefore, initially, in the theoretical session of this course, the relationships between architecture and sculpture through history were explained with the specific examples of historic buildings, especially the ones with stone architectural ornaments from various architectural periods. In this session, Greek, Roman, Byzantine, Gothic, Romanesque, Baroque, Seljuk Period and South East Asian Architecture are discussed to make students understand the interrelations between architecture and sculpture. In addition, the traditional methods of master craftsmen of buildings and sculptors are comparatively discussed through this lecture stage. Secondly, the conservation process of historic buildings is discussed in depth, especially focusing on the significance of the conservation of architectural ornaments, especially, their reproduction and completion and the potential roles of sculptors through the restoration process.

Through the theoretical session of the lecture, the general characteristics of the architectural ornamentation of monumental buildings built in Anatolian Seljukid Period was also investigated in depth to understand the buildings to be studied, specifically, Ince Minareli Madrasa, Karatay Madrasa, Sircali Madrasa and Sahip Ata Complex. Due to their similarity in function, all four buildings share common characteristics considering their architecture and architectural ornaments because of the proximity of their construction date in Seljukid Period (Eleventh to fourteenth century) as explained above.

The architectural ornaments on the monumental buildings constructed through the Seljukid Period embody various meanings and symbols of their period and the traditional building culture. The stone carved ornamentation of this period is mainly located on portals, windows and niches, corner piles,

² These conservation proposals were discussed in depth by Karakul (2012) in the ICONARCH 1, International Congress of Architecture-I, 15–17 November, Konya

the facades and *mihirabs*. Portals are the most significant architectural element considering ornamentation. The most important Seljukid contribution to the building culture of Anatolia is figural stone decoration. The patterns of ornamentation, which can be used separately or together, are mainly geometrical, floral motifs, figures and calligraphy (Ogel, 2002). Among the decorative elements of geometrical and natural motifs used, besides the animal motifs, such as the lion, eagle and snake, there are also a great variety of floral motifs, such as palmette, lotus and acanthus; and also, dragon and human motifs. The stone carved ornamentation on the buildings is made by two different ways, as interlacing or independent ways. Especially geometrical ornamentation is mainly based on the combination of basic shapes, like square, circle or rectangle, in an interlacing manner. Besides geometrical ornamentation, floral and calligraphic ornamentation could also be done in an interlacing manner. The style of interlacing of different motifs creates an infinity effect, symbolising ‘the infinity of universe’ (Sagona, 2006) and ‘continuity as their beginnings and ends are not clear’ (Ersoy, 2008) in the pattern of ornamentation over the viewers.

4.1.2. Practical session | Site surveys and studio work

The practical session of the course starts with a site survey. In 2012–2013 fall semester, during the survey, four Madrasah buildings constructed in Seljukid Period in Konya were deeply investigated to obtain information to be used for the different processes of the session, specifically, documentation, analysis, reproduction and reinterpretation. Among these processes, the documentation process was carried out during the site surveys; and the other ones were carried out through the studio work. From documentation to reinterpretation, students start with the objective studies like literature search, the preparation of the sketches of the studied building and photographs, and proceed in to the subjective studies by using their interpretation and creativity.



Figure 1. Ince Minareli Madrasa
(Source: flickr.com)



Figure 2. I Karatay Madrasa
(Source: flickr.com)



Figure 3. Sircali Madrasa

(Source: <http://88.255.225.23/dosyalar/gezilecekyerler/>)



Figure 4. Sahip Ata complex

(Source: www.meram.bel.tr)

Documentation: The documentation phase includes literature survey and site survey. First, within the scope of literature survey, the monumental buildings from Seljukid Period, specifically, Madrasahs of Ince Minareli, Karatay, Sircali and Sahip Ata Complex, were investigated with regard to their history, construction process and material use. Throughout the site survey, students visually documented the buildings with photographs and sketches and determined the unit of architectural ornamentation from the facades, especially portals, to be reproduced and reinterpreted for making a sculpture work. To scale photographs, the selected units of the architectural ornamentation on the portals on the main facades of the buildings are accurately documented by using tape measures by the students. In this first phase, students are expected to understand the architecture of building and to grasp the architectural ornaments with all motifs included, their location and significance on the building. They are also expected to comprehend the specific techniques and methods of stone masons used for producing ornamentation; and compare their methods learned through their previous courses taken in stone carving until today.

Analysis: In the analysis phase, students are primarily expected to define the constituents of the architectural carved ornaments, specifically, motifs on the portals studied clearly and to evaluate the architectural style of the buildings considering their ornamentation within the Seljukid architecture. In this phase, students certainly determined the unit of ornamentation to be reproduced; and decided its content and clear dimensions. Reconsidering the information obtained from the documentation

phase, literature survey on the building and the quality of the ornamentation on the portal, like geometrical or floral, the complexity of motifs, they decide the materials, techniques and tools to be used for the phases of reproduction, reinterpretation and design. In this phase, students generally came to their conceptual decisions about the form, dimensions of ornamentation and materials, tools and techniques to be used especially for the reproduction phase by reconsidering their experiences gained through the previous courses taken and site surveys.

Reproduction: This phase is mainly composed of the practical implementations of the conceptual decisions on the material use, methods and techniques and the selected unit of ornamentation determined through the analysis phase for reproduction. The selected ornamentation unit is exactly reproduced by using the predetermined materials like clay or gypsum, and the appropriate techniques and hand tools. All of the works of reproductions are generally made by using relief technique in which the sculpted elements remain attached to a solid background of the same material (Figures 5–9). Then, some of the productions of students, especially the ones made from gypsum, were painted in different colours and textures with regard to their tastes. In this phase, students are expected to understand, discuss and correctly apply the rules, materials and techniques used by the traditional building craftsmen through producing the patterns of ornamentations on the historic monumental buildings. The reproduction phase of the course provided the students to be aware of the similarities in techniques, tools and materials with the craftsmen of architecture and the significance of the phase through the restoration process of historic buildings.

Reinterpretation and design: This phase includes a design process through which students were expected to design a sketch firstly and a three-dimensional model of sculpture by reinterpreting their relief work using their creativity. Students were expected to design and make a three-dimensional model or a sculpture considering the selected unit of ornamentation in different materials by using abstraction and reinterpretation methods. The products of this session could be accepted either in the form of sketches or as the models made from different materials. In 2012–2013 academic year, students could only made a design in two-dimensional drawing making sketches, but, in previous academic year, they could design three-dimensional models of their sculptures (Figure 10).



Figure 5. Reproduction and reinterpretation of the selected floral ornamentation unit on the portal of Ince Minareli Madrasa by Abdullah Gumus



Figure 6. Reproduction of the selected geometrical ornamentation unit on the portal of Sircali Madrasa by Figen Demir



Figure 7. Reproduction and reinterpretation of the selected geometrical ornamentation unit on the portal of Sahip Ata Complex by Gulay Kaya



Figure 8. Reproduction and reinterpretation of the selected geometrical ornamentation unit on the portal of Sahip Ata Complex by Elif Dertli



Figure 9. The selected floral ornamentation unit on the portal of Ince Minareli Madrasa and its reproduction and reinterpretation by Furkan Payas



Figure 10. Three-dimensional models of the sculpture designs

5. Conclusion

This study discussed the sustainability of the intimate relationship between the disciplines of sculpture and architecture in history within the conservation process of traditional craftsmanship and historic buildings today by exemplifying a specific conservation course prepared in the Department of Sculpture in Selcuk University. The specific conservation course presented had an interdisciplinary view contributed by its designer, a conservation architect and the students from the Department of Sculpture. In the conservation of traditional craftsmanship, such kind of educational programmes with interdisciplinary view have great significance for raising awareness, understanding and documenting both their physical and intangible aspects. The interdisciplinary view of these studies can be developed more by the involvement of the students of the different departments, like architecture, interior architecture, art history, archaeology, ethnography, folklore, sculpture, traditional arts etc., in the Faculties of Fine Arts and architecture and can be reflected in the conservation studies in historic environments.

The specific conservation classes in the educational institutions including the applied architectural ornament production and restoration can help to develop the master–apprentice relationship with the participation of craftsmen in an interactive way. Such kind of applied lessons can be easily integrated to the educational programmes of the various Departments of Fine Arts Faculties, specifically, sculpture which are mainly based on the shaping the different materials like, clay, stone, timber in an

aesthetical manner. Besides the benefit from the experienced craftsmen during lessons, students need to be provided a possibility to work in a workshop of the experienced craftsmen in a limited period for educational purpose.

This educational experience has two-sided: its architectural side includes the documentation and analysis of architectural ornaments on buildings; and its sculptural side includes their re-production in workshops and their representation and reinterpretation as a physical context to design a sculpture. For the architectural side of this study, the theoretical and visual information on the architectural ornament in historic buildings from different periods were given to make the sculpture students aware of the sculpture–architecture relations through the history. The experience of this course can be developed with the summer workshops with the participation of local builders experienced in stone and timber from the different regions of Anatolia in the Faculties of Fine Arts.

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