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Contemporary Mason Master's Tacit Knowledge in Restoration Process of Architectural Works; Defining Process and Criteria for Architectural Repair in Southern Khorasan, Iran

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Abstract

Studies on monuments, repairs carried out on them, and the experience of the people who perform these repairs indicate a given method of repairing works. By focusing on the conservative thinking of contemporary master mason's in southern Khorasan, the present study examines the "intervention process" for restoring the architectural heritage (decision-to-action). This research has been done qualitatively, a field data collection method is applied, and data are collected through semi-structured interviews (conversation) with a group of contemporary master mason's. The architects followed an achievable model while carrying out the restoration measures. Achieving the foundations and processes of intervention for the restoration of buildings is one of the major goals from the point of contemporary masonry masters' views. What is the conservative thought structure that has developed from thinking to action for a restoration action will be one of the major questions. To achieve this goal, we utilize grounded theory. Finally, by comparing the extracted concepts presented the intervention process framework to restore architectural heritages. We can define this process with two critical sets. The first set is up to the intervention prerequisite, the "decision-making and diagnosis process". The next interval corresponds to the moment of intervention (repair or restoration), interpreted as a "planning and action process".

Keywords: Intervention Process; Restoration; Architectural Heritage; Repair; Contemporary Master mason

1. Introduction

Mason's, master mason's, craftsmen, and other performers played an essential role in developing various architectural monuments from different historical periods more than anything else that might have prevented destruction. The inscriptions on some historical monuments provide evidence of these repairs (Sharp 1970, 39; Honarfar 1965, 67-168). In the meantime, the opinions of related researchers have indicated that architectural training was based on the master-apprentice system, and in fact, the restorers of ancient monuments have been mason's who have acquired knowledge and experience in the traditional education system (Nadimi 1991, 131-133; Hojjat 2012, 131-133; Nadimi 1996, 250-251). Master masons are currently performing part of the restoration and repair of ancient monuments, with the exception that the survivors of these mason's carry out these tasks. Master mason's of today trained with the same master-apprentice system their fathers used and transferred the conservation thought with some changes that will be one of the most significant sources of "conservation thought". Mason mastery is emphasized from two aspects: tacit knowledge and know-how.

Additionally, one of the concerns about conservation practices is the need to address and attend to existing values (Orbasli 2008, 40; Feilden and Jokilehto 1998, 18). As well, conservation cannot be achieved without the integration of both science and action. Conservation researchers believe that some conservation sciences have no direct relationship with conservation practices (Muñoz Viñas 2009, Ch 5); there is no practical relevance in conservation science, and there is a gap between conservation science and action always (repair and restoration)(Torraca 1982, 232), and finally, practice plays an essential role in acquiring and developing the conservative skills(Orbasli 2008, 12). In the sense that Windelband (Windelband 1894, 7-8) points out, the science (conservation expert) can be considered "rule-oriented," but the action of the performer (restorer) is inevitably "idea-oriented." In fact, the restorer needs to solve problems without complete coordination with scientific rules. It can be said that the conservation expert is seeking the facts, and the restorer seeks solutions; Consequently, the restorer does not require to solve scientific problems but to address the conservation issues in practice (Muñoz Viñas 2009, 125). However, the

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expert's considerations have not tconsidered these problems and are far from reality (Muñoz Viñas 2009, 118-119). There is a distance between the conservator or restorer (master mason) and conservation experts (academic scientists in conservation).

The restorer must be prepared to deal with unusual or unexpected behaviors at any time during the restoration process, decide about them immediately, and coordinate his actions accordingly. Coordination will play a crucial role in the success of the restoration process and is entirely dependent on the decision of the restorer. It is worth noting that conservation is considered to be a profession in which "decision-taking" is essential at various levels (Muñoz Viñas 2009, 130-135); therefore, the factors leading to a decision can be investigated. In the past, master mason's have considered the decision-taking process and made decisions based on an architectural-conservative perspective (Nadimi 2014, 13). This decision introduces a restorative action (decision-to-action process), which has been discussed in this paper. In contrast, the main purpose of this paper is to identify a part of the conservation culture of architectural heritage. Based on the analysis of data obtained through dialogue with contemporary master mason's in Southern Khorasan (Iran), the proposal has been developed. In this study, indicative categories have been identified, explored, and meaningful relationships between them investigated.

2. Research Background

Intervention can be defined as "any intermediate act or practice carried out to change or prevent an event" (Brown 1993, 1401). By this definition, the intervention is related to the methodology because it has a process. The process, subject, and expected results of a group of studies were considered similar in this regard. It is for this reason that this section discusses "intervention in architectural heritage," "tacit master mason knowledge" and "theoretical knowledge in conservation."

In studies related to the restoration process of architectural heritages, case studies of monuments and historical sites are often examined as examples with an executive attitude. The step-by-step approach to soil coatings and mortars in Mesa Verde National Park, in Colorado, USA, includes several steps: study, analysis, stabilization, and interpretation (Matero 2003, 39). Matero introduces four steps in the first phase of the Casa Grande Ruins National Monument project in Arizona, USA: documentation and investigation, material identification, structural analysis, and treatment (Matero and Cancino 2000, 54). In these case studies, according to the conditions of the sites, the restoration action process has been introduced. This is even though, in addition to the conditions of the site, the conditions of the person taking action (executor) should also be taken into consideration.

Moreover, according to the Canadian Code of Ethics, the conservation process includes research, documentation, preventive conservation, preservation, treatment, restoration, and reconstruction (Earl and Saint 2015, 191). As well, Morales Gamarra (Gamarra 2007, 264) proposes four levels of conservation practices: 1) initial identification of documents and general characteristics, 2) preventive conservation, 3) preserving the integration, and 4) monitoring and periodic maintenance after conservation. In the same context, Getty Conservation Institute (Alva Balderrama 2001) emphasizes that the conservation of historical sites in Latin America is frequently performed by a process-based viewpoint, suggesting that "experts in this region generally apply a process-based approach for different building types and under different conditions" (Alva Balderrama 2001). It has been noted by Correia (Correia 2016) that restorative practices processes can be simpler or more complex with more details, however, it should not be repetitive and the same technique applied to all monuments and sites. Like the previous group, in these examples, the person taking action was not taken into consideration and only the condition of the area was taken into consideration.

In addition to restoration practices, tacit knowledge can also be discussed. The studies related to tacit knowledge can be divided into two groups: the first group has attempted to obtain tacit knowledge (tacit knowledge accommodation) and apply it to architecture and conservation. The first section of this group focuses on the documentation and experience of local master mason's and their application to conservation (Reed 2020; Rahimnia et al. 2019; Rahimnia et al. 2013), which finally presents the local attitude methods for restoration. The other part sought to acquire tacit knowledge from designers, architects, or even students, to use them in architecture education (Hojjat 2012, 11; Safaeipour 2016, 11). In conclusion, by providing appropriate methods or training practices, these studies have attempted to transfer the tacit knowledge of architects to students to enhance the design and creativity of architecture. Two groups of studies have discussed using tacit knowledge to internalize issues related to architectural design (tacit knowledge internalization) (Andjomshoaa, Islami, and Mokhtabad-Amrei 2011) but have given less attention to the restoration of architecture.

There are also studies related to this field that emphasize conservation criteria or using conservative thinking by architects. The study by Correia and Walliman (Correia and Walliman 2014) is an example of a process domain. To achieve these principles and basics, a theoretical study is required, and coding is used as a method for doing so. At the result, Research studies show that the topics of experience and experimental knowledge of architects have been taken into consideration in some studies. But this knowledge and experience as a source of achieving the process of restoration measures (repair and restoration of buildings) and the conservation thought of architects have not been considered. This view can be the link between knowledge management, the protection of architectural heritage, and even the culture of architectural restoration, which is discussed in this study.

3. Theoretical Framework

According to the framework of this study, restoration practices are defined from the perspective of master

masons. The following section provides a brief description of the general and logical structure of the analysis , which is the result of two glances at conservation, decision-making, and the restoration process.

Initially, conservation practices are intended to prolong the life of monuments (Muñoz Viñas 2009, 56), and conservation practices (Restoration) are inextricably linked to the artwork, and it is the artwork that defines the restoration (Brandi 2005, 47). Additionally, Brandi (Brandi 2005, 48) argued that conservation is an intervention that aims to reuse a building. Consequently, there is a close relationship between two categories (conservation and intervention), so conservation is defined as the way in which interventions are undertaken and their scale and size in monuments. It is also noteworthy to discuss the principles and policies that govern conservation and intervention practices. Hence, conservation and intervention are related in this regard. The conservation principles have been observed alongside intervention and conservation practice throughout conservation history (Jokilehto 2017; Keshavarz 2008, 33). Conservation theory and practice are also closely related. The process of conservation practice requires intervention or repair to conserve architectural monuments. Through this practice, master mason's acquire empirical knowledge and know-how.

From the second viewpoint, a part of the conservation work scope is attributed to the decision-taking process for implementation, which can be discussed more and more by recognizing the scientific structure of the "decision-taking process". According to the scientific perspective, decision-taking involves five basic steps: recognition of a problem, gathering information, creating alternatives, choosing a solution, and implementation (Adler and Gundersen 2001, 253), with some differences depending on various factors (Adler and Gundersen 2001, 253-260). The problem recognition can be considered equivalent to the understanding, the information gathering and establishment of alternatives equivalent to the diagnosis, choosing a solution equivalent to the decision, and finally, the action equivalent to the implementation; therefore, we can examine their common properties (Fig. 3).

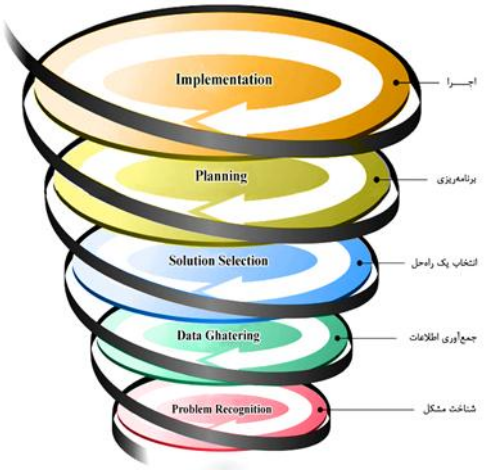

Fig. 3. The process for a decision

Repairs and interventions conducted on architectural monuments also appear to follow a decision-making process. Consequently, a decision process can be viewed as equivalent to restoration practices and its evidence and manifestations can be identified. Obviously, the master mason is a decision-maker or the restorer who plays a vital role in this decision (Efendi 1987). It has been determined that some evidence of this subject can be found in this study through the analysis and combination of data obtained from interviews with master mason's. Evidence suggests that in some cases, even master mason's have adopted a conservative approach to restoration. This process has been discussed in detail throughout this study.

4. Research Methodology

A primary objective of this study is to identify the intervention process involved in the conservation of architectural heritage (restoration practices from decision to action), whereas the sources used for this study are master mason's. Therefore, the general topic is organized to describe the process of repair and restoration. The research data are obtained through interviews with master mason's, surveys, and field investigations.

The South of Khorasan is the study's geographical area, and master mason's are the primary source for achieving the desired data in this research (Fig. 1). Therefore, a group of these mason's is identified by theoretical sampling, and the primary research data were collected by interviewing 20 of them (Fig. 2). The masters were often interviewed at their homes or workplacesTo recognize the perspectives and meanings of individuals in a specific situation (the process of restoration practices), this study is primarily based on qualitative data which is analyzed using an inductive method. As such, grounded theory - as one method for analyzing qualitative data - has been used primarily for analyzing the data in this study. For this purpose, semi-structured interviews with master mason's were conducted, recorded, and then converted to text. In the next step, applying coding processes in MAXQDA software, concepts in the conversations were extracted and classified into new categories. This list of concepts is the result of the survey in the interviews and the identification of meaningful statements and speeches made by master mason's that can be attached to some concepts (first-level coding). The next step involved combining these concepts (second-level coding) into subcategories (Table. 1). In the third step (third-level coding) of the analysis, which is addressed in this paper, the sub-categories were placed next to each other in new conceptual groups called categories. In this study, the restoration practices process consists of presenting this classification (categories in axial coding) and determining their relationships.

Figure 1. South of Khorasan, Iran

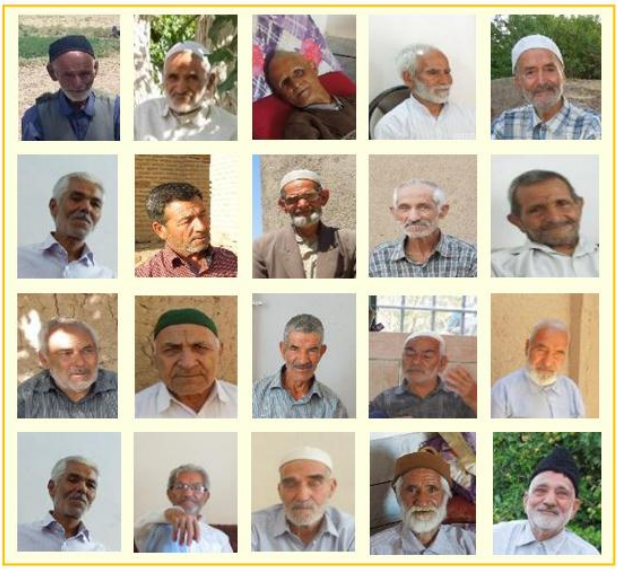

Figure 2. Mason Masters (Case Studies)

Table 1
Codes and Sub-Categories identified in Masons Interview

S-C No.	Sub-Categories	Codes
1	Emergency Conditions of Structure	Complications of natural disasters / cracks / moisture and humidity
2	Lack of Materials	Lack of bricks / Lack of gypsum / Lack of lime / Lack of materials / Lack of skills in using materials / Limited resources
3	limitations of intervention	Limitation of interve…itation in working with soil / Lack of constructio…s / Difficulty of repair and architecture acti… consumption resources
4	Economic Issues	Low wages / financi…n / Economic incapacity of the people / public pa…st of repair / use of available …ials
5	Intentions	…ctivities
6	Values and Beliefs	Religio… values / beliefs
7	Norms: Mutual Cooperation of People	People's empathy …'s participation / People's pa…t of repair
8	Norms: Saving and Contentment (individual-social ethics)	Contentment / Sa…d hard materials / Using available and c…ing costs / Saving time
9	Norms: Flexibility and Adaptability to Conditions	Adaptation to differ…ntion to people conditions / Difficulty of repair a…perience and creativity (new
10	Professional ethics	Patience and practice …lt of work / correct work and good work / use of …maintaining trust / student …cher
11	Updating	Adaptation and …y needs / expansion and
12	Reconstruction	Re…inal form
13	Renovation	
14	Desire to Progress	Updating / expans…t / Preferring the Todays
15	Architectural Style Change	Acceptance of New…nce of Modern Materials / …ral style
16	Hierarchy in Architecture and Architecture	Difference and…nion of Masons / high apprenticeship requi…hip / Existence Hierarchy in A… Masons
17	Importance of Experience and Expertise	Documenting the…n / Trust to the mason / Belief to the ability…ertise of the mason / Trust to the apprentic…nowledge of materials / Imitation of the Ot…nd creativity (New Idea) / Acquisitio…erience over time
18	Effort to Learn Properly	Learning by seeing… / Master and Apprentice process / Experie… ancestors / Interest and …n
19	Regular and continuous Repair	Requirements fo…r / strengthening of the structure / C…ir and Restoration
20	Preventative Conservation	Continuing to…ning of the structure
21	Repair and Restoration	Repair and R…of criteria for repair
22	Structural Stability	Strengthening / Continuing repairs for stability / strengthening the Structure
23	Continuous Function	Maintain the overall structure by removing some elements / Lack of Criteria for Repair / Continuation of Repair / Adaptation and Updating / Repair

Table 1. Codes and Sub-Categories identified in Masons Interview

5. Results (Identified Concepts in Interviews)

The preliminary results of this study are the conceptual interpretation of the concepts discussed in interviews with the mason's. Based on the combination of codes derived from the text of interviews with master mason's, these concepts are presented in Figure 1. 4.

It is important to note that the issues mentioned result from a study conducted among a group of mason's. As a result, some of the cases mentioned may have the highest impact on intervention while others may have the lowest impact on other work. Accordingly, the extent to which they affect the final decision will vary. In the following section, we will analyze the results obtained.

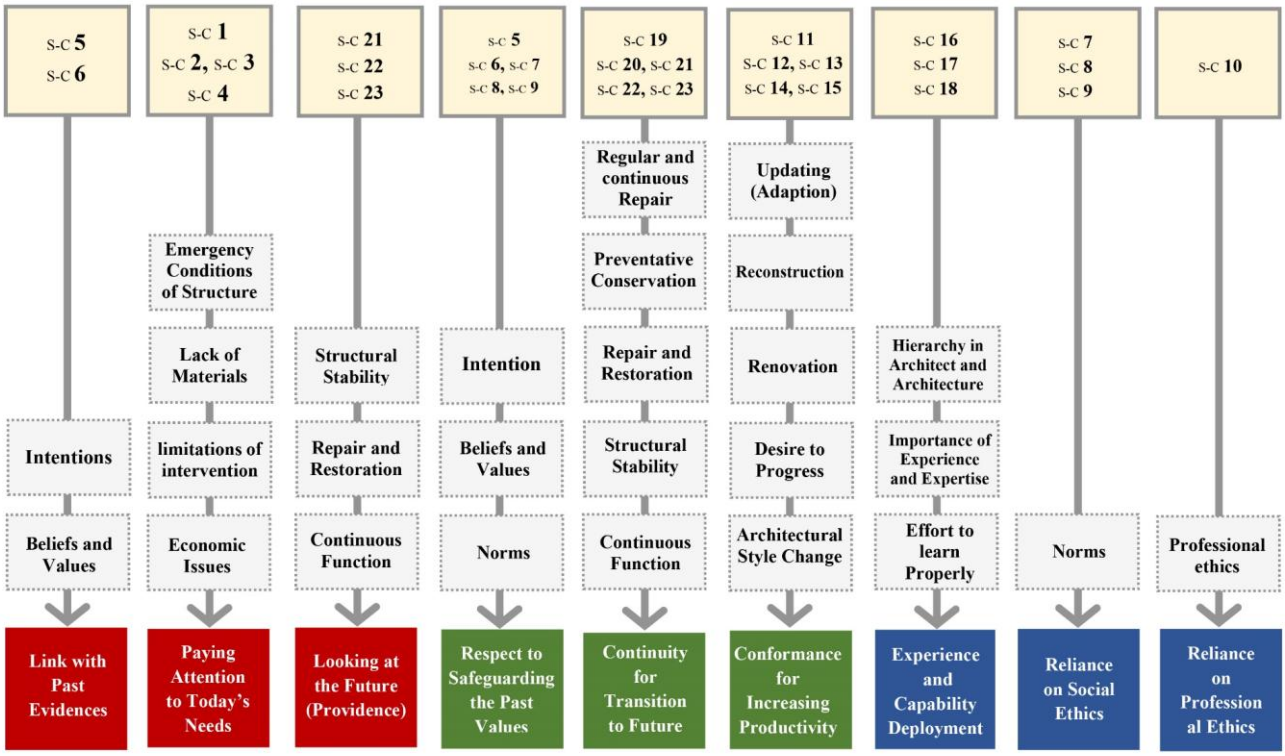

Fig. 4. Subcategories and categories identified in Masons Interview

5.1. Link with past evidence

Evaluation of a repair system in the past shows that values - which are often symbolic and religious - are related to cultural and identity values and are the result of the interaction of society and people with monuments (Feilden and Jokilehto 1998, 23). Concepts extracted like "beliefs and values," and "intentions," which are retrospectively depending on the past, can be placed in this category.

5.2. Paying attention to today's needs

Besides cases that have a look into the past, a group of them directly relates to the present conditions of monuments. A part of this situation is related to existing conditions and surrounding needs before a restoration practice that can be interpreted as today's needs for a monument. The emergency or special situations that can be caused for the monument by occurrences can be part of this issue. Categories by title "limitations of intervention" and "emergency conditions of structure" are conceived from the conversations and placed in this template. Also, change in the style and style of today's architecture that leads to the update of people can be discussed concerning today's attitude. Otherwise, society can be productive to intervene in the restoration; these can cause positive or negative conditions alongside the monument and factors affecting it. These positions lead to the arrangements of a restoration practice based on social, economic, political events. These are a summary of subjects extracted under the title of "lack of materials" and "economic issues" and placed in the framework of looking at today.

5.3. Looking at the future (providence)

Some of the concepts conceived from discussions indicate the future resulting from outcomes and some calm conditions in an intervention. Topics such as "continuous function," "Structural stability," and "repair and restoration" extracted from conversations have a look at the future and can be translated as expectations from intervention. When the purpose of a restoration practice is considered to hold congregational prayer, religious ceremonies, or a restoration practice have been conducted on a village's cistern to provide the required water for a more extended period, or some changes are made on the residential house so that it can sustain its performance, all of them are looking forward to the future condition of the monument.

5.4. Respect to safeguarding the past values

The interviews and conversations with the master mason's indicate a respectful approach towards the past. This approach attempts to respect the heritage and safeguard an influential group of monuments, traditions, and past culture. Safeguarding the intangible heritage, respecting them, and the values and beliefs that have a past-to-present perspective form a part of the master mason's decision. This respectful approach is considered a solution, which answers issues of "intentions", beliefs and values" and "norms".

5.5.Conformance for increasing productivity

The facts that a person faces to make a decision are various and have different systems in some cases. Creating coordination between them seems to be realized by adapting and balancing. In other sense, there is a need to form conformance between what exists and balance between them, issues that were extracted under the title of "updating (adaption)," "reconstruction," "renovation," "desire to progress," and "changing architectural style" from the conversations and were construct the basis of this conformance. Of course, these issues are discussed from two different perspectives: 1- to be conformed with the requirements of today's life and 2- to be updated. Generally, all issues mentioned above in this framework can include conformance to increasing the monument's productivity.

5.6. Continuity for transition to future

The analysis and composition of the data in new categories show two approaches and attitudes. A preventive attitude prevents threats, and a survival attitude can affect the future life of the architectural monument. These concepts are extracted by title of “regular and continuous repair” and “preventative conservation” can be defined in the framework of this preventative approach. Another concept with a more general approach to prevention and can even involve it is continuity and survival. This continuity, which can create survival, requires a series of actions that are considered from both physical and functional aspects and can be extracted under the title of “repair and restoration,” “structural stability,” and “continuous function,” issues that address continuity and survival.

5.7. Experience and capability deployment (growing old)

The subject of deploying the experience and capability is another concept that has been inferred from conversations with master mason's. Titles such as the “hierarchy in architect and architecture,” “importance of experience and expertise,” and “effort to learn properly” extracted from the conversations have been classified in this category. The experience and related issues are the main issues discussed, whether in the decision or the practice. This means that the experience and capability affect the decision-making process or the implementation of restoration practice. Of course, even this decision and implementation can be considered along with each other, as the decision-making process may occur during the practice in some cases, and the master mason may have minimal time for making a decision.

5.8. Reliance on social ethics

The other issue observed in the conversations is to give attention to the social ethics that can undermine restoration-related decisions. This subject is highlighted when there are two different approaches in choosing and deciding between benefits and social ethics. Of course, in the architecture training process and requirements of a master mason expressed in the limited letters and documents from the past architecture, ethical issues have always been addressed and considered in the learning process of architectural knowledge. Some issues raised in the framework of eight attributes of chivalrous (Fetian), which should exist in master mason, form an essential part of professional ethics(Khan-Mohammadi 1992, 12). The subjects being extracted as “norms” are directly related to these social ethics.

5.9. Reliance on Professional Ethics

Professional ethics are a set of principles that determine the behavior of individuals and groups, and in some way, it can be considered an ethical and moral obligation to any task and responsibility. In the conversations with the master mason's, one of the issues identified is “professional ethics”. However, there are subscriptions between professional and social ethics and their effects on each other; This is why beliefs and intentions are both the creator of professional ethics and social ethics because some of the professional ethics come from social norms and ethics. The cross-respect between the master and Apprentice, assiduity and accuracy in the restoration practice, and such attributes refer to the professional ethics of master mason's.

6. Discussion (The process of restoration practices)

The process of restoration practices from the viewpoint of contemporary master mason's is evidence that understanding, diagnosis, decision, and finally, intervention are the main phenomena for an action. This process originates from a significant relationship

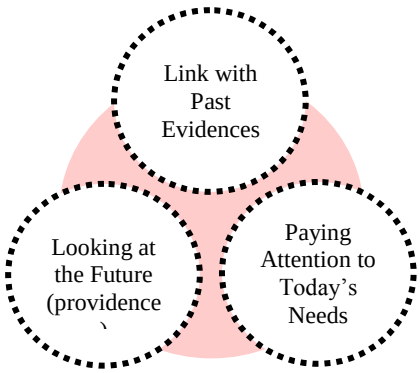

Figure 5. First step for Repair Action

identified between categories on the one hand and has been formed in the theoretical framework previously. This process will be similar to a decision process, with the difference that this process has three main steps rather than five in restoration practice. The events considered before the decision are referred to as decision-takers forming “decision-making process” in the first step. This step is the sum of “problem recognition” and “information gathering” in the process of a decision. In the following,

the "solutions" fitting into any problem - identified in decision-making process - will form the next step that will be presented as approaches for answers and decisions. This step was introduced as "solution selection" in the decision process. Finally, "decision-taking and action" is the third step also the sum of the two steps of "planning" and "implementation" in the decision process. These three steps present the complete structure of a restoration practice, which will be discussed in more detail.

6.1. First step: decision-making

During the restoration process, decision-making is considered as the initiator of the process and a prerequisite. Based on the evaluations conducted and the combinations of concepts extracted, it is evident that in the process of restoration practice, these conditions, along with the goals, will serve as the decision-makers of an action that will ultimately result in action (Rahimnia et al. 2019, 75-81). These decision-makers, however, are influenced by the past, the present, or the expectations regarding the monument in the future. Therefore, each of these three aspects can decide to conduct a restoration practice on a historical monument and affect it positively or negatively. The attitude can be considered in line with a definition of conservation, according to which conservation is sustainable management of change, and the concern is to conserve both past and present. In this definition, balanced judgments are made regarding the following: "Evidence (signs of the past)," "current needs and available resources", and "sustainability in the future" (Orbasli 2008, 40). Besides the mentioned definition, decision-making (issues related to the past, present, and future) can also be viewed as a link between the principles of conservation today and the structure of past interventions. What is identified in the three categories of "link with past evidence", "paying attention to today's needs" and "looking at the future" and their contents in the form of "decision-making for action" are significant and may determine the beginning of restoration practice. Despite this, decision-making process follows the recognition or understanding, and the first step is to begin a restoration process (Orbasli 2008, 99) (Fig. 5).

6.2. Second step: solutions (decision)

In the process of restoration practice, the data obtained from conversations indicates that master mason's have several approaches in their minds to address decision-takers. These approaches should be identified, and their different aspects should also be discussed. Based on the comparative study of data, it is evident that these time-dependent approaches can be distinguished and classified. Additionally, by combining them with new categories, additional concepts can be formed that will assist in clarifying these concepts. Based on this description, the basis of this classification is dependent on time and the new and abstract concepts that are derived from subcategories.
As shown in Fig. 6, the composition of these concepts can be defined in line with three main groups: "respect for safeguarding the past values," "conformance for increasing productivity", and "continuity for transition to the future". During this step, certain conditions are created when an intervention occurs. These conditions arise from "issues and constraints," and it will be appropriate to consider a good response during a confrontation. According to the conditions created for a monument, responses are ways to encounter or overcome the master mason's addresses.

6.3. Third step: Decision-taking

A repair or restoration practice, decision, and implementation were all taken together and were not separate. Meanwhile, Adler (1991, 250) argues that decision-making is accompanied by management. Therefore, management and planning must make a decision in order to create compatibility between the past, present, and future (decision-makers and solutions which are appropriate for them). This process has been implicitly used in the structure of previous interventions by the master mason. Evidence for this claim is derived from conversations with master mason's regarding intervention planning (Adler and Gundersen 2001, 252-253). Therefore, what is presented in this section is a combination of concepts referred to as "decision (selecting a solution)" and "implementation". As shown in Fig. 7, the conceptual study of data indicates that concepts such as "experience and capability," "professional ethics," and "social ethics" have been identified and also affect the decision of master masons. Therefore, in making a decision and implementing it, one can benefit from experience and capability on the one hand, and rely on professional and social ethics on the other. Moreover, the experience and capabilities of the master mason, as well as the decision-making process, are crucial factors in the practice aspect. However, this experience and capability must be considered in conjunction with all of the surrounding conditions. A higher level of experience yields a more accurate and timely decision, both in terms of time and quality. In other words, the level of experience and capability have a vital role during an intervention decision process and to the moment of action; however, at the moment the restoration practice, this issue gains more attention. Throughout history, three issues have always been intertwined, influenced each other, and weighed in making decisions.

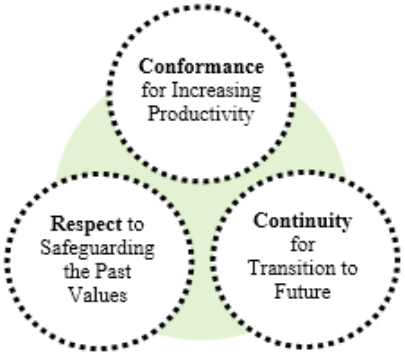

Fig. 6. Second step for Repair Action

Fig. 7. Third step for Repair Action

7. Conclusion

The purpose of the intervention and recognition of its process in architectural restoration is to achieve a structure that is addressed in restoration practices. According to the research questions presented above, the recognition of the basics and process of an intervention or restoration practice (first question) and presenting the structure of a restoration practice from the decision to action (second question) were examined by relying on the conservative thought of contemporary master mason's in this paper. Relying on what is reviewed -and to answer research questions- the basics, process, and structure of a restoration practice from the perspective of the conservative thought of master mason's can be defined in two necessary sets: 1) before action and (2) at the moment of restoration practice. In the first set, events before intervention are referred to as intervention prerequisites. There are two steps involved in this set: decision-making and solution diagnosis (Figure 8). According to the master mason's viewpoint, in step one (decision-making), this set can be divided into three parts: the past, present, and future. In the second step (solution diagnosis), we can identify a more general issue in each of these three parts (past, present, and future), which conceptually encompasses all three. The main phenomena are respect (for the conservation of heritage) when looking at the past, conformity (to enhance productivity) when looking at the present, and continuity and survival (for the transfer of monument values) when looking at the future. These items are visible in Fig. 8 in decision-making and diagnosis of the solution process.

In the next set, the master mason will decide whether to begin practical action based on the conditions. Essentially, this set, which is a "Planning and Action" process, is a result of factors affecting decision-making and implementation. The prerequisite of this set is the first one, and it does not have any externality without it. During the action phase, the master mason takes into consideration all circumstances, including past, present, and future discussions, and makes a decision accordingly. For this decision, factors such as experience, capability, and professional and social ethics are taken into account. As a result, all subjects are involved in multiple relationships during this set, and they are not considered independent in taking decisions or implementing those decisions. Each one is selected according to the master mason's opinion. On the other hand, each action is accompanied by a series of new training and experiences that will increase the capability. As a result, they will also have a recursive relationship (Fig. 8). Future research could include a description of some criteria in this selection and decision process as well as other principles.

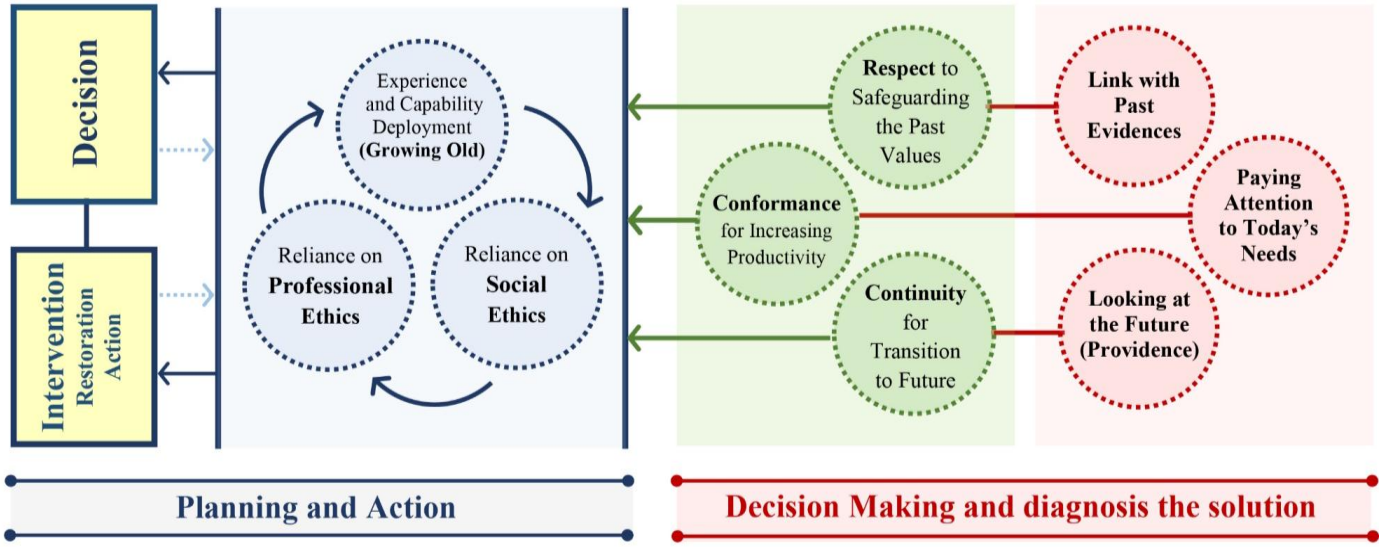

Fig. 8. Process of Restoration Practice at the viewpoint of contemporary master mason's

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