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History of Restoration in Iran:

Origins and Developments from 1900 to 1978

Presentata da: dott.arch. Pooya Zargaran

Coordinatore Dottorato	**Relatore**
prof.Annalisa Trentin	**prof.Andrea Ugolini**

Esame finale anno 2014

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Abstract

This thesis tends to study the origins and developments of the restoration in Iran from its very first moments till the Islamic revolution of 1978.

The thesis is its first study of its kind. While almost all recent occidental ideologies regarding the thematic of restoration and conservation of historic monuments are translated and published in Iran, very little efforts have been done regarding the study of the origins of the formation of restoration in the country.

Introduction and evolution of modern principles of conservation and restoration in Iran unlike European countries is neither the result of a well structured European academic criteria nor presents itself as the result of a cultural development of the sensitized cult about the necessity of preservation historical patrimony for future generations.

The diversity of Iranian contexts, multiplicity of the intervening factors and other factors characterized a different background for the raise and developments of restoration in the country; in the thesis the influencing and characterizing factors in the formation and development of restoration in Iran will be defined and studied in detail with relative examples; important cases of study will be analyzed; due to the complexity of the Iranian context and in order to consider all influencing and characterizing factors the thesis, parallel to have formation and development of restoration, as the main scope of the research, the developments influencing factors will be confronted with necessary flashbacks to the main theme, when and where necessary. In order to best formulate and understanding the passages of these factors and due to the concepts of passage, from traditional to modern context, the thesis will maintain a flexible structure.

A great care will be given to the period of the activity of the restoration experts of IsMEO which is thesis will be called as the period of the introduction of the modern principles of restoration into Iranian context; the fundamental ideologies, practical and theoretical principles of IsMEO will be identified and studied in details; important case of studies of the restoration of IsMEO will be analyzed in details and the innovative aspect of the presence of Italian experts of IsMEO will be revealed.

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I dedicate this thesis to my family, my wife for their constant support and unconditional love. I love you all dearly.

Summary

Introduction

Introduction and evolution of modern principles of conservation and restoration in Iran unlike European countries is neither the result of a well structured European academic criteria nor presents itself as the result of a cultural development of the sensitized cult about the necessity of preservation historical patrimony for future generations. The diversity of Iranian contexts, multiplicity of the intervening factors and other factors characterized a different background for the raise and developments of restoration in the country; a brief consideration of the historic patrimony of the country makes clear that Iran could not be considered as a pure Islamic country, where there should be the possibility of applying the principles of restoration applied in the other Islamic countries, but at the same time when talking about traditional restoration, it could be clearley seen how the ideology of maintaining and preserving the constructed in practical and theoretical aspects is influenced by religious beliefs. While almost all recent occidental ideologies regarding the thematic of restoration and conservation of historic monuments are translated and published in Iran, very little efforts have been done regarding the study of the origins of the formation of restoration in the country. It should be cited that still there is not a clear Charter of Restoration for confronting the problems of the historic monuments.

This thesis tends to study the origins and developments of the restoration in Iran from its very first moments till the Islamic revolution of 1978.

The thesis is its first study of its kind; while in a general way, this thesis is classified as a historical thesis, but it also will be attempted to confront the subject combining chronological and philological approaches; in this thesis, the influencing and characterizing factors in the formation and development of restoration in Iran will be defined and studied in details with relative examples; important cases of study will be analyzed; due to the complexity of the Iranian context and in order to consider all influencing and characterizing factors the thesis, parallel to have formation and development of restoration, as the main scope of the research, the developments influencing factors will be confronted with necessary flashbacks to the main theme, when and where necessary. In order to best formulate and understanding the passages of these factors and due to the concepts of passage, from traditional to modern context, the thesis will maintain a

flexible structure.
It is assumed that it is with the archaeology that first attentions to conservation were born, so the preliminary phase of the research will be stabilizing a profile for the raise and development of archaeology, from the end of 19th century and the commencement of the systematic archaeological excavations in the country, oriented and finalized to get the influences of the archaeology in the formation of restoration in Iranian context; the main archives and resources will be analyzed and a deductive profile will be formed.
Like archaeology, other influencing factors will be classified in the priority order and each of them will be studied in details. The political, cultural and religious factors are identified as the most important influencing factors in the foundation of the ideological fundaments of the restoration in the country.
The influences of the policy as the factor that decisively influenced the development of the archaeology will be studied considering its contribution on the development of archaeology and the formation of restoration; it will be tried to prove that even new emerging derivations of the concept of restoration were conditioned and influenced by the political orientations of the years 20-30s.
An important part of the thesis is the study of the approaches of the Iranian context regarding the concept of restoration.
In order to acquire a general understanding of the complexity of the cultural background, a great care will be given to the study of the derivations and interpretations of the restoration in Iran, in practical and theoretical aspects, with necessary documents and examples; this study is executed in order to highlight the flexibility and adaptability of Iranian traditional society in front of the modern principles of restoration and more importantly
the characteristics of the traditional Iranian restorations with examples and case of studies will be extracted.
A great care will be given to the period of the activity of the restoration experts of IsMEO which is thesis will be called as the period of the introduction of the modern principles of restoration into Iranian context; the fundamental ideologies, practical and theoretical principles of IsMEO will be identified and studied in details; important case of studies of the restoration of IsMEO will be analyzed in details and the innovative aspect of the presence of Italian experts of IsMEO will be revealed.
The research program will be elaborated in three phases: the first phase is trying to reach a general framework for developing the arguments; acquiring necessary references and resources: in this

phase bibliographic and archival resources area analyzed and evaluated.

After being stabilized a provisory framework, it will be tried to elaborate the arguments in a logical order, finalized to develop the main theme which is the formation and development of restoration in Iranian context.

1. From Archaeology to Restoration; evolutions in Iranian context

1.1. Brief history of archaeology in Iran from 1900 to 1940

Unlike European countries, introduction and evolution of modern principles of conservation and restoration in Iran, neither is the result of a well structured European's academic-based criteria nor appears as the result of the cultural developments of the ideologies of the sensitized cult about the necessity of preservation historical patrimony for future generations. While, in Europe, it took almost a century and a half for reaching the first well-structured theories in conservation and restoration, in Iran introducing the modern concepts of conservation, differentiating them from traditional derivations and adapting them in operative and cultural levels in a traditional context, all occur in less than 50 years parallel to the development and evolution of the archaeology, in academic, practical and legal aspects, as its legitimized result.
It is in fact with the archaeology that the first attentions to the necessity of conserving historical patrimony were born and conservation, as an individual discipline, was introduced as an integrative part within the institutionalization of the archaeological activities; it could be told that the concept of conservation, in both, academic and practical aspects, in its modern derivations, was born when, due to the maturation of the archaeology and in the shadow of nationalistic sentiments of the first years of 20th century, attentions were turned from pure excavations to preservation and the necessity of preserving and transmitting the pre-Islamic archaeological monuments to future generations coincided with the propagandistic ideas of the Pahlavi government[1] (1929-1979), who wanted to legitimate itself as the part of "dynastic continuity" into Iranian historical context thorough symbolization of the past glory.
Due to this particular dependency of the conservation to archaeology till the first years of 60s, when vast programs regarding the conservation of the historical patrimony of Iran were commenced and as the part of these programs National Association of conservation of ancient monuments officially took the responsibility of executing conservative measures in

1 K. Abdi, *Nationalism, Politics and the Development of Archaeology in Iran* In *American Journal of Archaeology*, No. 105, 2001, pp.51–76.

architectural/archaeological patrimony of the country in its very up-to-dated principles, thanks to the contributions of the Italian experts of restoration, it is necessary to have a general understanding of the rise and birth of the archaeology of Iran and its evolution from late 19th century on.

Rise and birth of archaeology in Iran

The beginning of serious archaeological researches in Iran can be dated from the second half of the 19th century[2]; already, with the beginning of the European enlightenment, many ambassadors had headed towards East including Iran and the existing records show that only during the second half of the seventeenth century, 147 travel books were written by French scholars about East and from these, 52 books were related to Iran[3]. Itineraries written during 16-18th century by European tourists and adventurers[4], had introduced Iran as an ancient country; from 1839-41, two French scholars, Jean-Baptiste Eugène Napoléon Flandin[5] (French orientalist and archaeologist,1809-1889) and

2 T. Daryaee, *The Study of Ancient Iran in the Twentieth Century* in *Iranian Studies*,Vol. 42,No. 4,2009,pp 579-589..

3 A. Hayeri, *The First Confrontation of Iranian Thinkers with the Western Double Bourgeois Methods*, Second Edition, Amirkabir Publications, Tehran, 1973, p 111.

4 It seems that Benjamin of Tudela, (1130- 1173) to be the first to come to East and visit Persia. Around 1168 he is in Baghdad and then enters in Iran. His vivid descriptions of western Asia preceded those of Marco Polo by a hundred years. The other famous travelers who before 18th century came to visit Iran are:

- Giosafat Barbaro (1413-1494): Venetian diplomat and explorer and ambassador to Persia; he visited the ruins of Persepolis and Pasargadae and some of those Iranian cities, Yazd, Shiraz and Baghdad and wrote an account of his travels entitled “Fiaggi fatti da Fenezia alla Tana in Persi” published in 1543-1545.
- Pietro della Valle, (1586 - 1652): he visited Persia and in 1621 left Isfahan, visited Persepolis and Shiraz. In 1618, he joined Shah Abbas (reign 1587-1629) in north of Persia as his guest. His works are: “Maani funeral oration for his wife”(1627), Bill of Shah Abbas (1628) and Travels in Persia (2 volumes) published in 1658, and the third part (India) in 1663.

5 Jean-Baptiste Eugène Napoléon Flandin (1809-1889), French orientalist, painter, archaeologist, and politician. Flandin’s archeological drawings and some of his military paintings are valued more highly by museum authorities than his purely artistic paintings. He is most renowned for his famous drawings and paintings of Persian monuments, landscapes, and social life made during his travels with the architect Pascal Coste during the years 1839-41. Flandin’s observations on the state of Persia and international politics in the mid-19th century also continue to provide important documentary infor-

Pascal Coste[6] (architect,1787-1879) visited Iran and registered precious observations which remained as the most celebrated on its kind and as reliable resources since the middle of the 19th century, on history, archaeology, arts, geography, social and court life, royal and provincial administration, military organization, etc.

Not only, their publication remained as an indispensable resource for a long time and furnished French scholars with precious historic information, but also, more importantly contributed in making French scholars interested in history of Iran and the commencement of systematic excavations in the ancient sites of Iran, especially in Susa[7], the capital of Elam civilization, in the south-western Iran.In the 19th century, however, two important interrelated factors oriented occidental scholar attentions versus beginning systematic scientific archaeological excavations in Iran and caused specific studies on the history and pre-history of Iran: identifying places mentioned in the Bible or in the accounts of classical authors and the decipherment of Old Persian cuneiform; the first became the motivator for foreign visitors to demonstrate particular interests for Iran and encouraged them to come and visit archaeological sites of Iran and the latter, accelerated and intensified scholar studies in the history and prehistory of Iran[8]. As a remarkable step in the first half of 19th century, the publication of first modern history of ancient Iran from the Median (728 BCE–549 BCE) to the Sasanian periods[9] (224CE-651CE) based on the translation and decipherment the trilingual cuneiform inscriptions recorded during excavations at Bisotun[10] from 1836

mation.

6 Xavier Pascal Coste (1787-1879) was a French architect of the *département and the municipalité*. In 1814, he was received into the *École des Beaux-Arts* in Paris and in 1829 he became a professor of architecture at the *École des Beaux-Arts* in Paris His time in Paris was a pivotal one in his life.

7 One of the most important reasons which intensified the attentions of the European scholars to the ancient site of Susa was that Susa had been mentioned in the Bible as the palace where Esther was chosen queen by Ahasuerus.

8 M. Azarnoush, and B. Helwing., *Recent Archaeological Research in Iran - Prehistory to Iron Age* in *Archaeologische Mitteilungen aus Iran und Turan*, Vol. 37, 2005, pp189-246.

9 Also spelled Sasanid Empire, Sassanian Empire, or Sassanid Empire.

10 Bisotun inscription is considered as a UNESCO World Heritage Site. The Bisotun Inscription is a multi-lingual inscription located on Mount Bisotun. The inscription, approximately 15 meters high by 25 meters wide, and 100 meters up, includes three versions of the same text, written in three different cuneiform script languages: Old Persian, Elamite, and Babylonian.

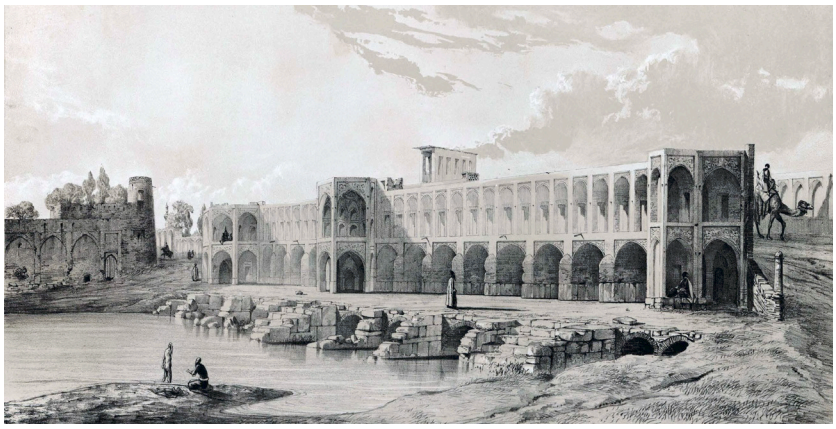


Figure 1.1.
Bridge Khjoou, Isfahan.
P. Coste, and J. Flandin, (ed)Gide and Baudry, Paris, 1851.

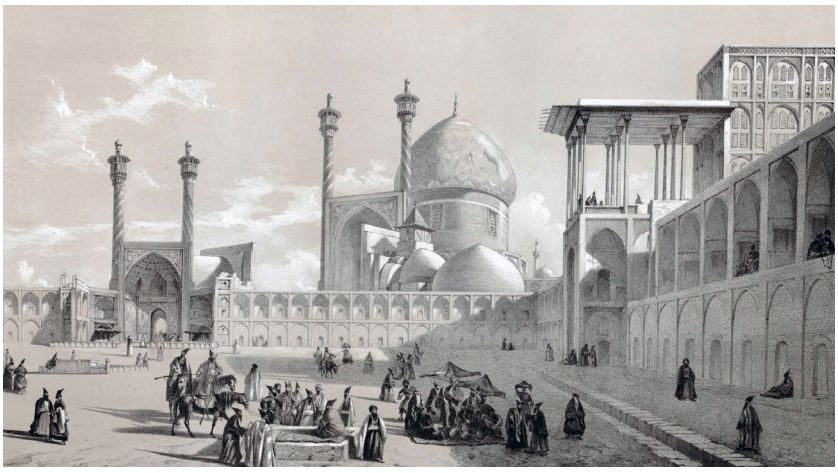


Figure 1.2.
Maidan i Shah or Royal Square , Isfahan.
P. Coste, and J. Flandin, (ed)Gide and Baudry, Paris, 1851.

Figure 1.3.
Persepolis, View of the ruins.
P. Coste, and J. Flandin, (ed)Gide and Baudry, Paris, 1851.

to 1847[11] , gave birth to specific and systematic studies in the camp of history and pre-history of Iran and the Ancient Persia Civilization.

Between l850 and l852[12], the excavations of William Kennett Loftus (1820-1858) in Susa in Khuzestan, the administrative capital of the Achaemenid Empire(550 BCE –330 BCE) could be considered as the earliest systematic excavations to have taken place within the boundaries of Iran by foreign scholars; during these excavations, while hasty and superficial but remarkably successful, Loftus identified the names and locations of the ancient cities[13] and furnished valuable architectural and inscriptional materials for further scientific studies; particularly, Loftus affirmed that the supposition that Susa was the site of biblical Shushan and he could find sufficient evidence to graphically reconstruct the outlines of some palaces of the Susa.

Apart from the foreign scholars interests, in fact, interests in the antiquities in Iran had always been existed and predate 19th century; the first empirical excavations in archaeological sites of Iran were all highly motivated by the search for antiquities—especially portable antiquities that could be removed to museums and private collections; during the Qajar dynasty (1787-1925), Naser al-Din Shah (reign 1846-1896) personally sponsored some excavations because of his personal interests in antiquities and furthermore established a private collection which then in 1910 became the foundation of the National museum of Iran in Tehra.

Till the first years of the 20th century and the institutionalization of specialized organizations in archaeology which turned Iranian interests from pure treasure hunting scopes to considering intrinsic values of archaeological materials as testimonials of ancient civilization of the country, the Iranian interests in archaeological material did not advance beyond treasure hunting, antiquarianism and searching for recoverable objects considering their material values. The treasure hunting was the dominating aspect of major parts of the excavations executed by Iranians which in many

11 Rawlinson's recording of the Bīsotūn (Behistun) inscription (1836-41)

12 By the beginning of the l850s, William Kennett Loftus, a member of a British boundary commission was already persuaded of the far wider significance of the site of Susa mentioned in the Bible as the palace where Esther was chosen queen by Ahasuerus; he declares that "Whether we regard it in a geographical, historical, or scriptural point of view, there are few places throughout the East more replete with interest than Susa".

13 P, J, Peters., *Excavations in Persia* in *The Harvard Theological Review,* Vol. 8, No. 1, 1915, pp. 82-93.

cases resulted in the destruction and the loss of many important historical/archaeological traces; as the result, when developing necessary legal attentions in the field of archaeology in Iran which will result in the release of the Law of Antiquity in 1930 the major attentions were concentrated to confront and limit treasure hunting based diggings.

Délégation Archéologique Française en Iran in the late 19th century

The presence of French scholars in archaeological sites of Iran began in the late 19th century, specifically in 1880, when the French scientist, Marcel Dieulafoy[14] (1844-1920) came to Iran and visited Susa and the visible traces of the explored palace by Loftus. *L'art antique de la Perse* , published during 1884-1889, contains precious observations of archaeological sites of Iran gathered and registered by Dieulafoy during this travel; this valuable resource then became the support of Dieulafoy's further scientific explorations[15] in Susa, specifically, and French scholars, generally, in the archaeological matters of Iran which highly influenced the Iranian archaeology and its interrelated fields for more than 50 years, till the middle years of 20th century.

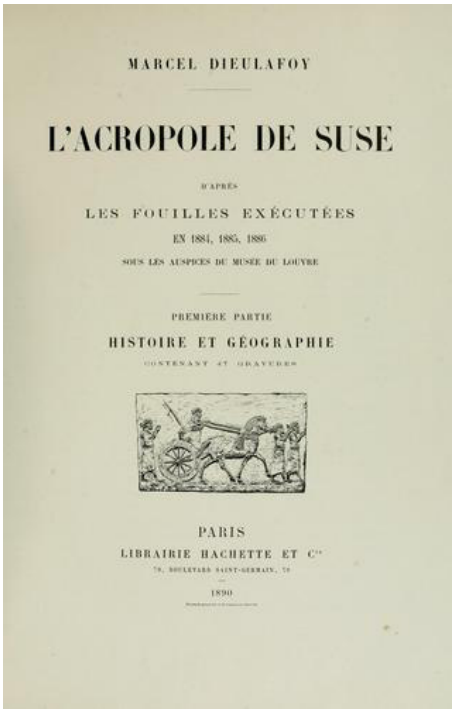
The excavations of Dieulafoy during his first travel enriched the museum of Louvre with precious beautiful bricks, the frieze of the lions and the frieze of the archers[16]. As the result the government of France decided to begin a vast program of archaeological exploration/excavation in the ancient sites of Iran and particularly

14 Marcel-Auguste Dieulafoy (1844-1920) was a French archaeologist, noted for his excavations at Susa (modern-day Shush, Iran) in 1885 and for his work, L'Art antique de la Perse.

15 The influences of Eugène-Emmanuel Viollet-le-Duc (1814–1879) as the responsible of the commission of historic monuments in defining the direction of the research of the first generation of French archaeologists in Iran could be seen thorough the first set of publications of French scholars on history and pre-history of Iran; Dieulafoy, who under direct influence of Viollet-le-Duc decided to come to Iran, was more interested in architecture and history of architecture than in "museum objects"; the research of Dieulafoy "…deeply persuaded that Sasanian Persia had had an overwhelming influence on the origins of Islamic architecture and that it was through the study of the monuments of Khosrow and Šāpūr that it would one day be possible to substitute for ingenious theories reasoning based on solid foundations." for finding Iranian architectural counterparts of archaeological sites of Acropolis and Constantinople for structuring a reliable Persian architectural history, is best reflected in his valuable publications in history and pre-history of Iran.

16 P, J, Peters., *Excavations in Persia*, *op.cit,* pp. 84.

in Susa; between 1884-86 first set of official excavations of French scholars with official permission from Iranian government[17] began in Susa; discoveries of first set of official archaeological explorations of French scholars[18] in Susa were published in Paris in 1893 as *L'Acropole de Suse d'après les fouilles exécutées in 1884, 1885, 1886 sous les auspices du Musée du Louvre*.


MARCEL DIEULAFOY

L'ACROPOLE DE SUSE

D'APRÈS

LES FOUILLES EXÉCUTÉES

EN 1884, 1885, 1886

SOUS LES AUSPICES DU MUSÉE DU LOUVRE

PREMIÈRE PARTIE

HISTOIRE ET GÉOGRAPHIE

CONTENANT 47 GRAVURES

PARIS

LIBRAIRIE HACHETTE ET Cie

79, BOULEVARD SAINT-GERMAIN, 79

1890

Figure 1.4.
Cover of *L' Acropole de Suse :d'après les fouilles exécutées en 1884, 1885, 1886, sous les auspices du Musée du Louvre*.
M. Dieulafoy, *L' Acropole de Suse :d'après les fouilles exécutées en 1884, 1885, 1886, sous les auspices du Musée du Louvre,* Paris, 1893.

From the scholar point of view, it is important to be noted that while the excavations of Loftus had contributed in providing important historical information, the excavations of Dieulafoy, during his first travel to Susa, yielded little of historical importance in the way of inscriptions of the Persian period and unlike Loftus who had tried to identify and reconstruct the outlines of the palaces of Susa, from Dieulafoy's excavations it was impossible to extract any sort of architectural detail.

Due to the satisfying results of the excavations in Susa, the French government decided to extent their archaeological explorations in all ancient sites of Iran; Jacques de Morgan (1857-1924), a mining engineer who had already visited Persia in 1889-91, had marked Susa as a place to be explored scientifically and completely; de

17 The permission for the excavations at Susa was given in 1883 by the Iranian government to Marcel and Jane Dieulafoy.

18 Combining historic/archaeological interests and technical education constitute general characteristics of the French archaeologists of 19th century who form the Délégation Archéologique Française en Iran.

Morgan developed a plan which won the support of the French government and by the agreement between Iran and France, in 1895, French monopoly in archaeological matters of Iran under the title of *Délégation Archéologique Française en Iran* (DAFI) began, with the so called contract of De Morgan[19] that lasted till the years 30 of the 1900; this monopoly gave the French government the exclusive right of conducting archaeological excavations in ancient sites of Iran; it was De Morgan who had advised on the terms of the agreement between Iran and France.

The French presence dominated all archaeological matters of Iran and all its interrelated fields; the influences of French in the years of formation[20], the 30s, went beyond to just limit itself to archaeological excavations and influenced architecture and urbanism and establishment of specialized organizations like the Department of Archaeology, National Library and National Museum of Iran and Faculty of Fine Arts.

The first director of *Délégation Archéologique Française en Iran* (from 1897-1912) was Jacques de Morgan; during his first series of excavations which were began in 1897, de Morgan achieved a first appreciation of the stratigraphy of Susa and found three principal mounds: the Mound of the Palace, on which Loftus and Dieulafoy had conducted their excavations, the Acropolis, and a third hill, which he designates as the Mound of the Royal City, larger in extent than either of the other two mounds.

De Morgan's excavations were remarkably successful in results and thoroughly scientific in method. He, focused the excavations on the prehistory of Susa and its prehistoric necropolis and revealed the existence of a civilization at Susa as early as that of Babylonia.

While other investigators were also done at other sites of Iran, Susa became and remained as the largest field of French excavation and the most parts of French scholar archaeological activities were concentrated in excavating in Susa even after 1927 when the Persian government renounced the terms of its treaty on antiquities with the French and in fact these excavations

19 The contract of *De Morgan*, launched, in eight chapters, between Iran and France In 1895 allows exclusively to the French government, in addition to the advantages of the excavations at Susa, the permission of the excavations throughout Iran.

20 Formation of specialized institutions, organization and associations like establishment of the University of Tehran, Faculty of fine arts, the National museum, the National library, etc, all occurred during the first years of 30s.

continued till the last years of 60s.

French Délégation Archéologique at Susa and other archaeological sites of the country were resumed after World War I under the title of *Mission Archéologique de Perse* directed by Ronald de Mecquenem (1877–1957) and after a further suspension of activity during World War II, in 1946, Roman Ghirshman (1895–1979)became director of the *Mission Archéologique en Iran* (MAI) and focused his own efforts on the Ville royale or Royal City at Susa until 1951.

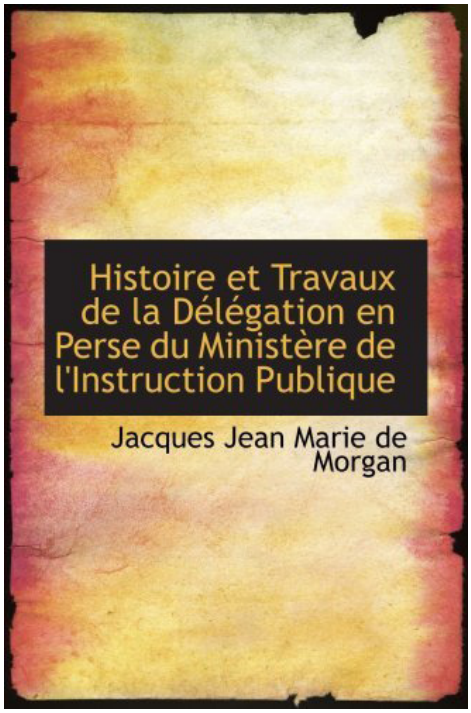


Figure 1.5.
Cover of *Histoire et Travaux de la Délégation en Perse du Ministère de l'Instruction Publique.*
J. de Morgan, *Histoire et Travaux de la Délégation en Perse du Ministère de l'Instruction Publique*, Paris, 1905.
In his famous pubblication De Morgan writes about the history of the French archaeological delegation in Iran, its main activities, its important explorations; an important part of the volume is dedicated to detailed describtion of the French explorations in Susa and the reconstruction of historical profile of Elam civilization.

Although French excavations were « remarkably successful in results and thoroughly scientific in method[21] », the principle behind all archaeological activities of French excavators was how to dig a maximum amount of earth with the funds and time available; excavations at Susa best describe how explanatory theories and methods of excavation were all oriented and exclusively limited to recover every recoverable objects and antiquity discovering techniques[22]. In fact, the scope behind the foundation of DAFI was « to investigate these little-known regions from every scientific

21 P, J, Peters., *op. cit.*, pp. 82-93.

22 The sponsorship of the French national museums and its department of oriental antiquities at the Louvre and the minister of public instruction who provide French scholars with the army, navy, material and supplies is the most convincing reason why all attentions were oriented to discover movable objects.

Figure 1.6 and 1.7.
Achaemenid findings of French excavations in Susa, Louvre museum, Paris, France.
2011, photo by author.

vantage point ». During the French excavation, all discovered objects and also discovered architectural elements, where their movement was forbidden under the terms of the contract between the Government of Iran and France, were sent to Paris at the Louvre museum. «…The collections which the Mission has sent to France embrace not only monuments, inscriptions, objects of art, utensils and jewelry of every sort and every material, but paleontological collections, geological collections, and collections in the field of natural history…[23] ».

Development of archaeological activities in 20-30s

Parallel to the gradual maturation of the archaeology in Iran, under the French influences, during the first 20s of 1900, the socio-political changes of Iran considerably affected the Iranian archaeology and its development; in this period, the future of Iranian archaeology was shaped thanks to the reinforcement of nationalistic-based ideology of the emerging government of Pahlavi(1929-1979); institutionalizing special organizations[24], formulating specific norms and regulations for archaeological explorations and terminating the French monopoly on archaeological matters of Iran are remarkable aspects in the field of Iranian archaeology in these years. While French excavations were limited to Susa and its vicinities, the emergence of the Pahlavi dynasty in 1925 and the abolition of the French Monopoly in 1927 turned international attention to Iran and brought foreign expeditions and foreign scholars the opportunity of conducting archaeological explorations in other archaeological sites of Iran; the presence of western scholars was very fruitful for the development of the historical/pre-historical profile of Iran; in this regard the rediscovery of Persepolis, its constructive phases and its contribution to the Persian civilizations, due to the decipherment of ancient languages, is of great importance which became a fascinating topic of growing interest in academic researches and exhibition presentations of the 20s in Iran.

Nationalism became the motivator for numerous specific archaeological researches and the government of Pahlavi promoted particular state-sponsored excavations specifically

23 P, J, Peters., *op. cit*, pp. 82-93..

24 Already in 1910 , the initiative to create the first antiquities service in Tehran was taken and in 1916, the first antiquities museum was opened in Tehran with 270 objects. Both of these institutions continued to function until the early years of 1930s.

in pre-Islamic archaeological sites for the recovery of its pre-Islamic past. Stress on nationalism and pre-Islamic values and traditions continued to be the dominant aspect of the government of Pahlavi for more than 50 years till the Islamic revolution in 1978; searching for authentic national origins in pre-Islamic Iran, specifically during Achaemenid period (550 BCE–330 BCE) for reconstructing national identity for political matters[25] characterized the methodology of historical studies during 1920 to 1939; during Pahlavi period, archaeology took actively part of Pahlavi's state building programs and to solidify the nation which is reflected in an interesting interplay between academic and scholarly work and the governmental agenda aiming at the creation of a new image of the nation-state of Iran; manipulating archaeological data for political use in the shadow of nationalistic sentiments and for the creation and elaboration of national identities and the state-sponsored attempts to marginalize Islam in favor of the supposed pre-Islamic values and traditions describe the way archaeology was used by the government of Pahlavi in these years.

Ernst Emil Herzfeld[26] (1879-1948) is the dominant figure

25 From the political importance of the period of Reza Shah Pahlavi (1920-1939) are the reinforcement of nationalism that began in 1906 in the cultural, social and political aspects of Iranian society, and Westernization of the country. The Iranian nationalists formed by intellectuals who had, the experience of study and living abroad, particularly in France, praising the ancient Iran, tried to re-establish the social and cultural values of the modern age on the basis of recognition of the ancient traditions. They held that the era of best value that Iran was considered the pre-Islamic and Islamic period as the deterioration of the Iranian culture. The Pahlavi dynasty thus was set irrevocably down the road towards infusing the country with a form of secular nationalism, a path that would eventually bring it into conflict with the country's clerical class. Iranian nationalism was a deciding force in the 1951 movement to nationalize Iran's oil wealth., K. Abdi, *Nationalism, Politics and the Development of Archaeology in Iran*, *op.cit*, pp.51–76.

26 Born on 23 July 1879 in Celle, Germany. Studied architecture at the *Technische Hochschule* (later renamed Technical University) in Berlin, but also Assyriology, art history, and philosophy at the Friedrich-Wilhelms-Universität Berlin. In 1903 he passed his examination in structural engineering. Traveled extensively in Iraq and Iran in 1905-06 and became interested in doing excavations in Baghdad, Ctesiphon, Persepolis and Pasargadae. He presented his Ph.D. dissertation on Pasargadae in 1907. Traveled to Syria and Iraq with Friedrich Sarre, director of the Islamic Museum in Berlin in 1907. During his travels he became an expert in Islamic art. In 1909 he submitted his inaugural dissertation for professorship on Iranian rock reliefs, and the text was incorporated in the joint publication of Sarre and Herzfeld, Iranische Felsreliefs (Berlin, 1910), a pioneering and finely illustrated study of ancient

of the archaeology of Iran in the first years of 20s who in great extents contributed to the formation of the historical profile of pre-Islamic Iran. Ernst Herzfeld's scholarly accomplishments encompassed an immense chronological and disciplinary range; these far-ranging interests make Herzfeld and his scholarship the perfect starting point for a more comprehensive reassessment of the development of Iranian studies.

Herzfeld was first trained as an architect in *Technische Hochschule* (Technical University) of Berlin, but later thanks to his education in the *German school of Orientalistik* and art history became a good Iranologist and after spending two years at the archaeological excavations of *Deutsche Orient-Gesellschaft* in middle-east and receiving the best possible training available, became a celebrated archaeologist[27].

Ernst Herzfeld is the foremost specialist, of any nationality, in the field of Iranian archaeology; while the French delegation contributed little to the history of the Iran, Herzfeld contributed immensely in shaping the future of archaeology, institutionalizing special organizations, formulating specific norms and regulations for archaeological explorations in Iran and more importantly helping the new emerging Iranian archaeology to be liberated from French-influences domination.

During 1905-06 Herzfeld came to Iran for the first time and in 1907 Submitted his Ph.D. dissertation on Pasargadae and in 1909 his inaugural dissertation for professorship (*Habilitationsschrift*) on Iranian rock relief; during his first travel to Iran, Herzfeld, visited, mapped, photographed, and drew intensively many places, both pre-Islamic and Islamic monuments, most notably Samarra, Baghdad, Ctesiphon, Sistan, Persepolis, and Pasargadae which successively became the resources for his extensive excavations in archaeological sites of Iran.

Persian monuments of Pasargadae, Persepolis, Naqš-e Rostam, and other Achaemenid and Sasanian sites of Fārs province and western Iran; it has remained a handbook of Iranian archaeology to this day. In 1917 he was nominated as Associate Professor of Historical Geography and History of the Ancient Orient in Berlin. In 1920 he was promoted to become the first full Professor of Archaeology of the Middle East in the world.Dedicated important articles of Islamic architecture in Iran.In 1917, he was one of the founders of the German-Persian, which had significant influence on cultural exchanges between the two countries.His travels through Persia are described in his "Reiseberichte", which is an important for the Persian archaeology.

27 A. C. Gunter and S. R. Hauser, *Ernst Herzfeld and Near Eastern Studies, 1900–1950* in *Ernst Herzfeld and the Development of Near Eastern Studies, 1900-1950*, BRILL, Leiden, Boston, 2005, pp. 3-45.

Figure 1.8.
Designs from the Achaemenian inscriptions of the archaeological site of Persepolis.
E. Herzfeld, 1903-1935, in *Ernst Herzfeld papers*, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

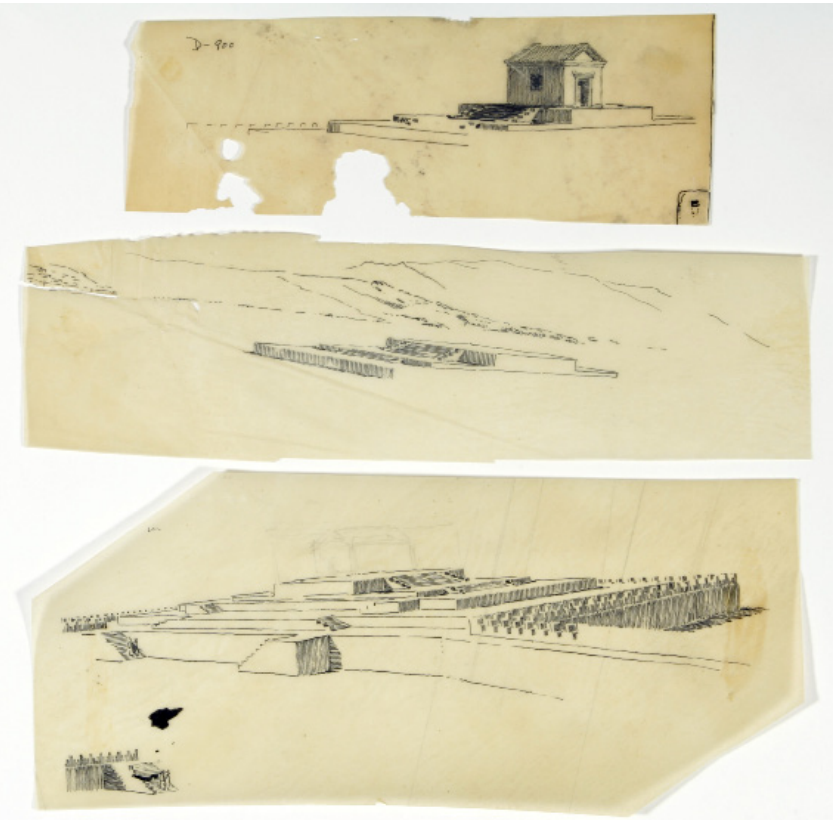


Figure 1.9.
Architectural representation of the tomb of Cyrus the Great as Pasargadae. E. Herzfeld, 1903-1935, in *Ernst Herzfeld papers*, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

For Herzfeld the concept of heritage was expansive: it ranged from what he called pre-historic "sites of ancient cult," to the tomb of Cyrus the Great at Pasargadae, the ruined splendor of the Achaemenian capital of Persepolis, Sasanian ruins and Iran's early Islamic[28] past.

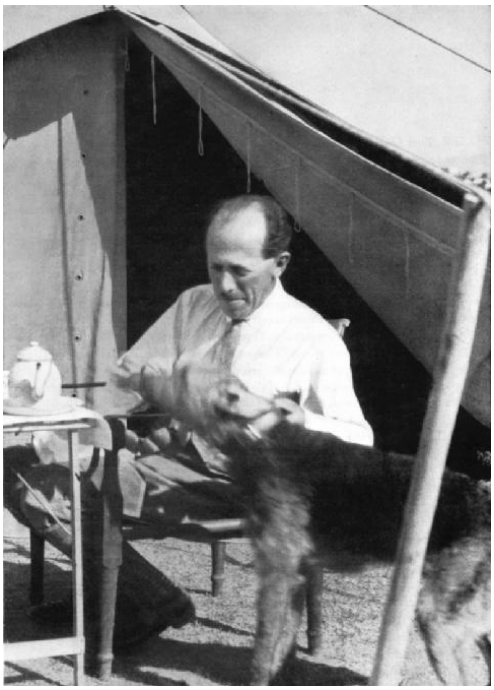


Figure 1.10.
Ernst Herzfeld at Persepolis; during his first travel to Iran.
C. D. Reimer, Berlin, 1928.
Herzfeld gathered and collected important and necessary documentation for outlining eventual exploration programs.

As the first full professor of Near Eastern Archeology in the world, Herzfeld made vital contributions, to both Islamic and pre-Islamic history of Iran[29]; two synthetic books, Archaeological History of Iran (1935) and Iran in the Ancient East (1941), were the brilliant results of the travels of Herzfeld and his excavations

28 During his travels and by his cooperation with Sarre, director of the Islamic Museum in Berlin, Herzfeld became an expert on Islamic archaeology. His excavations at the vast ruins of Samarra, in Iraq, the first excavations of an Islamic site in the Near East, resulted in six volumes of final reports. Moreover, his reports as field director between 1911 and 1913 and his articles helped to define Islamic art in Western research and were important in creating the field of Islamic art history., J. Kroger, *Ernst Herzfeld and Friedrich Sarre* in Ernst Herzfeld and the Development of Near Eastern Studies, 1900-1950, BRILL, Leiden, Boston, 2005, pp. 45-103.

29 Regarding the study of the history and culture of the Neolithic, Achaemenid, Parthian, and Sasanian periods, Herzfeld translates and publishes new texts and inscriptions in Assyrian, Old Persian, Middle Persian, and Arabic and publishes two important articles to Islamic architecture in Iran "Khorasan," in Der Islam 11, 1921 and "*Die Gumbadh-í Alawiyyân und die Baukunst der Ilkhane in Iran*," in A volume of Oriental Studies presented to E.G. Browne in 1922.

from 1928 onward of both prehistoric and historical sites in Fars (and, briefly, in Sistan).

Figure 1.11.
The document n.5992 of 1927 which gives Herzfeld the permission of archaeological researches in Sistan in order to complete his inventory of the national monuments.
National Archives of Iran, Tehran, Iran.

In 1923 Herzfeld as the official councilor of the Iranian government in archaeological matters prepared a detailed description of the current state of the ruins of Persepolis and preliminary plans for their preservation entitled "*Rapport sur l'état actuel des ruines de Persépolis et propositions pour leur conservation*"[30]; two years later, in 1925, Herzfeld prepared the first record of the historical monuments, containing a list of 88 monuments considered having historical values, which was issued by The National Monuments Council of Iran; this index then was completed and finalized

30 E. Herzfeld, *Rapport sur l'état Actuel des Ruines de Persépolis et Propositions Pour leur Conservation*, Berlin, 1928.

in 1928 by André Godard[31] (1881-1965), the director of the department of archaeology of Iran.

In the early 1930s, many of the new expeditions sponsored by numerous institutions[32] were executed in different parts of Iran mostly concentrated in prehistoric sites. The abolition of the French monopoly on archaeological matters caused significant augmentation of foreign scholar's presence and accelerated commencement of extensive excavations in other important archaeological sites of Iran; moreover, the commercial values of archaeological sites made Iran an interesting destination for European countries and encouraged foreign governments to send their scholars to Iran for scientific/politic matters.

The augmentation of the archaeological explorations in different parts of Iran and the necessity of an unique approach in order to control and organize archaeological activities resulted that in 1925, on the request of the National Monuments Council of Iran, Ernst Herzfeld prepared the drafts[33] for the first law in conservation of the national heritage which was approved by the parliament in 1930 as the Law of Antiquity defining and regularizing the legal approaches regarding the execution of the archaeological

31 French architect, archeologist, art historian, and director of the Archeological Services of Iran, A graduate of the École des Beaux-Arts of Paris. He first visited the Middle East in 1910. In 1912, he went to Egypt to continue his research on Islamic architecture. He became the architect of the French Archaeological Delegation in Afghanistan in 1922. In 1925 he organized an exhibition on the achievements during excavations at Bamian, a center of Buddhist pilgrimage. In 1928, he was asked to take the post of Director of the Archaeological Service of Iran. In 1929 he was in Iran and prepared a list of national works included 385 works in 1929. Compiled the first law on cultural heritage known law of conservation of national heritage in 1930. Designed the National Museum of Iran in 1936 and became its first director.

32 Among important institutions that sponsored new expeditions are University of Pennsylvania Museum, Musée du Louvre, Royal Swedish Academy., M. Yazdani, *Heyathaye Bastanshenasy dar Iran* in *Ganjine-ye Asnad*, Tehran, 2005, pp. 95-111.

33 In 1923 Herzfeld is asked to prepare a description of the current state of the ruins of Persepolis and plans for their conservation. Translated as "Rapport sur l'état des ruines de Persepolis Actuel et propositions pour leur conservation."This report was the beginning of the involvement of Herzfeld in the Persian national heritage and the organization of the department of antiquities and asked to prepare various drafts of a general law about the conservation of the national heritage. In 1926 he was asked to serve as a consultant archaeologist Iran and became the government's candidate for the director of the department of antiquities., A. Mousavi, *Ernst Herzfeld, Politics, and Antiquities Legislation in Iran* in *Ernst Herzfeld and the Development of Near Eastern Studies, 1900-1950*, BRILL, Leiden, Boston, 2005, pp. 445-477.

activities and the tutelage of the national registered archaeological patrimony.

Although, in 1927, the French monopoly had been canceled by the nationalistic government of Reza Shah Pahlavi (reign 1920-1939), however, the presence of French scholars remained and continued to influence archaeologically related disciplines. According to the agreement between France and Iran, French architect and historian of art, Andre Godard came to Iran to assist Iranian authorities to establish a museum for preserving the found objects[34].

After the abolition of the French monopoly on archaeological matters of Iran, between 30s and 40s many important excavations were done in the archaeological sites of Iran by American archaeologists, as the most important rivals of the French archaeologists; from 1929 to 1939 American historian of art, Arthur Upham Pope[35] (1881-1969) led many expeditions to Iran to photograph and document architectural monuments. In 1930, Pope established the American Institute for Persian Art and Archaeology[36]; moreover, he managed to organize exhibitions of Persian art which contributed in great extents to introducing the art and architecture of Iran to the worldwide; the result of his activities are published in six massive and well-illustrated volumes entitled as "A Survey of Persian Art"[37], published by

34 Moreover, Godard designs the country's first modern archaeological museum, the I*ran Bastan Museum* (*Muza-ye Irān-e bāstān*), the campus of the University of Tehran and participated in establishing the Faculty of Fine Arts, included the first professional school of architecture in the country, by merging the *School of Applied Arts* and *Crafts* (*Madrasa-ye Sanāye wa pīša wa honar*) with the School of Architecture (*Madrasa-ye ālī-e me'mārī*).

35 Arthur Upham Pope (1881-1969), was an American archaeologist and historian of Persian art. Born in Phenix, Rhode Island, graduated from Worcester Academy in 1899, and taught at Amherst College and the University of California. He married fellow Persian art historian, Phyllis Ackerman, in 1920.in 1925, he came to Iran to complete research and serve as an art adviser to the Iranian government. He traveled around the world giving lectures and organizing exhibitions of Persian art.Their efforts led to the establishment in 1925 of the American Institute for Persian Art and Archaeology, which later became the Asia Institute, in New York City and their unique programs of research, publications, exhibitions and educational instruction continued at the Institute and around the world until their retirement. Pope is often credited with being responsible for helping revive the spirit of Iran's glorious past in the Pahlavi era.

36 In 1925 Pope established the American Institute for Persian Art and Archaeology, which later became the Asia Institute, in New York City.

37 The final volume of A Survey of Persian Art appeared just before the outbreak of World War II in 1939. Acclaimed by scholars and reviewers alike,

Oxford University Press in 1938-39.

The foreign research institutions operating in Iran gradually enlarged their interests from the Mesopotamian and Elamite civilizations to include the Achaemenid period and later in the 30s to the monuments of early Islamic Iran[38]. American excavations sponsored by the University Museum of the University of Pennsylvania, the Pennsylvania Museum of Art and Oriental Institute of Chicago had important results regarding the (pre) history and culture of Iran. Under the sponsorship of Oriental institute of Chicago important Islamic archaeological zones of Iran were excavated and studied for the first time[39] and during 1934-1936 a comprehensive aerial survey of the archaeological sites in Iran in the form of a combination of aerial photography

the Survey was an immediate success, and after some years the entire edition went out of print; presented in a graceful, lucid text (3,816 pages), copious line drawings (2,129), and excellent photographic reproductions (3,737), is Persia's testimony to culture: architecture, pottery, painting, textiles, sculpture, metalwork, calligraphy, carpets, jewelry, seals, coinage and iconography. Especially lovely are the many line drawings and color reproductions of textile designs. Chosen for their maximum demonstrative value from more than 200 collections in more than 30 countries, these reproductions illustrate Persian art in all its facets and reveal Persian civilization to have been highly gifted and inventive from almost the beginning of human creativeness.
v. 1. Text: Pre-Achaemenid, Achaemenid and Parthian periods.
v. 2. Text: Sāsānian periods.
v. 3. Text: Architecture.
v. 4. Text: The ceramic arts, calligraphy and epigraphy.
v. 5. Text: The art of the book, and textiles.
v. 6. Text: Carpets, metalwork and minor arts.
v. 7. Plates, 1-257: Pre-Achaemenid, Achaemenid, Parthian and Sāsānian periods.
v. 8. Plates, 258-510: Architecture of the Islamic periods.
v. 9. Plates, 511-554, 812-980: Architectural ornament and the art of the book.
v. 10. Plates, 555-811: Pottery and faience. v. 11. Plates, 1107-1275: Carpets.
v. 12. Plates, 981-1106, 1276-1482: Textiles, metalwork, minor arts.
v. 13, fasc. 1. Addendum A-the Andarz Nama; proceedings, the IVth international congress of Iranian art and archaeology, April 24-May 3, 1960.
v. 14. Proceedings, the IVth International Congress of Iranian Art and Archaeology, Part A, April 24-May 3, 1960.
v. 15. Bibliography of Pre-Islamic Persian art to 1938.
v. 16. Bibliography of Islamic Persian art to 1938.

38 M. Yazdani, *Heyathaye Bastanshenasy dar Iran,op.cit,* pp. 95-111.

39 German archaeologist Erich F. Schmidt during 1934-36 investigated the mounds of Rayy, the great Islamic city on the outskirts of modern Tehran, under the sponsorship of the Museum and the Boston Museum of Fine Arts and carried the chronology of the city back through the first centuries of Islam to the prehistoric levels of the town.

Figure 1.12.
Isfahan, Iran, the Shah Piazza. 1937
Photo n. AE950, Persepolis and ancient Iran:Aerial Survey Flights, 1937, Oriental Institute Photographic Archives, Oriental Institute of Chicago.

Figure 1.13.
Istakhr, Sasanian settlement in the province of Fars.
Photo n. AE57, Persepolis and ancient Iran:Aerial Survey Flights, 1937, Oriental Institute Photographic Archives, Oriental Institute of Chicago.

During the activities of the Oriental Institute of Chicago, Schmidt managed to photograph many of historic/archaeological settlements of the country.
The aerial photographic operations were divided into three parts: (1) flights over excavations already in progress, such as Persepolis and Rayy; (2) aerial documentation and mapping of sites under consideration; and (3) reconnaissance and exploration flights over archaeologically unknown areas of Iran.

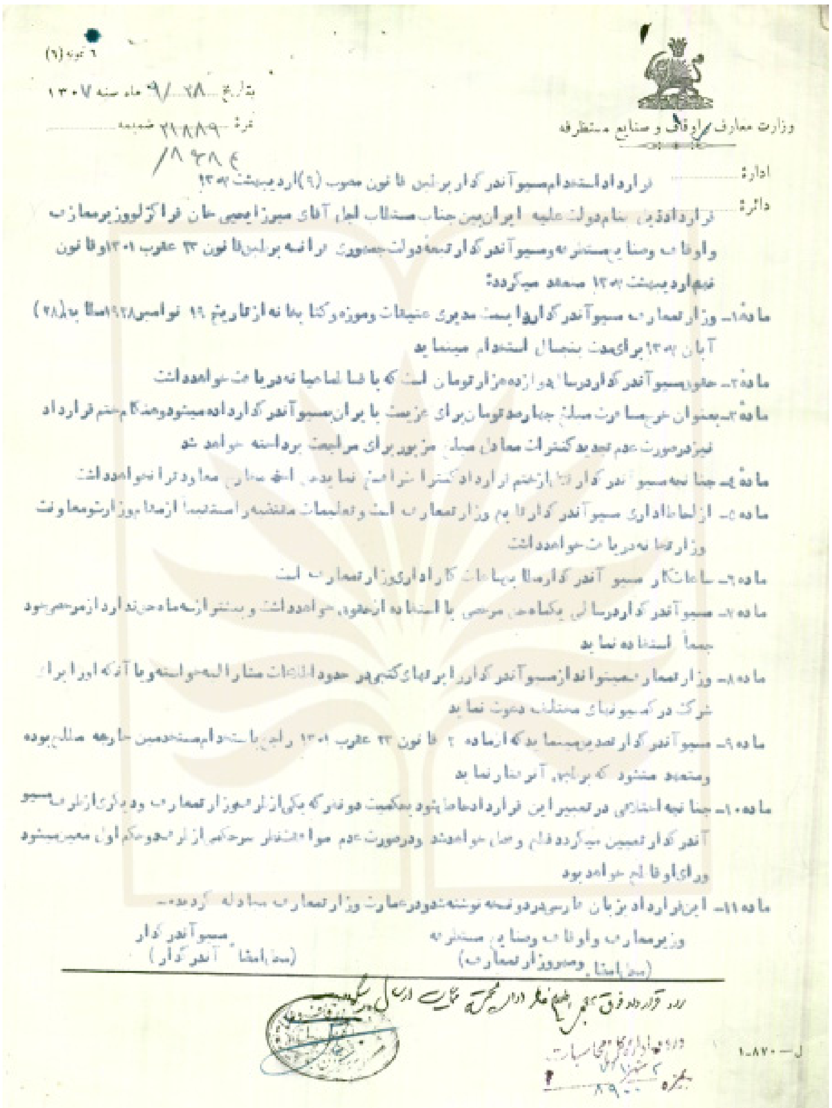
and ground observation was executed.
In the late 20s official archaeological excavations in Persepolis were started by the sponsorship of Oriental Institute of Chicago which continued till the last years of the 30s; during the activities of Oriental Institute of Chicago which had Herzfeld as the field director from 1931-1934 and Erich Friedrich Schmidt[40] (1897-1964) from 1934[41] and 1939 systematic investigation of the royal structures at the terrace of Persepolis are executed and major parts of the structures were unearthed. In this period, more than monumental work of Oriental Institute of Chicago at Persepolis which resulted in major publications by the same name, other archaeological sites especially Achaemenid architectural monuments, appeared in important publications and significant contributions regarding the body of knowledge of pre-Islamic history of Iran.

Department of Archaeology in 30s

Based on the agreement between Iran and France, in 1930, the department of archaeology of Iran was established and till 1960, its director was the French architect Andre Godard. As the director of Archaeological service, Godard encouraged individual studies of Persian architectural monuments, began systematic researches on historic monuments of Iran and published the results of archaeological and architectural investigations in elaborate publications including high quality photographs and illustrations and architectural drawings and inscriptions known as *Athār-é Īrān: Annales du Service Archéologique de l'Īrān*, published in French from 1936 to 1949.
The volumes of *Athār-é Īrān: Annales du Service Archéologique de l'Īrān*, provide a testimonial documentary of the changes that the ancient monuments of Iran have undergone in the past decades. Despite being valuable regarding the introducing the

40 Erich F. Schmidt was at the Oriental Institute in the early to mid 1930s when he excavated at Persepolis, Rayy, and Luristan. He was a pioneer of remote sensing techniques, who in 1935 conducted one of the earliest comprehensive planned aerial surveys of archaeological sites in Iran and the middle east.

41 In 1935, he accepted the directorship of the Oriental Institute's expedition at Persepolis. He continued the systematic investigation of the royal structures at Persepolis, the soundings at the prehistoric mounds of Tall-i-Bakun, the fortified area at the foot of the royal tombs at Naqsh-i-Rustam, and the Islamic city of Istakhr. Also, in 1935 and 1938 Schmidt led the earliest archaeological survey parties into Luristan, in the mountainous of western Iran.



وزارت معارف و اوقاف و صنایع مستظرفه

تاریخ ۲۸/۹ ماه سنه ۱۳۰۷
نمره ۲۱۸۸۹ ضمیمه

اداره
دائره

قرارداد استخدام مسیو آندره گدار برطبق قانون مصوب (۹) اردیبهشت ۱۳۰۷

قرارداد ذیل بنام دولت علیه ایران بین جناب مستطاب اجل آقای میرزا یحیی خان قراگزلو وزیر معارف و اوقاف و صنایع مستظرفه و مسیو آندره گدار تبعه دولت جمهوری فرانسه برطبق قانون ۲۳ عقرب ۱۳۰۱ و قانون نهم اردیبهشت ۱۳۰۷ منعقد میگردد:

ماده ۱- وزارت معارف مسیو آندره گدار را بسمت مدیری عتیقات و موزه و کتابخانه از تاریخ ۱۹ نوامبر ۱۹۲۸ مطابق با (۲۸) آبان ۱۳۰۷ برای مدت پنجسال استخدام مینماید

ماده ۲- حقوق مسیو آندره گدار در سال دوازده هزار تومان است که باقساط ماهیانه دریافت خواهد داشت

ماده ۳- بعنوان خرج مسافرت مبلغ چهارصد تومان برای عزیمت بایران بمسیو آندره گدار داده میشود و هنگام ختم قرارداد نیز در صورت عدم تجدید کنترات معادل مبلغ مزبور برای مراجعت پرداخته خواهد شد

ماده ۴- چنانچه مسیو آندره گدار قبل از ختم قرارداد کنترات را فسخ نماید حق اخذ مخارج مراجعت را نخواهد داشت

ماده ۵- از لحاظ اداری مسیو آندره گدار تابع وزارت معارف است و تعلیمات مقتضیه را مستقیما از مقام وزارت و معاونت وزارتخانه دریافت خواهد داشت

ماده ۶- ساعات کار مسیو آندره گدار مطابق ساعات کار اداری وزارت معارف است

ماده ۷- مسیو آندره گدار در سال یکماه مرخصی با استفاده از حقوق خواهد داشت و بیشتر از سه ماه حق ندارد از مرخصی خود جمعا استفاده نماید

ماده ۸- وزارت معارف میتواند از مسیو آندره گدار برای کارهای کتبی در حدود اطلاعات مشار الیه خواسته و یا آنکه او را برای شرکت در کمیسیونهای مختلف دعوت نماید

ماده ۹- مسیو آندره گدار تصدیق مینماید که از ماده ۲ قانون ۲۳ عقرب ۱۳۰۱ راجع باستخدام مستخدمین خارجه مطلع بوده و متعهد میشود که برطبق آن رفتار نماید

ماده ۱۰- چنانچه اختلافی در تعبیر این قرارداد حاصل شود بحکمیت دو نفر که یکی از طرف وزارت معارف و دیگری از طرف مسیو آندره گدار تعیین میگردد حل و فصل خواهد شد و در صورت عدم موافقت نظر حکمین از طرف [illegible] حکم اول معین میشود و رای او قاطع خواهد بود

ماده ۱۱- این قرارداد بزبان فارسی در دو نسخه نوشته شده و در عمارت وزارت معارف مبادله گردید.

وزیر معارف و اوقاف و صنایع مستظرفه
(محل امضاء وزیر معارف)

مسیو آندره گدار
(محل امضاء آندره گدار)

ل — ۱۰۸۷۰

Figure 1.14.
The contract between the Iranian government and Andre Godard in 1927.
National Archives of Iran, Tehran, Iran.
Due to the agreement between the Iranian and French government at the time of the abolition of the French monopoly on the archaeological matters of the country, the French scholars could remain and continue their activities in Susa and in return the French government sent Andre Godard to assist Iranian authorities to establish the department of antiquities. In this contract Andre Godard is called as the director of the department of antiquities and its museum and library. the duration of his contract is fixed for 5 years which will be renewed for 5years.

historic patrimony of Iran, however the documents published on these monuments rarely exceeded plans, prepared based on the theory of shadows, and sections and Godard never provided a detailed design that could be useful for a profound study of the monuments.[42]

During his directorship, as the director of the department of archaeology and referring to the Law of antiquity, Godard managed to classify and make necessary documentations for the registered national monuments and for the monuments which should be registered in the index of national monuments.

Godard employed expert traditional masons "Usta" for managing necessary restorations on these monuments on the request of local branches of archaeological department thorough Iran when needed; the method of interventions were still that of traditional and far from European methods in those years; in fact, like other French scholars also Godard, was more interested in archaeology[43] and history of art than to conservation activities in architectural monuments, this resulted that historic monuments remained still in threatening situation and in the need of serious attentions.

The presence of Godard highly influenced for more than 30 years disciplines of archaeology and architecture; Godard trained the first generation of Persian architects professionally trained in Iran during his directorship as the dean of the Faculty of Fine Arts of Tehran; thanks to his colleagues, mostly graduated from the École des Beaux-Arts in Paris, Godard modeled the French curriculum[44] on system of ateliers, the syllabus and projects taught there were translated into Persian and used in teaching. Despite being the director of Archaeological service of Iran[45] and the first dean of the Faculty of Fine Arts, Godard never inserted Heritage and

42 G. Zander, C*onsuntivo di quindici anni di collaborazione Italo-Iraniana(1964-1979). Questioni di metodo, in Studi e restauri di architettura Italia-Iran* in *Studi e Restauri,* Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1980, p 101.

43 He was among the first to be interested in the bronze objects that had been found in Luristan. Godard went himself to the sites where they had been found and visited the necropolises, where these bronzes came, and devoted an important book to them.

44 The curriculum was planned in two parts, each taking two years and leading to a bachelor's degree. Teaching and practical work were done in studios, each directed by a single professor. The three workshops in architecture led by Dubrulle, Siroux, and Mohsen Forūghī were particularly important because of their outstanding teachers. In painting there were two studios. In sculpture there was initially one workshop with only one student, under the supervision of the well-known sculptors.

45 He held this position until 1953 and again from 1956 to 1960.

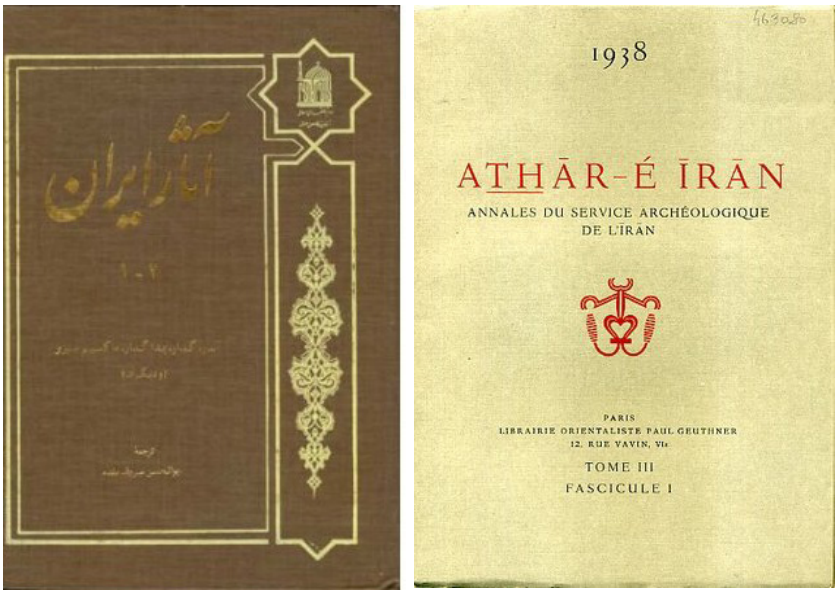
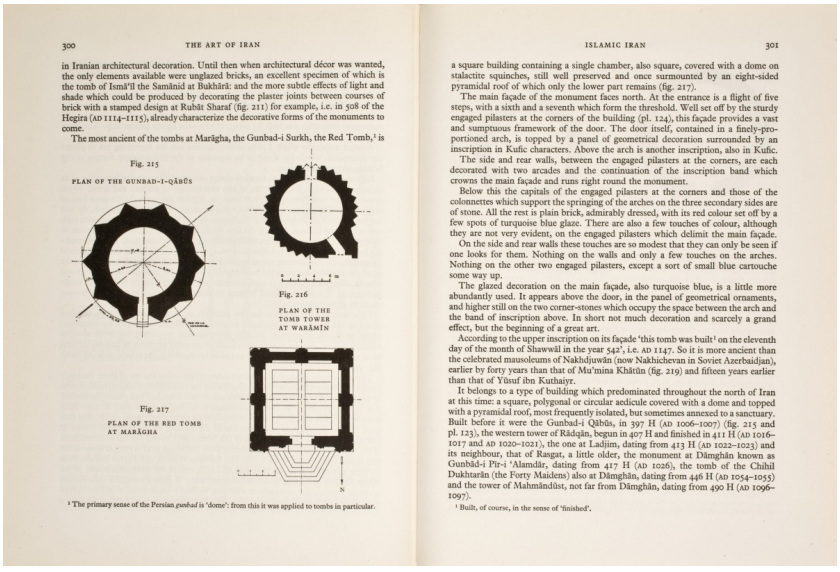


Figure 1.15.
Cover of the *Athār-é Īrān: Annales du Service Archéologique de l'Īrān*.
The Athār-é Īrān was one of the initiatives of the department of archaeology under the directorship of Andre Godard.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in Iranian architectural decoration. Until then when architectural décor was wanted, the only elements available were unglazed bricks, an excellent specimen of which is the tomb of Ismā'īl the Sāmānid at Bukhārā: and the more subtle effects of light and shade which could be produced by decorating the plaster joints between courses of brick with a stamped design at Rubāt Sharaf (fig. 211) for example, i.e. in 508 of the Hegira (AD 1114–1115), already characterize the decorative forms of the monuments to come.

The most ancient of the tombs at Marāgha, the Gunbad-i Surkh, the Red Tomb,[1] is

Fig. 215
PLAN OF THE GUNBAD-I-QĀBŪS

Fig. 216
PLAN OF THE TOMB TOWER AT WARĀMĪN

Fig. 217
PLAN OF THE RED TOMB AT MARĀGHA

[1] The primary sense of the Persian *gunbad* is 'dome': from this it was applied to tombs in particular.

ISLAMIC IRAN 301

a square building containing a single chamber, also square, covered with a dome on stalactite squinches, still well preserved and once surmounted by an eight-sided pyramidal roof of which only the lower part remains (fig. 217).

The main façade of the monument faces north. At the entrance is a flight of five steps, with a sixth and a seventh which form the threshold. Well set off by the sturdy engaged pilasters at the corners of the building (pl. 124), this façade provides a vast and sumptuous framework of the door. The door itself, contained in a finely-proportioned arch, is topped by a panel of geometrical decoration surrounded by an inscription in Kufic characters. Above the arch is another inscription, also in Kufic.

The side and rear walls, between the engaged pilasters at the corners, are each decorated with two arcades and the continuation of the inscription band which crowns the main façade and runs right round the monument.

Below this the capitals of the engaged pilasters at the corners and those of the colonnettes which support the springing of the arches on the three secondary sides are of stone. All the rest is plain brick, admirably dressed, with its red colour set off by a few spots of turquoise blue glaze. There are also a few touches of colour, although they are not very evident, on the engaged pilasters which delimit the main façade.

On the side and rear walls these touches are so modest that they can only be seen if one looks for them. Nothing on the walls and only a few touches on the arches. Nothing on the other two engaged pilasters, except a sort of small blue cartouche some way up.

The glazed decoration on the main façade, also turquoise blue, is a little more abundantly used. It appears above the door, in the panel of geometrical ornaments, and higher still on the two corner-stones which occupy the space between the arch and the band of inscription above. In short not much decoration and scarcely a grand effect, but the beginning of a great art.

According to the upper inscription on its façade 'this tomb was built[1] on the eleventh day of the month of Shawwāl in the year 542', i.e. AD 1147. So it is more ancient than the celebrated mausoleums of Nakhdjuwān (now Nakhichevan in Soviet Azerbaidjan), earlier by forty years than that of Mu'mina Khātūn (fig. 219) and fifteen years earlier than that of Yūsuf ibn Kuthaiyr.

It belongs to a type of building which predominated throughout the north of Iran at this time: a square, polygonal or circular aedicule covered with a dome and topped with a pyramidal roof, most frequently isolated, but sometimes annexed to a sanctuary. Built before it were the Gunbad-i Qābūs, in 397 H (AD 1006–1007) (fig. 215 and pl. 123), the western tower of Rādqān, begun in 407 H and finished in 411 H (AD 1016–1017 and AD 1020–1021), the one at Ladjim, dating from 413 H (AD 1022–1023) and its neighbour, that of Rasgat, a little older, the monument at Dāmghān known as Gunbād-i Pīr-i 'Alamdār, dating from 417 H (AD 1026), the tomb of the Chihil Dukhtarān (the Forty Maidens) also at Dāmghān, dating from 446 H (AD 1054–1055) and the tower of Mahmāndūst, not far from Dāmghān, dating from 490 H (AD 1096–1097).

[1] Built, of course, in the sense of 'finished'.

Figure 1.16.
The Athār-é Īrān: Annales du Service Archéologique de l'Īrān.
Doc n. AKP128.05, Fine Arts Library, Radcliffe Institute for Advanced Study, Harvard University.
The *Athar-é Iran* introduces the national monuments of the country with general information and drawings.

conservation neither as part of the official syllabus in this faculty nor in any institute of higher education in Iran; this best explains why most architects and engineers had a limited understanding of the issues around conservation since 50s.

1.2. Archaeology and legislative approaches; evolutions from the 30s on

The Law of Antiquity

The Law of Antiquity of 1930 defines first legislative approaches regarding the preservation of historical patrimony. Although this Law in great parts is regard to legitimization and stabilization of a unique legal[46] national approach for excavating in archaeological sites, however primary approaches versus the necessity of conservation of historical patrimonies are identifiable thorough articles of this Law.

The influences of the two of the most well-known experts of Persian archaeology in those years and especially the role of French architect/archaeologist André Godard in finalizing such law is very important; as one of the first duties of Andre Godard as the director of antiquities under the jurisdiction of the Ministry of Public Education, was formulating policies for the archaeological and historic preservation and restoration in Iran. Godard compiled the draft which Herzfeld had prepared in 1925, under the title of "Code of Antiquities", and finalized it as the first law of antiquity in 20 articles which gathered various legislative aspects about antique objects and historical monuments, united legal approaches in relation to the archaeological activities and defined limits for archaeological excavations in order to conservation of national heritage in Iran.

The year after, in international level, as the result of increasing global attentions to the historical patrimony and the necessity of its conservation for the future generations, the First International Congress of Architects and Technicians of Historic Monuments, held in 1931 in Athens, issues as its final result the famous seven point manifesto called "Athens Charter"[47], the first international

46 Different articles of this law reflect legal support regarding the necessity of preserving the objects inserted in the index of National Heritage.The penalty for the destruction and damaging the registered monuments, defining limits for owners of the private minor registered monuments and defining limits for excavating in archaeological sites are among the cited articles of the Law of Antiquity.

47 The Athens Charter for the Restoration of Historic Monuments was produced by the participants of the First International Congress of Architects and Technicians of Historic Monuments organized by the International Museums Office and held in Athens in 1931. The seven points of the manifesto were:
- to establish organizations for restoration advice
- to ensure projects are reviewed with knowledgeable criticism

charter in relation to the conservation of the historical patrimony which became the basis of similar charters about restoration and conservation of the historical patrimony, as the manifest of the congress.

Although present famous foreign archaeologists and architects, who were completely aware of the current cultural movements regarding the conservation of historic monuments in international context, have worked in preparation of the Law of Antiquity, however, this law is limited, in major parts, to define legal approaches of archaeological activities and regularizing its commercial orientations and never goes beyond to extend its attentions to conservative attentions of archaeological and historical monuments; for example, this law never talks about post-excavation conservation in archaeological fields.

The Law of Antiquity recommends and emphasizes the necessity of registering[48] the historic monuments[49], legal approaches

- to establish national legislation to preserve historic sites
- to rebury excavations which were not to be restored.
- to allow the use of modern techniques and materials in restoration work.
- to place historical sites under custodial protection.
- to protect the area surrounding historic sites.

48 However, due to the lack of a coherent definition of the concepts like "antique", " monuments" the registered constructions in the index of national monuments were just limited to pre-Islamic works and the monuments constructed till 1794. In 1930 with the law of the "foundation of the communes", modernization and transformation were began in the old tissues and in 1933 the law '"construction and development of the streets and roads" was approved; destruction and modernization of old fabrics to make new buildings and wide streets for vehicles characterized the nature of urban development programs of the 30s; this trend caused a lot of damage in historic contexts and monuments;, during the urban development programs of the 30s, important part of historic centers of old cities were put at risk of destruction; destruction of the historic walls of Tehran in 1932 to provide the ground for the urban development and providing wide streets for circulating new imported cars is just an example of the activities of the years. In general "Renovation" and "Demolition" were two characterizing approaches of urbanism of the years 30s,finalized to create a beautiful urban landscape composed of new buildings designed in the unique form posted on the large streets designed based on the European model of "Boulevard" for the new imported cars; moreover the old streets of the historical parts of the cities were usually modified, were widened, in order to give sufficient place for the entrance of the cars and the motor vehicles into internal parts of the "Old city".

49 This law introduces the Department of Archaeology as the responsible to prepare and update a list including all national works of historical or industrial type and registering them after diagnosis and written consent of the Ministry of Education.

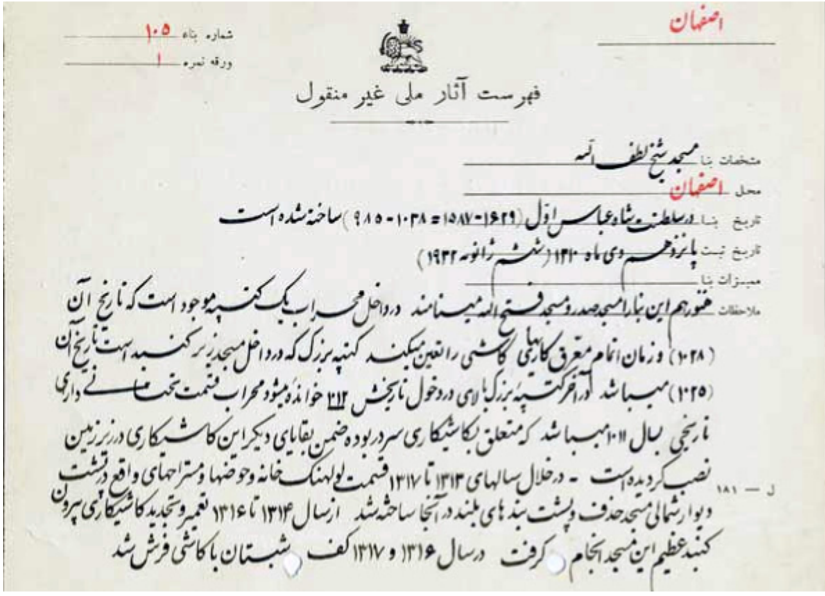
regarding registered historic monuments; for the first time, in this law the government is officially nominated as the responsible of making a list (and keeps it always updated) and conserving what is defined, under certain circumstances that are described within different articles of present law, as the national work. Moreover, in this law the activities which result the penalty for the authors and the law also describes the obligation of the individuals who own or find a historical object or building and in each case the relative duties are specified. The articles 11-16 of the law exclusively concern about excavations, including specifying scientific from commercial excavation, and the obligations of the government and who discover antique objects during excavations. The last three articles of the law define certain conditions for merchandising the antique objects and in the last article emphasizes again on the importance of this as the unique condition for ulterior permission for excavations.

It is recommended that the registration of a building in the index of national monuments should be done after verifying and revealing its historicity and importance; the article III of "Executive decree" of the Law of Antiquity emphasizes that the registration of a certain monument in the index of national monuments should be accompanied and preceded by sufficient documentations. The accompanying dossier for a monument, which should be prepared prior to its registration, should give accurate description, accompanied by necessary mapping and photographs including detailed maps, sections, elevations and description of ornamental, decoration and restored parts, and detailed information about its history, its transformations and eventual interventions it experienced with exact specification of these interventions, identifying eventual restorations with specifying the date and responsible(s) of restorations.

The transportability of the decorations and the collapsed parts of the buildings and monuments, which defines them as movable objects, becomes in some extent problematic while in 60s, conservative principles necessities moving of found objects of the archaeological sites held in museums for integrating the lost parts of the buildings in restoration.

The *"Executive decree" of the Law of Antiquity* in 1932

In 1932, the "Executive decree" of the Law of Antiquity gives accurate descriptions of the articles of the Law of Antiquity and introduces the the Department of Archaeology as the



اصفهان

شماره بناء ۱۰۵

ورقه نمره ۱

فهرست آثار ملی غیر منقول

مشخصات بنا مسجد شیخ لطف الله

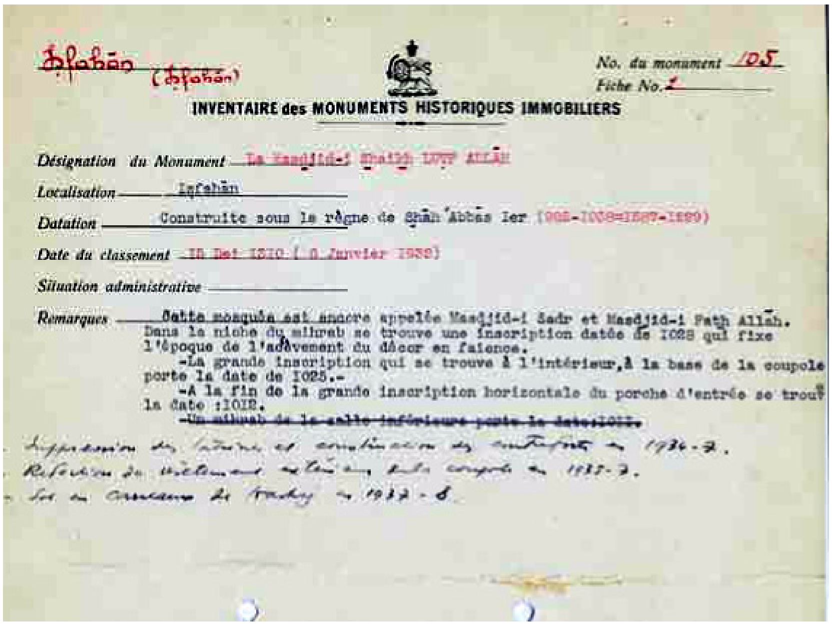
محل اصفهان

تاریخ بنا در سلطنت شاه عباس اول (۱۶۲۹-۱۵۸۷ = ۱۰۳۸-۹۸۵) ساخته شده است

تاریخ ثبت پانزدهم دی ماه ۱۳۱۰ (ششم ژانویه ۱۹۳۲)

ممیزات بنا

ملاحظات هنوز هم این بنا را مسجد صدر و مسجد فتح الله میخوانند در داخل محراب یک کتیبه موجود است که تاریخ آن



Isfahān (Isfahān)

No. du monument 105

Fiche No. 1

INVENTAIRE des MONUMENTS HISTORIQUES IMMOBILIERS

Désignation du Monument La Masdjid-i Shaikh LUTF ALLĀH

Localisation Isfahān

Datation Construite sous le règne de Shāh 'Abbās Ier (996-1038=1587-1629)

Date du classement 15 Dei 1310 (6 Janvier 1932)

Situation administrative

Remarques Cette mosquée est encore appelée Masdjid-i Sadr et Masdjid-i Fath Allāh.
Dans la niche du mihrab se trouve une inscription datée de 1028 qui fixe l'époque de l'achèvement du décor en faïence.
-La grande inscription qui se trouve à l'intérieur, à la base de la coupole porte la date de 1025.-
-A la fin de la grande inscription horizontale du porche d'entrée se trouve la date :1012.
~~-Un mihrab de la salle inférieure porte la date:1022.~~

Figures 1.17&1.18.

The Sheikh Lotfallah Mosque; Documentation prepared by Andre Godard. National Archives of Iran, Tehran, Iran.

As the director of the Iranian service of archaeology, Godard managed to prepare a dossier historic monument registered in the index of national monuments. These documentations were prepared in French and Persian and based on the recommendation of the Law of Antiquity, for every monument basic information like nomination, location, date of construction, date of registration, etc. were collected and inserted with eventual graphic documentations.,

official responsible for executing the necessary actions for the preservation of the buildings[50] registered in the index of national monuments.

The "Executive decree of the law of Antiquity" in 1932 gives the exact definition of the concept of "antique" and classifies "antique" objects into two main categories of movable and immovable; object classified in these categories are recognized by the Department of Archaeology as the national objects to be preserved. From the conservative point of view this classification of the "antique" objects has its own advantages and disadvantages. From one hand, the concept of "antique" is extended from monuments to sites and from artificial to natural objects; all grounded and not easily portable objects, buildings and human constructions as well as natural environment and historic caves having ancient works are called as antique immovable objects which for their preservation the Department of Archaeology is called to prepare specific programs and instruments.

Legislative evolutions in archaeological matters from 1940s on

The "law of antiquity" considered only existing buildings constructed before 1794 as monuments for insertion in the national monuments index(art.1); in 1944, the monuments constructed during the Qajar[51] dynasty, particularly the public monuments, (till 1925) were added to the list of the national registry list.

The other important step happens in 1958, when "The decree on preserving historic buildings and national works" obliges archaeological department[52] of each city to do all the necessary activities for the conservation of the historic buildings and the registered works (having tourist interest), in order to maintain these buildings always health and clean and forbids all the unconfirmed activities in these buildings.

In 1968, The law of acquisition of the grounds, buildings and structures for preservation of the historic and archaeologically

50 In the case that the registered building is of a private owner, as foreseen in this law the right to property for the owners remain protected, however, the owner should not prohibit the government to do the protective measures.

51 The Qajar dynasty(1781-1925)

52 Archeological department and its branches in each city, and the National Monuments Council of Iran were the principal responsible for the preservation and the restoration of the historic buildings., A. Tajvidi, *Maintain our beautiful and ancient buildings*, in *"Art and People"*, No.10, Tehran, 1963.

important monuments and their surrounding boundaries[53] is approved and in its first article[54] , the minister of the Culture and Art is called to make the necessary activities[55] for the acquisition of the grounds, fabrics belonging to privates or institutions for technical aspects such as maintain, preparation and the restoration of the monuments and for better visional aspects and also for scientific aspects such as excavations and the necessary archaeological researches.

In 1973, The law of registration of national heritage is modified and lets the minister of the Culture and Art, to add the nationally and historically important buildings, regardless of the time of construction, to the national registry list[56].

53 The importance of this law is from the point of view of liberation of the boundaries of the historic buildings.

54 The other six articles of this law define the conditions and the procedure of acquisition of the grounds subject of this law and the relative duty of the government. The misinterpretations of this law caused the isolation of the historic monuments and the respective destruction of the surrounding boundaries in order to bettering their visional aspects.

55 The role of the National Association of Conservation of Ancient Monuments regarding approval of this law is very important.

56 The importance of this law is regarding the responsibility of the academic institutions for individualization and valorization the buildings and historic contexts subject of this law and contributing in their registration.

1.3. Iranian archaeology from 1940 to 1978

In 1939, after the departure of the Oriental Institute of Chicago, the Iranian government took over excavating and restoring the Persepolis and Iranian archaeologist managed to continue the unfinished excavations in Persepolis, and then in other archaeological sites.

The shortage of academically trained Iranian archaeologists and insufficient fund, were the reasons of the absence of active Iranian participation in archaeological excavations till the 40s; in 1935, a chair of archaeology was founded in the university of Tehran, which then turned to be the faculty of Archaeology, and began training the Iranian archaeologists; from the 40s on, due to the maturation of the Department of Archaeology, the participation of Iranian archaeologists in explorations began to increase and, Iranian archaeologists started to execute important excavations in numerous archaeological sites of Iran which furthermore result the establishment of important provincial museums in the late 40s and early 50s[57].

From 1940-1960 numerous excavations in different archaeological sites of Iran were executed by foreign[58] and Iranian archaeologists[59].

In 1950s the Scientific Bureau of Persepolis, was founded and in the late 1960s The Institute of Achaemenid Studies was founded at Persepolis as an organization at Persepolis managed by Iranian specialists that could generate research programs quite independently.

From 1960s on, due to the maturation of the Iranian Archaeological Service, development of a strong program in archaeology at the University of Tehran and the foundation of the Iranian Center for Archaeological Research within the Archaeological Service, the archaeology of Iran reaches its maturation phase. The Department of Archaeology of the university of Tehran played

57 The late 1940s and early 1950s saw the foundation of the first provincial museums in the cities of Shiraz, Isfahan, and Qazvīn.

58 After the outbreak of the Second World War, French excavators returned to Susa in 1946 under Roman Ghirshman, though his main focus from 1951 to 1962 was the excavation of the Elamite ziggurat at Chogha Zanbil.

59 Iranian archaeologists who exceuted excavations in these years are:

-Ali Sami who excavated in Persepolis and Pasargadae from 1941-1961.

-Ali Hakemi did numerous soundings at Hasanlu, , at Ganj Tepe in l949, at the Sasanian site of Tepe Mil near Varamin in 1955, at Tepe Musalan near Karaj in l958-59.

a more profound role in archaeological research and in training Iranian archaeologists to serve in the Archaeological Services of Iran. By the mid to late 1970s, the new approach was widespread in Iranian archaeology which gradually shifted concentration from single-site excavations to regional surveys.

The 1960s and 1970s witnessed such a major growth in archaeological activities of Iran; during these years, the important scholar institutions were established like archaeological branch of the French Institute, German Archaeological Institute and the British Institute of Persian Studies, the Asia Institute and the American Institute of Iranian Studies.

Between 60s and 70s, the Archaeological Service of Iran contributed considerably to archaeological fieldwork and many other expeditions embarked on fieldwork in Iran in the form of collaboration of Iranian and American, Austrian, Belgian, British, Canadian, Danish, French, German, Italian and Japanese excavators.

In the late 50s, activities of Italian archaeologists of IsMEO in Iran begin with the with archaeological researches[60] in two archaeological sites of Iran: in the city of Isfahan and in the Sistān basin; Italian's archaeological activities, considerable and fruitful, then were accompanied by conservative programs and from 1964, on the request of the Iranian authorities, IsMEO was asked to prepare and execute conservative measures in archaeological and architectural monuments of Iran, especially in the two provinces of Isfahan and Fārs[61], specifically the Achaemenid archaeological complex of Persepolis and the Safavid architectural monuments of Isfahan. The activities of Italian archaeologists were considerable and generated important theoretical issues important for the formation, evolution and maturation of the archaeology and the restoration of Iran. Italian archaeologists did not limit themselves just to material exploration of the ancient sites but to introduce an original multidisciplinary approach in the field of archaeology with impressive development of scientific knowledges from the field of Palaeo-botany to physical anthropology, etc.

During stratigraphic excavations [62] in Isfahan, in the Masjid-e

60 On the scientific and archaeological activities of the IsMEO (and of the IsIAO) see *Il Contributo dell'Istituto allo studio della Civiltà Iranica*. Una breve presentazione. (IsIAO), Roma 1999..

61 The IsMEO also from 1965 began training of the local staff of the Archeological Department of Isfahan.

62 See also many individual contributions concerning IsMEO archeological activities in Iran published in the catalogue of the exibition *Antica Per-*

Gium'a,rests from the 8th century and also important pre-Islamic period rests were found which generated serious problems regarding the cultural diversities and the possibilities of adapting European conservative theories in Iranian traditional context, prevailing historical values or resecting religious values when preparing the conservative program for a religious monument, the possibility of combining European modern techniques and Iranian traditional methods in the project of restoration, etc.

sia. I tesori del Museo Nazionale di Tehran e la ricerca italiana in Iran, Museo Nazionale d'Arte Orientale, Roma, 2001.

2. Nationalism and Restoration

2.1. Nationalism and Archaeology: ideological fundaments

Nationalism and development of archaeology

Development of the archaeology in Iran, in the first years of 20th century is highly influenced by nationalistic sentiments[65]; in Iranian context, the nationalist traditions influence all aspects of archaeologically related matters for whole the Pahlavi Period from early 20s of 20th century since the Islamic revolution in 1979; nationalism stimulated the very creation of archaeology as a new science into Iranian traditional context and, during the first half of the 20th century, became the motivator for numerous specific archaeological researches; it can be said that without the existence of nationalism, archaeology or the study of the past might never have advanced beyond the status of a pure science of the study of the pastime and the nationalism, in fact, is deeply embedded in the very concept of archaeology, in its institutionalization and development.

Nationalism[66] in Iran, introduced in the second half of 19th century by intellectual Iranians[67] graduated in European universities[68], mostly in France, based on the latest intellectual trends in Europe and the United States; Iranian nationalists believed in the Aryan superiority of the Iranian nation and referred to archaeological remains of the pre-Islamic Iran as the existing testimonies of this racial superiority; their ideology was based on the idea of the re-foundation of a new Iranian national identity based on pre-existing ethnic/territorial ties[69], historical memories, and commemorations of historical events of the pre-Islamic Iran or ancient Persia.

65 K. Abdi, *Nationalism, Politics and the Development of Archaeology in Iran*. In *American Journal of Archaeology*, No.105, 2001, pp.51–76.

66 Iranian nationalists supported a vision of the future Iran that was secular, constitutional, national and free from domestic and western imperial domination, H. Katouzian, *Nationalist Trends in Iran, 1921-1926* in *International Journal of Middle East Studies*, Vol. 10, No. 4, Nov 1979, pp. 533-551.

67 H. Katouzian, *Nationalist Trends in Iran, 1921-1926,..*cit.,p. 10. These men, all highly educated in the western tradition and native to Iranian culture, wholeheartedly believed in the inherently Utopian and totalistic universal modernism for Iran with all of its productive and destructive patterns.

68 According the approved decree of 1928 government each year should send 100 student, obtained by scholarship, for 6 years to study in European academies and universities.

69 K. Abdi, *op, cit.,*p 55.

Based on Iranian intelligentsia, pure Iranian cultural and authentic national origins could be found in its pre-Islamic time, specifically during Achaemenid period (559–331 BC), thorough technically sophisticated documentations and categorizations to establishing its connections with past, recognizing its values, introducing them to the world and adapting them to the necessities of the modern society for political purposes. The Iranian nationalistic sentiments then in the early years of 20th century, during the birth of Pahlavi, absorbs the shadows of modernization and reaches its maturation phase; this modernized nationalism turns to be an important instrument of realization of political strategies of the Pahlavi government for more than 50 years.

Nationalistic sentiments during the 20s, find their ways within the most prestigious national institutions and organizations as "National Monuments Council" of Iran and continue to influence and characterize the methodology of historical studies during the first years of Pahlavi period, during the reign of Reza Shah, by elaborate attempts to define the parameters of Iran's new "heritage" and reconstruct Iranian national identity for political matters; the reinforcement of nationalism then reaches its maturation and acquires an international expression on 1971 when Mohammad Reza Shah celebrates the 2500-year anniversary of the Persian Empire with great pomp and ceremony.

Pahlavi and Reconstruction of "National Identity": the "Nationalistic" archaeology

Following the new post-Napoleonic European emerging governments in the 19th century's trend of establishment "national" museums, the new emerging Pahlavi government(1929-1979) in order to legitimate itself as part of Iranian "dynastic continuity" and to position itself into Iranian historical context commenced vast cultural initiatives in order to construct its own national identity which at the same time satisfies the exigencies of the modern society;history and the archaeology were essential important instruments of these programs and the nationalistic sentiments of the early 20th helped the new emerging government of Pahlavi to realized its programs by promoting particular state-sponsored projects in order to recover, revitalize and re-interpret Iranian ancient history and civilization following certain political strategy; the similar trend which, in the same period, could be seen in other European countries like Germany and Italy, is identifiable by celebrations and commemorations of the collective historical memory through symbols and myths, rituals and ceremonies,

museums and archaeological sites, nationalistic music, and a national dress code are the examples of these efforts[70].

The abolition of the French monopoly on archaeological matters by the government of Reza Shah Pahlavi (1920-1939) in 1927, is not appreciated just as a political but as the most nationalistic act; the abolition of the French monopoly on archaeological matters parallel to the influences of nationalism, highly contributes in the development of the archaeology of Iran and its all related disciplinary aspects and transforms archaeology to a part of Iranian national identity.

During Pahlavi period, archaeology figured prominently in all national events; in fact, the way in which archaeology and its related fields in Iran are structured and oriented clearly confirm their importance for national and political aspects.

Organizing numerous excavations specifically in pre-Islamic archaeological sites for the recovery of Iranian pre-Islamic evidences are important part of the programs of Pahlavi government which were accompanied by elaborate attempts to introducing the history of Iran by producing thousands of pages, magnifying listing archaeological findings of past epochs, introducing historical/cultural interests of the country and glorifying the past history and culture of ancient Iran or Persia[71] and its contribution to world civilization; these efforts wich characterized the nature of historical studies in the first 20years of 20th century, demonstrate nationalistic interpretations of the archaeological remains for satisfying political goals of Pahlavi government.

For the construction of national identities, thanks to the recovered archaeological data from the archaeological excavations the past was "invented" or "rediscovered" through the selective use of inherited symbols, myths[72], and material remains.

70 Urge to return to the "glorious past" resulted in various forms of including the Iranian historiographic literature of the 1890s and 1900s, the architectural style of the 1910s and 1920s, the purification of the Persian language in the 1930s, and the reorganization of the education system in the 1940s, K. Abdi,..., *op, cit.,* p. 55.

71 In November 1934, the king of Iran, Reza Shah Pahlavi (ruled 1926–1941), decreed the permanent substitution of the country's official name of "Persia" by "Iran," signifying the Land of Aryans.

72 P. Kohl, *Nationalism and Archaeology: On the Constructions of Nations and the Reconstructions of the Remote past* in *Annual Review of Anthropology*, Vol. 27, 1998, pp. 223-246. Myths of national origin were elaborated from a variety of sources, including, notably, the material remains found within the state's demarcated territorial borders.

Nationalist archaeology, adopted by Pahlavi government (1929-1979) used archaeologists and their data for nation-making purposes and specific political matters and the archaeological data recovered from the excavations in ancient sites were manipulated by Pahlavi government to re-establish the social and cultural values of the modern age on the basis of recognition of the ancient traditions; during 20s and 30s, myths, symbols and material remains of pre-Islamic Iran, specifically during Achaemenid period (559–331 BC), were used for reconstructing national identities through continual process of depicting the past to influence and reawaken the collective memory through material mimicking of past objects; revivalism of the historiographic literature of the 1890s and 1900s, the architectural style of the 1910s and 1920s, the purification of the Persian language in the 1930s, and the reorganization of the education system in the 1940s. Scientific publications[73] of the excavations done by European archaeologists in the ancient sites of the south and west-south of Iran, defined as high points of pre-Islamic Iranian civilization, and organizing the exhibitions on Persian history[74] and art to introduce the importance of ancient Iran show how the government tried to introduce a new reconstructed version of Iran to the globe via establishing connections with past, recognizing its values and remaking its high culture by constantly going back to an authentic artistic origin.

73 One of the first and important examples is the first volume of the collection of "L'Art antique de la Perse" by Marcel Dieulafoy (1844-1920) the French archaeologist that had been written after his first travel to Susa and had been published in 1884 and brought him a grant from the Department of Antiquities at the Louvre and from the Ministère de l'Instruction publique ; as the result he became encouraged to travel to Iran and start archaeological excavations.

74 For example one of these exhibition was held in Paris in 1895 from Achaemenian discoveries which Marcel Dieulafoy (1844-1920) had found during his excavations in Susa.

2.2. National Monuments Council of Iran and Reconstruction of"national identity"

National Monuments Council of Iran

Establishing the National Monuments Council of Iran is the most important part of Pahlavi's program for the reinforcement of nationalism by executing certain initiatives in order to preservation of the ancient traditions for re-establishing and reconstructing the social and cultural values of the new national identity in the modern age all oriented to to legitimate itself into Iranian historic context; however, despite the political reasons, the presence of National Monuments Council of Iran is of great importance for the rise and birth of the new principles and direction for the conservation of the historical monuments; it is with the establishment of the National Monuments Council of Iran that the very first attentions versus the necessity of preservation of the historical patrimony of Iran are born and it is the National Monuments Council of Iran which first establishes and issues certain regulations for conserving the architectural and archaeological monuments.

National Monuments Council of Iran[75], as the first specialized national organization in history and archaeology of Iran, was found in 1922, to "…promote interest in and to preserve Iran's cultural heritage…"by "cultivating public fascination with Iranian scientific (elmi) and industrial (san'ati) historic heritage (asar-e tarikhi) and to attempt to protect the fine arts (sanaye'-e mostazrafeh) and handicrafts (sanaye'-e dasti) and to preserve their old style and method."

National Monuments Council of Iran within its prominent members, included prime ministers and scholars[76], court ministers, governors and cabinet ministers; all these persons graduated from the European countries, who embraced the latest intellectual trends in Europe and the United States and believed in the Aryan superiority of the Iranian nation, believed in the inherently Utopian and totalistic universal modernism for Iran with all

75 The foundation of National Monuments Council of Iran was from the first activities of Reza Shah Pahlavi (1925-1939) regarding the reinforcement of nationalism. He himself was the honorary president of the council., M. Hojjat, *Cultural Heritage in Iran, Policies for an Islamic Country*, Tehran, Cultural Heritage Organization, 2001.

76 As one of the scholars among the group was the prime minister Hasan Pirnia who wrote History of Ancient Iran in four volumes.

of its productive and destructive patterns. Due to the presence of foreign art historians and archaeologists, the NMC of Iran, benefited from great art historians like Ernest Herzfeld, André Godard, Phyllis Ackerman and Arthur Upham Pope. Moreover, in order to create collective feelings and promote interests in public, the National Monuments Council of Iran invited a number of well-known local and western Orientalists[77] to deliver public lectures and publish articles on the arts and culture of (mostly ancient) Iran. The contributions of foreign scholars member of Council were very fundamental in sensibly-zing the politicians about the necessity of preserving historical monuments of Iran by benefiting from their nationalistic sentiments.

In 1925[78], as its very first activities the NMC of Iran issues the first list of historical monuments in Iran, which then was completed in 1928; entitled "A Brief Inventory of the Historical Heritage and Edifices of Iran[79]" this index which was completed consequently in 1928 and finalized in 1932 with 247 insertions, and following the political strategy of Pahlavi government, included in major parts the Pre-Islamic historical monuments of Iran[80]; in fact, the necessity of preparing a record from important historical and precious national heritage important to be preserved, was

77 In 1925, Pope did two important lecture, organized by Iranian ambassador to the US and the UN as well as a loyal and enduring member of the Council, entitled "The Past and Future of Persian Art," which addressed Iranian craft, its history, and historiography, but was political in nature because when during 1920s Iran, the revival of the "nation's real heritage" was the state's main concern, citing within first paragraph of the article the Achaemenian and Sassanian founders like Cyrus and Ardeshir seemed like national slogans.

78 In 1925, Herzfeld, the only foreign member of this association, was asked by the National Monuments Council to compile a list of historical monuments and to help develop a plan for the department of antiquities. In Tehran, Herzfeld has prepared the first list of 88 monuments and sites designated as historic monuments.However, the listed archaeological and architectural works crystallized just a limited number of sites as Iran's national heritage.

79 It was the first and methodologically most decisive publication of the National Monuments Council of Iran. It was intended as a comprehensive catalog based on "scientific" observations and examinations. The sites are numerically listed under each major city or region. The classification of sites was arbitrary to the extent that small cities and large provinces were lumped together as equals. The logic of their order was governed by Herzfeld's own preconceived ideas about Iranian imagined identity, supported and financed by the preconceived ideas of his patrons.

80 T. Grigor, *Recultivating "Good Taste": The Early Pahlavi Modernists and Their Society for National Heritage* in *Iranian Studies,* volume 37, n.1, March.,2004, pp. 17-44.

emphasized in the eighth article of the the constitutional act of the NMC which itemized it as one of its initial objectives: "1) The establishment of a museum in Tehran; 2) The establishment of a library in Tehran; 3) The recording and classification of those works necessary to the preservation of a national heritage, and; 4) The tabulation of priceless collections related to libraries or museums that are in the possession of the state or national organizations.". This index was prepared by Ernst Herzfeld who in that time was the official councilor of the Iranian government regarding archaeological matters; methodologically, Herzfeld used periodization and comparison as effective techniques in order to classify the historic monuments of Iran into neat periodic compartments of Achaemenians, Sassanians, Seljuks, and Safavids.

In the same year, Ernst Herzfeld, as the the prominent member of the Council and as the scholar which his specific interests in Achaemenid monuments of Persepolis and Pasargadae were of great importance to the government of Pahlavi, on the invitation of the National Monuments Council of Iran delivered a lecture at the Ministry of Culture about the importance of "the nation's heritage" where he emphasized the necessity of "… get the people interested in their national heritage and its preservation…".

In 1925, on the request of the National Monuments Council of Iran, Ernst Herzfeld prepared the drafts[81] of the first law in preservation of the national heritage which in 1930 this draft was completed and approved by the parliament as the Law of Antiquityon[82] conservation of the national heritage.

81 In 1923 Herzfeld is asked to prepare a description of the current state of the ruins of Persepolis and plans for their conservation. Translated as "Rapport sur l'état des ruines de Persepolis Actuel et propositions pour leur conservation."This report was the beginning of the involvement of Herzfeld in the Persian national heritage and the organization of the department of antiquities and asked to prepare various drafts of a general law about the conservation of the national heritage. In 1926 he was asked to serve as a consultant archaeologist Iran and became the government's candidate for the director of the department of antiquities.

82 The approval of first Law of Antiquity is the most important legislative action done by the government till 1930. The role of the two of the most well-known experts of Persian archaeology Ernst Herzfeld, in preparing its draft in 1925, and French architect and archaeologist André Godard (1881-1965), in finalizing it, is very important; this law is the most complete law regarding the conservation of the historical patrimony till 1930 in Iran. The Law of Antiquity, which its draft, had been prepared in 1925 named as the "Code of Antiquities", in 20 articles, contains various legislative aspects about antique objects and archaeological explorations. For the first time, in this law the

However, in practical levels, due to the lack of the understanding the concepts of "Perseveration" and "Antique" from one hand, and following the modernizing projects of Pahlavi government from the other hand, the necessity of preserving heritage was misunderstood and the discourse on Iranian architecture occasioned quarrels over techniques of preservation, authenticity of heritage, and ownership of archaeological sites.

National Monuments Council of Iran, architecture and reconstruction of the national identity

National Monuments Council of Iran was in fact a highly organized body integral to the massive project of Iran's modernization of the 20s and architecture as the language of public instruction and important factor in realizing Iranian society's modernizing project and got "public fascination with Iranian heritage"[83] and new parameters of modernity together and reflected them in the initiatives of NMC of Iran[84]; the Pahlavi government sustained that in order to create a "new Iran", the concepts of time, taste, identity had to be "rediscovered" and "reclaimed" through a national artistic "spirit" and architecture was the most suitable instrument.

Architecture and modernization, get together in the architecture and urban planning of the years 1920-1939 and created a new architectural style, without any precedent reference, based on the combination of the traditional elements of the pre-Islamic architecture of Iran and the taken occidental architectural elements. The "Neo-Persian" and "Neo-Achaemenian" revival are the terms which define a rich stylistic amalgamation of European imported

government is officially called as the official responsible of making a list (and keeps it always updated) of national monuments and make necessary attempts regarding their conservation, under certain circumstances described within its different articles. The law also describes the obligation of the individuals who own or find a historical object or building and specifies the activities which result the penalty for the authors. The articles 11-16 of the law exclusively are about excavations, specifying scientific from commercial excavation, and the obligations of the government and excavators. The articles 17-19 of the law define certain conditions for merchandising the antique objects and in the last article emphasizes again on the importance of this as the unique condition for ulterior permission for excavations.

83 T. Grigor, *Recultivating "Good Taste": The Early Pahlavi Modernists and Their Society for National Heritage* in *Iranian Studies*, Vol. 37, No. 1, March 2004, pp.17-47.

84 See K. Abdi, *Nationalism, Politics and the Development of Archaeology in Iran* In *American Journal of Archaeology*, No. 105, 2001, pp.51–76

architectural motifs, Achaemenid revival, and Islamic traditions[85]. The government ordered that official buildings and public edifices[86] be built according to traditional Iranian architectural models, rather than European styles; such style appears in the construction of banks, post offices, telegraph and telephone offices, wich all are identifiable with a uniform façade composed of mentioned combination between Iranian and western elements, designed, in the major part, by European architects[87], and unlike traditional style of Iranian architectures, based on the modernism of the years 30 in Europe. The buildings built in this style were called with the addition of suffix "National" to their name, such as The National Museum (1936), The National Bank (1930), The National library (1936), etc. The most exemplifying architectural work done in the "Neo-Persian" and "Neo-Achaemenian" revival is the Iran Bastan(National) Museum, completed in 1936, conceived as a modern building with a traditional facade inspired by the pre-Islamic architecture of the Sasanian period as favored by the Pahlavi state.

Although the contributions of NMC of Iran in introducing the cultural and historical values of Persian civilizations are of great importance, but the lack of a general understanding of the concepts and the values of "antique","conservation" from one hand, and the reinforcement of modernization and nationalism from other hand, in many cases failed the constitutional principles of the NMC itself in "protect the fine arts (sanaye'-e mostazrafeh) and handicrafts (sanaye'-e dasti)" and in many cases resulted in the creation of new constructed false identities for hsitoric

85 Archeological excavations of the ancient sites, more than just contributions to scientific historical research and forming historical profile of Iran and, being referred as an important resource, historical profile of the ancient civilizations results formation of a new hybrid style of architecture, by the late 1910s, defined as a rich stylistic amalgam of European imports, Achaemenid revival, and Islamic traditions.

86 T. Grigor, *Of Aryan Origin(s), Western Canon(s), and Iranian Modernity* in *Repenser les limites : l'architecture à travers l'espace, le temps et les disciplines*, Paris, INHA (« Actes de colloques »), 2005..

87 From the other architects who in the years 1930-40 contributed in construction of the modern buildings in Tehran were: Nikolay Markov, Georgian-born architect and graduate of St. Petersburg Academy of Fine Arts (1882-1957); Was among the first architects at introducing industrial architecture to Iran and used it for designing the factories, he also built the Alborz High School one the most prestigious high schools of Tehran. The other famous architect was the French architect Maxime Siroux who first came to Iran as an archaeologist and then because of his interests in Iranian architecture designed important buildings in Tehran like some faculties of the University of Tehran.

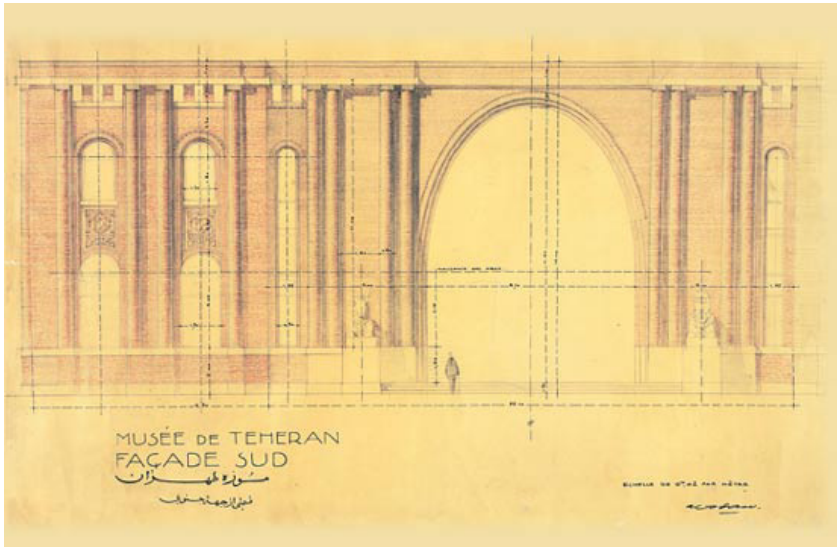


Figure 2.1.
The project of Iran Bastan Museum by Andre Godard in 1928.
National Archives of Iran, Tehran, Iran.

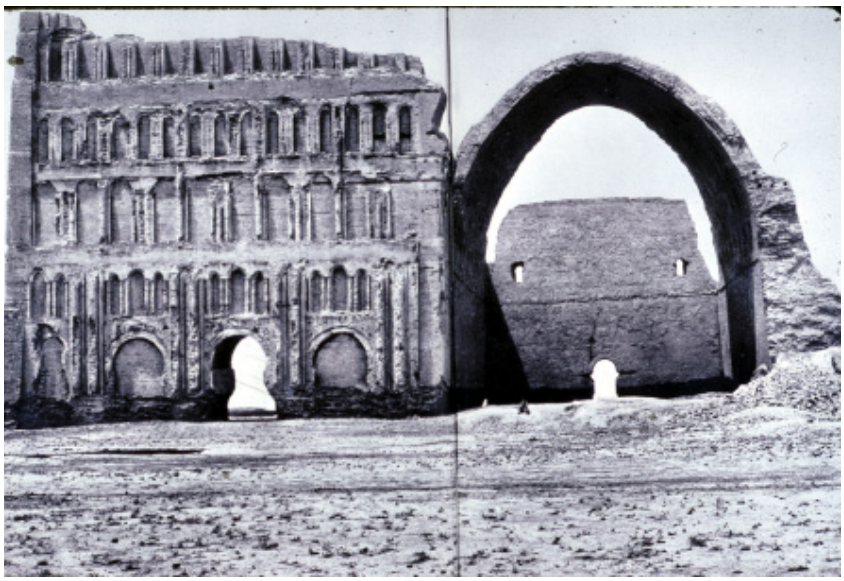


Figure 2.2.
The Arc of Cethisphon in Iraq, the royal palace at Ctesiphon, near the center of the Persian Empire.
Photographic glass plate negative, F|S Archives, Folder 16.3, Antoin Sevruguin (late 1830s–1933)
The obvious similarity of this arch and the project of Godard is identifiable as one of the characterizing and influencing factors of the new emerging style of the years 20-30s in Iran called as Neo-Parthian/Neo-Achaemenian style.

monuments instead of formulating solutions for maintaining their authentication by "preserve their old style and method".

Control over the physical and conceptual "heritage" enabled Pahlavi government to destruct, erase and represent the immediate past, particularly public landmarks as the most influencing factors, with a modern language in order to construct the "progressive" future and a "New Iran". The remarkable examples of the project of reviving the past by modern language in order to satisfy political goals are seen in the erection of monuments, destruction and reconstruction of their old tomb with a new modern architectural language, for important Iranian figures[88], as the first set of the activities of NMC of Iran.

The project of immortalizing the famous Iranian figures, who were selected thorough a selected procedure harbored technically sophisticated documentation, categorization, and ordering of the national domain; this project was started by selecting, locating and eliminating their burial place and erecting a modern building on the original site and an official royal inauguration[89], which in details was covered by state-run media; moreover, in order to complete the project of immortalizing, the physiognomic particularities of the figures, for whom the monuments were erected, were reconstructed based on skull and bone examinations, their life-size sculpture and color portraits were produced and their modified biography were circulated among the masses by means of photographs, stamps, post-cards, coins, and various paraphernalia.

In order to reconstruct a new Iranian identity, architecture conditioned the revival of historical impossibilities and mausoleum as a particular kind of architectural typology, which preconditions an a priori existence of a "great hero", was selected as the most respondent architectural form which contributed in immortalize the memory of the these selected national figures. During its activity, NMC of Iran erected forty mausoleum of

88 Major architectural works undertaken by NMC included the construction of the modern mausoleums of Ferdawsi (1934) in Tus; of Hafiz (1938) and Shah Shuja' (1965) in Shiraz; of Avicenna (Ibn Sina) (1952) and Baba Taher (1970) in Hamadan. At Shiraz the site of the tomb of Hāfez was provided with an open octagonal structure, approached through a long columnar portico; the capitals of the columns were copies of those of earlier Islamic periods.

89 These projects were financed by royal donations, fundraising in schools, lotteries, excise taxes, private and municipal grants, and government credits., M. Hojjat, *Cultural Heritage in Iran, Policies for an Islamic Country,* Tehran, Cultural Heritage Organization, 2001.

great Iranian figures which confirms the emphasis of the Pahlavi government on proceeding the project of "New Iran".
All attentions of Pahlavi government during the years 20s and 30s, as it was told, were oriented and limited to preserve the pre-Islamic artworks, specifically the Achaemenid artworks and generally the "Achaemenidization" of ancient Iranian history is the term that best characterizes the political strategy of the Pahlavi government in this period.

Figure 2.3.
Achaemenide stamps. National Archives of Iran, Tehran, Iran.

During 20s and 30s archaeology and archaeological foundings were used and manipulated by the Pahalavi government in order to provoke the nationalist sentiments of the public.

By the 1940s, the Achaemenids, Cyrus the Great and architectural complexes of Pasargadae and Persepolis[90] as ultimate symbols of Iran's monarchy and civilization became the main cultural symbols of Iran, mainly promoted by the Pahlavi dynasty.
Great cares therefore were given to preserve the physical remnants of this forgotten monarchy and civilization crystallized in the monumental complexes of Persepolis and Pasargadae and especially Persepolis which has always been considered as the symbol of identity in Iran since its foundation; as the Pahlavi government believed that Persepolis as-preserved-ruin could give birth to the holistic vision of a glorious past projected onto a

90 Persepolis has been always been considered as a national monument, and its architecture and sculpture could be found on metal works, tapestry, and carpets, on palace facades and even on stamps.

Utopian future and the archaeological ruins of Persepolis would forge an intimate and viable gemology of monarchical conception of Iranian time.
Consequently, all the archaeological excavations at Persepolis and Pasargadae were expected to fulfill the double goal of symbolic conversation with highly charged notions of the past and scientific achievement to enrich the knowledge of Achaemenid period and the programs for the conservation of Persepolis and Pasargadae enabled their physical reuse as stages of political theatrics and, more importantly, provided the space for a temporal leap from antiquity to modernity[91].

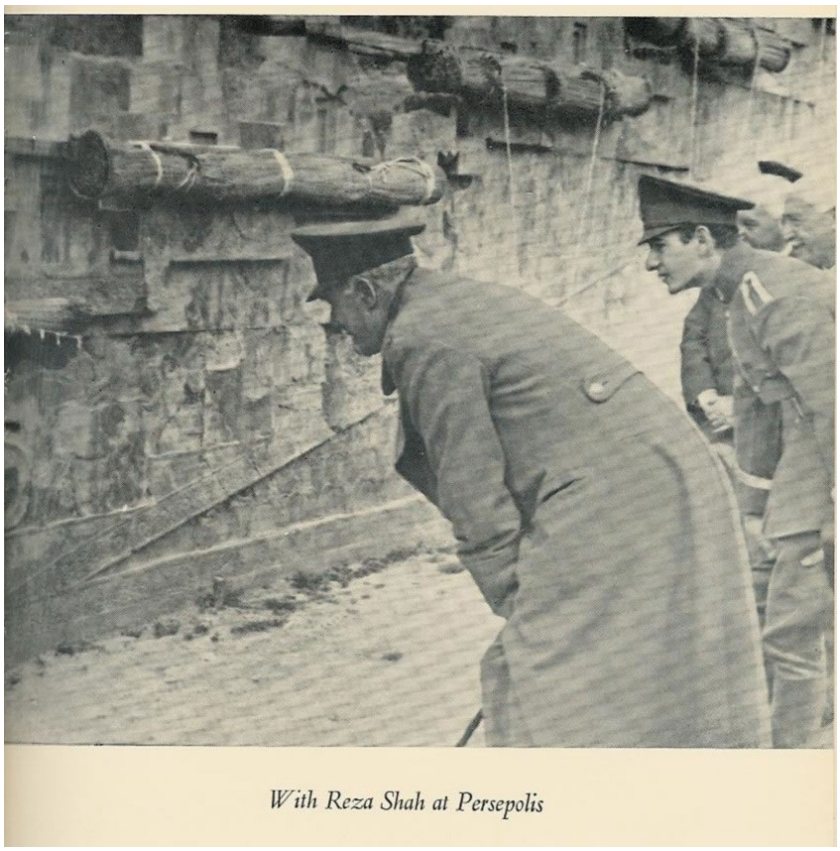


Figure 2.4.
Reza shah with his crown prince Mohamma Reza at Persepolis in 1935.
National Archives of Iran, Tehran, Iran.

Remarkable amount of scientific publications on pre-history and the history of pre-Islamic Iran and especially on Achaemenid archaeological sites of Persepolis and Pasargadae demonstrate the political approaches of the Pahlavi government regarding the reconstruction of a new national identity.
The "Achaemenidization" of ancient Iranian history was furthered

91 See T. Grigor, *Recultivating "Good Taste": The Early Pahlavi Modernists and Their Society for National Heritage* in *Iranian Studies*, Vol. 37, No. 1, March 2004, pp.17-47.

The 2.5&2.6.
Royal celebrations of 2500th anniversary of Persian Empire at Persepolis 1971. (2002)published by Cyrus Kadivar.
The Royal celebration were held in the archaeological complexes of Pasargadae and Persepolis as the ultimate symbols of the Persian monarchy.

by the work at the stronghold of Cyrus the Great at Pasargadae and following the political goals of the Pahlavi government, in October 1971, the king of Iran, Mohammad Reza Shah Pahlavi (1941–79) decided to celebrate "the 2,500-year Anniversary of the Founding of the Persian Empire by Cyrus the Great"[92] and named that year as the "year of Cyrus the Great", which was furthured by the king's ritualistic speech at Cyrus the Great's tomb, and the archaeological site of Persepolis was chosen as the the authentic site of the three days of royal celebrations known as "the 2,500-year anniversary celebrations."

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Figure 2.7.
Royal celebrations of 2500th anniversary of Persian Empire at Persepolis 1971. (2002)published by Cyrus Kadivar.

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The manifestation of the pahlavi's social engineering and cultural revivalism of the twentieth-century history to create a "Great

92 For the importance of Cyrus the Great for the Pahlavi Dinasty, see A. Marashi, *Nationalizing Iran: Culture, Power & the State, 1870–1940*, Washington, 2008, pp. 3–5.

Civilization" occurs in the royal celebrations of "2500 anniversary of Persian empire". Through the three days of royal celebrations[93], Persepolis became, according to official reportage, "the center of gravity of the world."

However, political[94], propagandistic and commercial abuse of

Figure 2.8.
Mohamma Reza shah at Persepolis in 1965.
National Archives of Iran, Tehran, Iran.

historical landmarks , those belonging to the pre-Islamic, and in first place Persepolis, created distances between these works and the people which decreased the traditional value transmissive capacity of them; in fact, the abuse of the historic monuments to create images of imperial authority, all oriented to satisfy political goals, as was the case of 2500 years celebration held in Persepolis, proved to be the beginning of an anti-Pahlavi[95] revolution and resulted that, right after the overthrow of the Pahlavi's regime, these works to be targeted to many attacks by revolutionaries who wanted to destroy and eliminate them as symbols of monarchial and aristocratic system, which necessitated urgent interventions of their physical preservations to prevent them from total destruction, and further neglect.

93 International invitees included the rich and famous of the time: a dozen kings and queens, ten princes and princesses, some twenty presidents and first ladies, ten sheikhs, and two sultans, together with emperors, vice presidents, prime ministers, foreign ministers, ambassadors, and other state representatives who came to witness a ritualistic speech by the king at Cyrus' tomb, an unparalleled sound and light spectacle over Persepolis, exquisite banquets in a tent-city, and a fantastic parade of Persian History.

94 L. D. Nayeri , *Baznegary dar Jashnhaye 2500 Saleye Shahanshahi dar Iran* in *Pazouhesh Name-ye Tarikh*, No.6, year.2, 2005, pp.49-69.

95 The Pahlavi dynasty's attempt at connecting its rule to that of the Achaemenids and to Pasargadae would have repercussions some eight years later when there was an attempt at bulldozing the tomb of Cyrus the Great by the new revolutionary government of Iran.

2.3. Reconstruction of a "National Identity" in 20s: approaches and methodologies

The history and the archaeology were two essential legitimizing components of the new emerging government of Pahlavi (1929-1979) into Iranian historical context as the part of "dynastic continuity". The Pahlavi government in order to preserve these components managed to prepare special programs which, regarding the conservation of historical monuments, predicted special programs for the preservation of pre-Islamic artworks and monuments, in particular, those more representing the glory and the strength of the past times. Visits of Reza Shah from the archaeological ruins of Persepolis and his concerns about the necessity of executing conservative instruments for its preservation[96] demonstrate how the new emerging government of Pahlavi was obsessed about the importance of the role that preserving ancient civilizations could play in order to legitimize Pahlavi period in Iranian historical context and give birth to the holistic vision of a glorious past projected onto a Utopian future.
The Pahlavi government for 50years manipulated, directed and profited from the nationalistic sentiments of the late 19th and early 20th and and directed these attentions to satisfy its political goals in the project of revitalizing and reconstructing Iranian national identity by investing on preservation of historic monuments as reliable resources and its cultural support[97].
It could be said that, the modern derivations of what that could be meant as the "Culture of Conservation" of historical monuments in Iran, in its literal derivations, is in fact has it very first origins from the concept of "Preserving for Reconstructing" finalized to satisfy the propagandistic wills of the nationalistic government of Pahlavi in the years 20s of 1900.
As the development of the archaeology in Iran, in the first years of 20th century is highly influenced by nationalistic sentiments, the history of the formation of conservation in Iran, in its modern derivations is highly dependent to the political strategy of the government and is born within the political contest of Iran in this period(1922-1978).
The conservation and restoration in Iran has been more political

96 A. Sami, *Nokhostin Didar-e Reza Shah az Viranehaye Takht Jamshid* in *Barresihaye Tarikhi*, No.2, 1965, pp. 213-232.
97 M. Mostafavi, *Hemayat-e Ma'navi Shahanshah Aryamehr az Asar-e Bastany-e Iran* in *Barresihaye Tarikhi*, No.2, 1965, pp. 15-22.

than social; Political dimension of conservation and preservation of historical monuments is highly definable by the way historic monuments were treated; there are many examples that many of historical monuments suffered from neglect and the lack of necessary attentions while certain selected monuments were subjected to many state-sponsored programs and received remarkable and in some case exaggerated attentions.

Referring to the existing documents, the reason behind main projects of restoration during the first half of the Pahlavi period was representing them as revitalized symbols of a forgotten civilization following strong political strategies; the projects of excavating Achaemenid sites of Persepolis, Pasargadae and Susa were all executed in order to demonstrate how Pahlavi government took care about preserving certain selected ancient monuments which best present the basilar points of Persian civilization[98].

In fact, there has been always the government that has directed and governed historic monuments and consequently, all interventions in these monuments had been always dependent to state decisions and the lack of sufficient budget for the executing necessary interventions in historic monuments, made this possible and convincible.

Following political purposes resulted that in Pahlavi period, especially in its first half, specific attentions were exclusively limited to preserve the Achaemenid period heritage as proofs of the racial superiority of the nation; artworks of this period, recovered during the French excavations in Susa e furthermore in Persepolis and other Achaemenian archaeological sites, were chosen and magnified by the government and the term"Achaemenidization" is the term that best describes the political strategy of the Pahlavi government in these years.

Persepolis: archaeology and preservation for the reconstruction of "National Identity"

Persepolis (called Takht-e Jamšid or "Jamšid's Throne"[99] in Persian),is the ruined monuments of the acropolis of the city of Pārsa, the dynastic center of the Achaemenid Persian kings,

98 For the Pahlavi use of ancient Iran see, K. Abdi, *Nationalism, Politics, and the Development of Archaeology in Iran* in *American Journal of Archaeology*, Vol. 105, No. 1, 2001,pp. 51–76.

99 Early Muslim geographers describe the ruins but attribute them to the legendary world-king Jamšēd/Jamšid, whom they identify with the Biblical Solomon.

located in the plain of Marvdašt, some 57 km northwest of Shiraz. Referring to scholar studies, the estimated time of the construction of the monuments of Persepolis, composed of four groups of ceremonial palaces, residential quarters, a treasury, and a chain of fortifications, is about 518 BCE when Darius the Great(ruled from 522-486 BCE) chose the current site of Persepolis, terrace platform covering an area of 125,000 square m, at the foot of a mountain[100] to serve as the site for a new palace complex forming the citadel of the city of Pārsa[101] with its mud brick houses and gardens, founded by Persian settlers by the late 6th century BCE, in the Marvdašt Plain.

The constructions of these buildings were commenced by Darius the Great (ruled from 522-486 BCE) and were followed by his successors, Xerxes (ruled from 486-466 BCE) and Artaxerxes I(ruled from 466-424 BCE); the Persians planned and directed the work, following their traditional architecture of columned halls surrounded by porches and side chambers, but artisans from the subject nations executed the designs[102] as documented in the inscriptions carved next to the (original) gate of Persepolis where Darius the Great specifies that nations subject to him co-operated in the creation of Persepolis.

In 330 BCE the structures of Persepolis were burnt by the Alexander. After Alexander's destruction, no attempt was made to rebuild Persepolis in-toto or to reestablish it either as a working

100 The name of this mountains, Kuh-e Mehr (Kohmehr) "Mount Mithra" (since the 13th century "translated" as Kuh-e Rahmat "Mount Mercy"), indicates that the early Persian held the site sacred, and associated it with Mithra (Mehr), the deity of Iranians at arm and the "Guardian of Iranian lands" (Shahbazi, 1977b, pp 206-7).

101 The city was called Pārsa after the name borne both by the province Pārsa (Fārs, Gk. Persis, whence Persia), and by the people inhabiting it. The Greeks knew very little of this city, and a few who had heard about it, called it Persai. Later they erroneously elaborated this to Persepolis to indicate it as Persai polis or "the City of Persians". After the fall of the Achaemenids, the Iranians no longer remembered the name "Pārsa," and came to call the site Sad-Sotun (Hundred-columned) and Čehel Menār (Forty-columned), and Iranian traditional history came to attribute the monuments to Jamšid, whom they identify with the Biblical Solomon,who build magnificent palaces of Persepolis from stone and bore him while enthroned from one palace to another.

102 Persepolis was in essence Iranian but in details and workmanship Urartian (blind windows, platform construction), Egyptian (architraves, painting of the sculptural figures), Babylonian (court ceremonials and decorative patterns), Elamite (costumes, vessels), Assyrian (doorway designs, tribute processions, and throne-bearing scenes), Scythian (animal motifs and armament decorations), Lydian and Ionian (stone cutting tools and techniques, elements of columns, clamps and gold work), etc.

administrative center or as the routinely used palatial backdrop for dynastic rituals and royal ceremonies.

The oldest description of Persepolis is in the accounts by Alexander historians who described Persepolis as "...the metropolis of the Persian kingdom...". After the evasion of Alexander, Persepolis was abandoned and no serious attempt was executed in order to its repair or reuse, till the emerging of the Pahlavi government in the 20s of 1900.

The beginning of the scholar studies in Persepolis is dated to the early 1800s and the decipherment of Old Persian; these scholar studies sustain that Persepolis was built as the site for celebrating Nowruz, the Persian New Year, festival. The decipherment of Old Persian was a major milestone in the study of Achaemenid Iran, opening up many new avenues of interpretation based on Persian as well as classical and Biblical texts; based on the decipherment of Old Persian cuneiform writing, which provided the key to the reading of Babylonian and Elamite texts, the date of construction of the complex of Persepolis was attributed to the Achaemenid kings.

In 1840, artists and art historians Charles Textier (1840) and Eugène Flandin and Pascal Coste (1840) visited Persepolis and documented its monuments in their accounts and drawings; prior to the invention and popularity of photography, the ruins of Persepolis were sketched by the Visitors in the eighteenth and early nineteenth centuries and back to Europe these sketches then turned to useful descriptions and engravings.

It was in this period that the antiquity of Persepolis and its identification as an historical site were established. The earliest extant visual documents of the site in the form of drawings and sketch plans appeared at this point. In 1881 Marsel and Jane Dieulafoy made the first photographic documentations of the monuments of the terrace of Persepolis. The extraordinary significance of Persepolis encouraged scientific explorations and scholar studies of the ruins of Persepolis which greatly contributed and advanced understanding of the Achaemenid art and architecture.

In the first half of the 20th century, the excavations in Persepolis contributed on the future of Iranian archaeology and significantly enriched the knowledge of the Achaemenid Empire[103]. Moreover, these excavations provided numerous opportunities for training

103 The first years of the twentieth century, in fact, saw a keen interest in excavating the ancient ruins of Persepolis-an epic enterprise that had the effect of catalyzing national interest in archaeological activity throughout Iran.

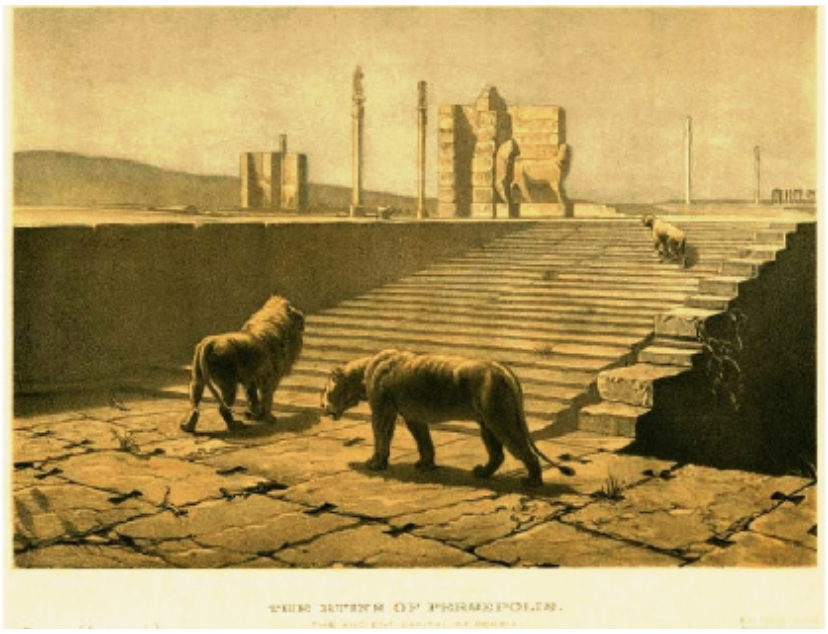

Figure 2.9.
The ruins of Persepolis
Images of the Ancient World / Persia (Ancient)., Digital ID: 1623963., Picture Collection., Mid-Manhattan Library.

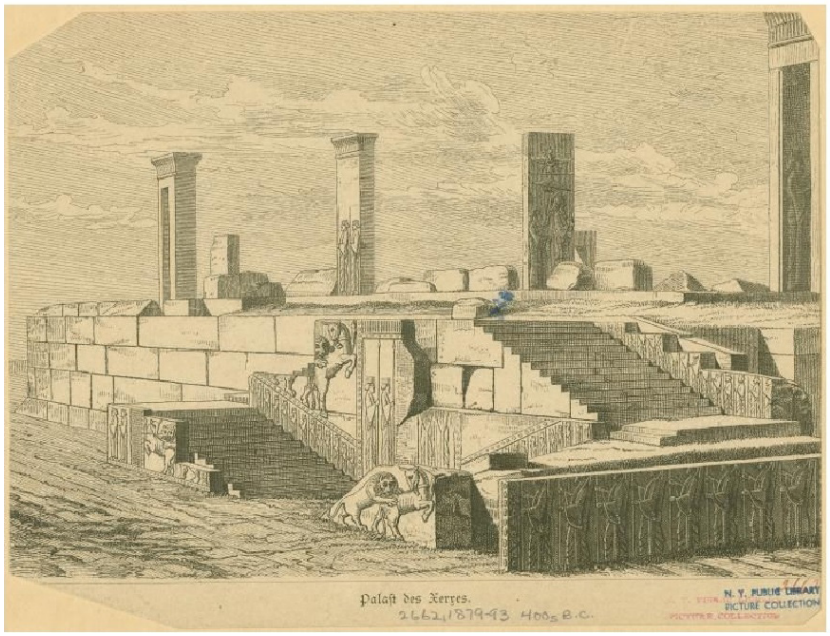

Figure 2.10.
The palace of Xerxes at Persepolis, 1879-1893.
Images of the Ancient World / Persia (Ancient)., Digital ID: 1623960., Picture Collection., Mid-Manhattan Library.
Although almost all of the graphic representations of Persepolis prepared prior to the 20th century are made in the personalized methods, but all of them clearly show that the archaeological complex of Persepolis was abandoned a se.

in excavation techniques, restoration, and interpretive researches, which have been remarkably positive in the development of historical studies and technical achievements in Iran.

Thorough special attention of the Pahlavi government, Persepolis has maintained its unique status in Iran as a national monument par excellence. Even before 1920s, Persians had come to view Persepolis as a national monument, and consciously copied its architecture and sculpture on metal works, tapestry, and carpets on palace facades and even on stamps.

In the late 20s, the proposal of Ernst Herzfeld for executing archaeological excavations of Persepolis inspired the Iranian government to approve an Antiquities Law for regulating excavation procedure in general and then to apply such a law to the site of Persepolis; Ernst Herzfeld drafted the first excavation law, *Loi sur les Fouilles*, which subsequently promoted and regulated archaeological activities in Iran.

Within the first 50years of the 1900, Persepolis has experienced important phases and witnessed great archaeologists and specialists with different cultural backgrounds who worked there to render the Persepolis as is today. Unlike the mounds at Susa, where the French had been digging since the late nineteenth century, the excavations at Persepolis have benefited from a remarkably high profile, including regular official visits of kings and queens.

The 50 years of activities in Persepolis can be classified to separate historical period; 1930s and the Oriental Institute of Chicago, 1940-60s and the Scientific Bureau of Persepolis, 1964-1978 and the activities of IsMEO; it was the project for the preservation of Persepolis that inspired the Iranian government to approve an Antiquities Law, which subsequently promoted and regulated archaeological activities in the country; moreover, the archaeological excavations at Persepolis provided numerous opportunities for training in excavation technique, restoration, and interpretive research and important organizations were established and dedicated exclusively to conduct historical and scientific researches in Persepolis like the establishment of the Scientific Bureau of Persepolis,in 1950s, and the Institute of Achaemenid Studies, in the late 1960s, as specialized organizations to generate research programs in Persepolis.

In 1965, by the demands of Iranian authorities, Italian experts of IsMEO begin a 15-year program of scientific investigation, conservation and restoration of the stone structures of the terrace of Persepolis and its adjacent monuments and the result of this Italo-Iranian collaboration then becomes the example of a

successful archaeological conservation.
In 1968, a new program of research at Persepolis and other Achaemenid sites was begun to investigate the "origin of Achaemenid civilization and its early manifestations in the province of Fars". In this program, with the idea of finding notions of the existence an Achaemenid urbanism at Persepolis and to articulate the nature of that urbanism, Persepolis was studied as the core of an urban settlement with installations.
In 1968, in order to implement more effective protection, a practical buffer zone for the site of Persepolis and its adjacent remains was established.
In 1971, in the occasion of 2500th anniversary of the establishment of the Persian Empire, the archaeological site of Persepolis was chosen as the site of the three days of royal-celebrations.
In 1973, the Institute of Achaemenid Research was founded at Persepolis in order to direct all aspects of excavations, restorations, and publications of the Achaemenid monuments and facilitating co-operation between scholars in the field. The most profound overarching significance of the programs of Institute of Achaemenid Research is elaborate attempt to prove the existence of urbanism at Persepolis and to articulate the nature of that urbanism.
In 1979, ICOMOS registered Persepolis in the index of World National Heritage[104].

The 20s: Ernst Herzfeld and formulation of systematic excavations

The beginning of the program of Ernst Herzfeld for the excavation and conservation of the archaeological site of Persepolis, which was then sponsored by the Oriental institute of Chicago, can be dated in 1922 when Reza Shah Pahlavi[105] during his first visit of Persepolis registered his distress[106] over the poor condition of the ruins[107].
Already the distressed condition of the ruins had become a significant concern among the Iranian intelligentsia. As the official councilor of the National Monuments Council of Iran in archaeological matters, and benefiting from the political

104 See in the appendix.
105 In this visit, Herzfeld guided a comprehensive tour of the monuments and his recent discoveries.
106 During his first visit of Persepolis, Reza Shah registered his distress over the poor condition of Persepolis :"… There should be walls to avoid destroying Persepolis. Something must be done about it."
107 Herzfeld's first impression of Persepolis was recorded on 24 November 1905.

Figure 2.11.
Persepolis: Panoramic View of the Throne Hall before Excavation.
1903-1905.
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

Figure 2.12.
Persepolis: Apadana, East Portico, Two Columns with Capitals before Excavation.
1903-1905.
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

Figure 2.13.
Persepolis: Foundations of Doorway, View before Excavation 1903-1905.
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

Figure 2.14.
Persepolis: Great Stairway to the Terrace Complex, before Excavation. 1903-1905
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

Figure 2.15.
Persepolis: Southern Wall of Terrace Complex, View before Excavation. 1903-1905.
Ernst Herzfeld., Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

importance of the archaeological complex of Persepolis for the new emerging government of Pahlavi, Herzfeld used his status to emphasize the importance of preserving Persepolis to provide governor permission for his activities by highlighting the nationalistic significance of the Persepolis and the role it plays in shaping the identity of Iran. Based on his archaeological digs, Herzfeld had hypothesized that the term "Iranian"[108] was historically linked to Aryan tribes that had migrated into the region; the statement that in the vigor of the nationalistic sentiments of the 20s was highly appreciated by the new emerging government of Pahlavi.

After the visit of Reza Shah Pahlavi, in 1923 Herzfeld, on the request of governor of the province of Fars, prepared a detailed description of the current state of the ruins of Persepolis and preliminary suggestions for their preservation; in 1923/24, Ernst Herzfeld made a trip to the site and produced a careful plan of all the discernible buildings on the terrace and took hundreds of photographs[109] including an extensive collection of about 500 negative plates which formed his first photographic documentation of site. For formulating the conservation program, Herzfeld used investigating the material and structure of unearthed artifacts and remains as important information resources in determining the archaeological nature of the site; moreover he made environmental investigations to find out the geographical conditions of the site as well as the state of preservation of the remains.

Herzfeld prepares numerous volumes of photographs, plans, detailed representations of the relief sculptures of the terrace buildings, reconstructions of buildings and necessary drawings for conservative scopes like maps showing sites where archaeological sites are, maps showing locations of archaeological finds and drawings of the artifacts themselves. A brief look to the graphic documentation of the Persepolis prepared by Herzfeld does during his early visits to Persepolis, from 1923 to 1925 reveals that such documentation has been prepared as preliminary graphical reports to be completed and Herzfeld clearly knew what he would

108 In november 1934, the king of Iran, Reza Shah Pahlavi (ruled 1926–1941), decreed the permanent substitution of the country's official name of "Persia" by "Iran," signifying the Land of Aryans.

109 During this time, Herzfeld produced quantities of sketches and measured plans of buildings, took extensive photographs of the site, drew a plan of all the discernible buildings on the terrace, noted many details of the relief sculptures that decorate the terrace buildings, and took paper squeezes of the inscriptions. All these information, then constitute Herzfeld's main database during his official activities in Persepolis from 1931-1934.

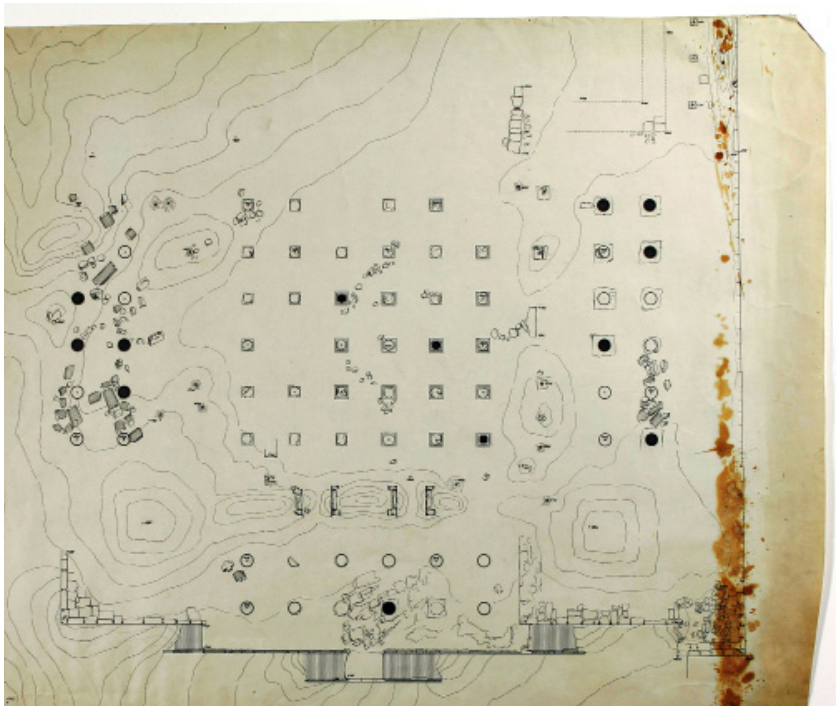

Figure 2.16.
Persepolis: Apadana, plan before excavation,1903-1936.
Ernst Herzfeld., Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

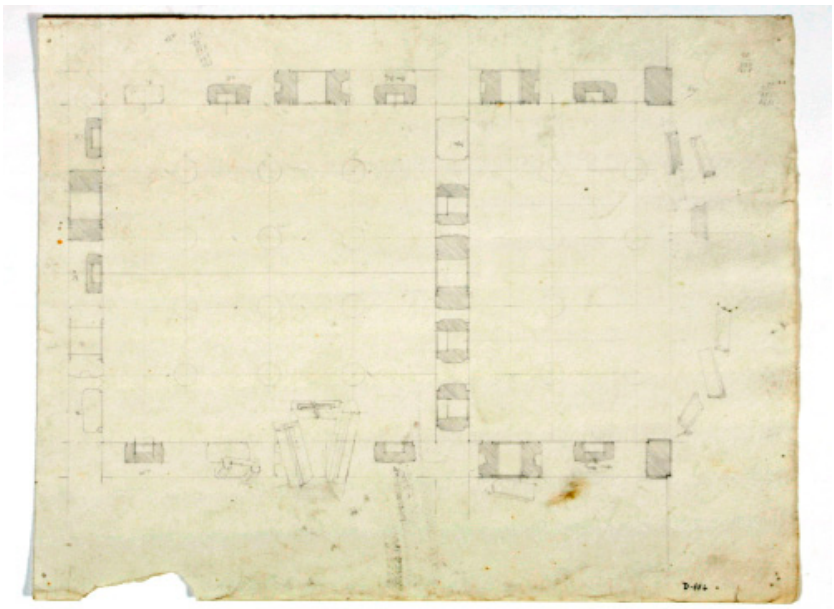

Figure 2.17.
Persepolis: Palace of Darius, plan before excavation, 1903-1936.
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.
Herzfeld utilizes and combines his double training as architect and as archaeologist when confronting the archaeological ruins of Persepolis; he used investigating the material and structure of unearthed artifacts and remains as important information resources in determining the archaeological nature of the site and to find out the geographical conditions of the site as well as the state of preservation of the remains.

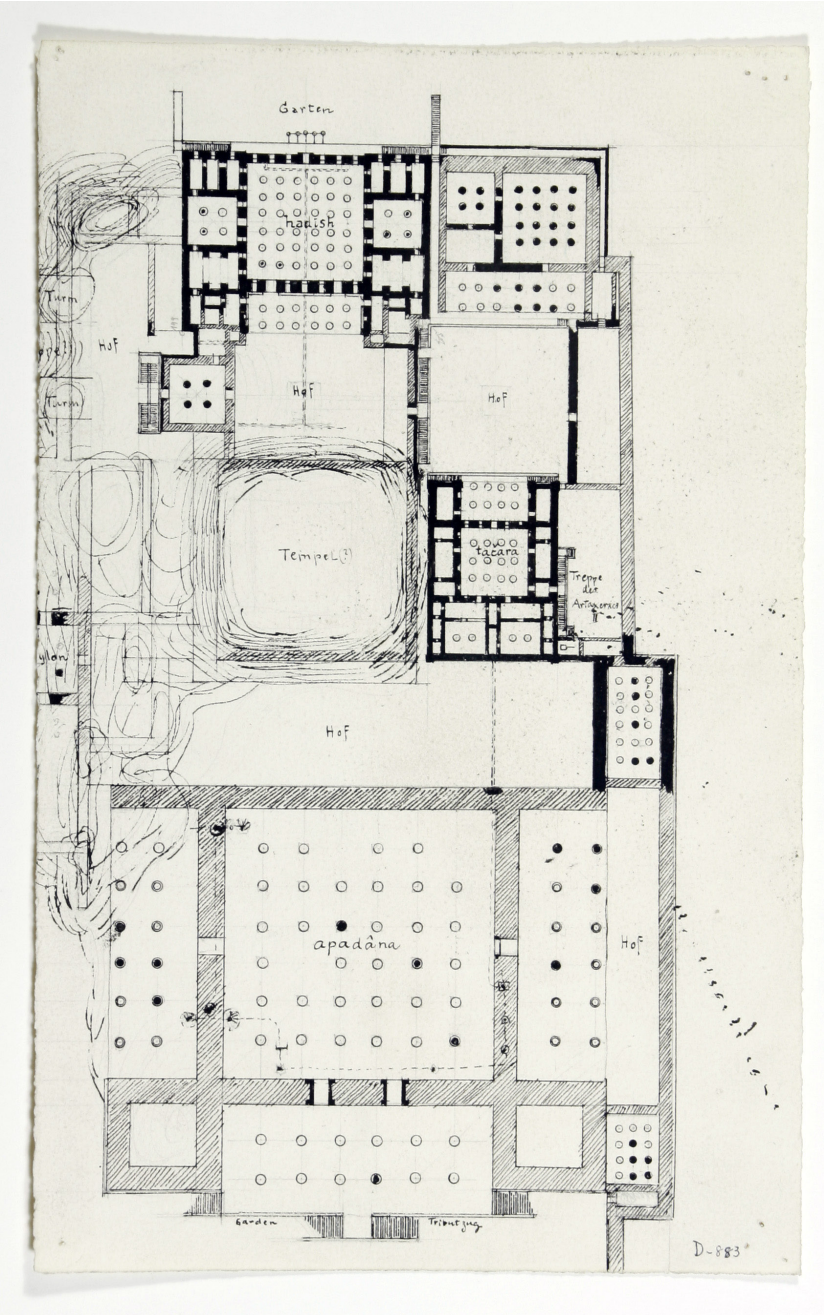

Figure 2.18.
Persepolis: Apadana, Palace of Darius, Palace of Xerxes, Palace G and H, unfinished plan, 1903-1936.
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

do later in Persepolis.
Herzfeld utilizes and combines his double training as architect and as archaeologist[110] when confronting the archaeological ruins of Persepolis and his program for the fist time, in an analytic way, gathers and presents detailed systematic programs for archaeological excavations and practical suggestions for the preservations of the ruins of Persepolis terrace.

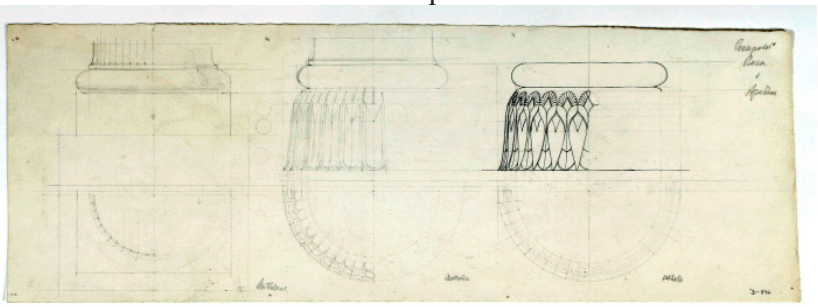

Figure 2.19.
Detail of the column base from the Apadana palace.
Ernst Herzfeld., Freer Gallery of Art and Arthur M. Sackler Gallery Archives.
Herzfeld made many details of the relief sculptures that decorate the terrace buildings, and took paper squeezes of the inscriptions.

Herzfeld's report entitled "Rapport sur l'état actuel des ruines de Persépolis et propositions pour leur conservation"[111], which then became the reference of Herzfeld's successive interventions in Persepolis, written and published in French in 1924[112], clearly addresses following points:

- A detailed description of the actual state of the buildings of the terrace at Persepolis, the nearby tombs, and the fortification wall that enclosed the terrace and the hill behind it ;
- Necessary measures for the conservation of the existing ruins[113];

110 Herzfeld was first trained as an architect, graduated from Technische Hochschule (later renamed Technical University) of Berlin, but later thanks to his education in the German school of Orientalistik and art history became a good Iranologist and after spending two years at the archaeological excavations of Deutsche Orient-Gesellschaft in middle-east and receiving the best possible training available, Herzfeld became a celebrated archaeologist.

111 E. Herzfeld, *Rapport sur l'état Actuel des Ruines de Persépolis et Propositions Pour leur Conservation*, Berlin, 1928.

112 He published a more detailed description of the state of preservation and need for conservation of the site in 1928, reprinted in the Archäologische Mitteilungen aus Iran in 1929.

113 Regarding the conservative measures to be done in Persepolis, Herzfeld writes that: "…Digging is what must be done in 21 thousand square meters with the help of railways without deforming or damaging the founda-

- Estimating the costs and the duration of work[114];
- Graphic representation of the ruins and essay of reconstruction.

In 1927, preceding Herzfeld's presentations in the National Monuments Council of Iran, the minister of foreign affairs and one of the founding members of the National Monuments Council of Iran, gave a short lecture about the necessity of executing certain interventions in Persepolis regarding its preservation[115]: "… I do not need to speak in detail of Persepolis and its pitiful condition; you gentlemen have all heard about or seen it.... For its protection from robbery, it is necessary to put a metallic or wooden enclosure with a gate, and to employ guards to control the entrance of the site, and to build a residence for them nearby, etc… ".

The proposal of Ernst Herzfeld for official excavations at Persepolis was hypothesized to fulfill following goals:

- Examination by excavation of the principal palatial complexes of the terrace;
- Reconstruction of one of the palaces of Persepolis for housing the expedition;
- Preservation[116] of buildings and sculptures of the terrace, to "be effected by reopening the ancient subterranean drainage system, and protection against damage by rain, frost, and man".

In 1930, Ernst Herzfeld was given the permission[117] of starting

tion…" and "... Assumingly moving and transferring the stones, and building runnels and covering top of the stones with a layer of cement...".

114 And while reminding them, mentions useful points to avoid further damages and in the end, considering the needed time and expenses, continues: "Digging ...the expenses will not exceed 30 thousand tomans." and "...stone placement...with a layer of cement will cost about half of the forementioned expense and time, therefore I expect 2 years till everything is done." and "...adding further personal expenditure, material, and scientific calculations' expenses to the estimated expenses, there would be an overall of 90 thousand tomans, rounded up to 100."

115 The government's vision of "Preservation", as cited in this lecture came to be synonymous with physically protecting the Persepolis by employing guards to control access to the site.

116 However, due to the lack of the culture of conservation the term "Preservation" came to be considered as physical protection of the site by employing and increasing guards to control access to the site. In 1929, in order to provide the necessary security for physical preservation of the Persepolis a police headquarters was established at Persepolis.

117 In an official letter to the Iranian ambassador in Paris, Teymourtash (the court minister) clearly indicated that "no excavation permit was given to foreign institutions" and that the Oriental Institute, through Herzfeld, "offered a proposal merely for the preservation of historical monuments at Persepolis, which was then approved by the government that released an authorization;

his activities in Persepolis, the first excavation permit under the Antiquities Law. This permission, in fact the intention of as Iranian government had intended was the "Clearance permission " for promoting restorations and preservations in terrace of Persepolis, as was indicated in Herzfeld's proposal for the preservation of the monuments of Persepolis, in order to preserve[118] its structures against damages by rain, frost, and man.

Interventions of Oriental institute of Chicago during the 30s

In 1931, Herzfeld began official excavations at Persepolis, sponsored by the Oriental Institute of the University of Chicago[119] which was continued till 1939.

The scopes Herzfeld hoped to complete during his activities in Persepolis were "first, the clearance of the ruined palaces still rising above ground level on the vast terrace, second, the preservation of these remains and third, the complete reconstruction of one of the palaces as a model of the Persian art of building in the Achaemenian period.[120]"

Herzfeld directed the works of the Oriental Institute of Chicago from 1931-1935 and from then till 1939, Erich f. Schmidt continued the preestablished scopes of the Herzfeld's program. Detailed reports of the activities in Persepolis were constantly published as "The Oriental Institute Archaeological Report on the near East" in the "The American Journal of Semitic Languages and Literatures."

Remarkable contributions of the excavations of the Oriental Institute are stimulating a broad spectrum of archaeological activities in the region, and providing indispensable knowledge of Persepolis through important documentary and interpretive scientific studies.

There is no camp diary recording the progress of work during the years of Herzfeld's directorship[121] and it is not clear how the

the permit had nothing to do with an excavation process."

118 It is in fact not clear how the initial works of preservation and restoration were subsequently transformed into a real archaeological excavation.

119 Herzfeld wanted to use German support for these excavations, but the financial and political situation in Germany did not allow for the engagement of the Notgemeinschaft der Deutschen Wissenschaft in these years.

120 J. H. Breasted, *The Oriental Institute,* Chicago: University of Chicago Press, 1933, p. 311

121 This lack of detailed record keeping characterized Herzfeld's work at Persepolis. Herzfeld never published the results of his work at Persepolis because he believed that the information obtained from his excavations was his own scientific property. Herzfeld gave most of his professional records which cover many years of exploration in the Middle East, including the excavations

initial works of preservation and restoration were subsequently transformed into a real archaeological excavation; however it is possible to generally frame the works executed during the excavations of the directorship of Herzfeld.

From 1931-1935, the major part of the activities were concentrated in clearing the site and as the result an important part of the courtyard between the Hall of One Hundred Columns and the Apadana was cleared.

In 1932, Herzfeld excavated the major portion of the Gate of All Lands and the system of subterranean canals. In addition a part of the western wing of the Harem of Xerxes and the southern stairway of the Central Palace were uncovered. In this year the large large avenue to the north of the Central Building, between the Hall of One Hundred Columns and the Apadana, was excavated which resulted in the discovery of the sculptured stairways of the northern facade of the Central Building and the eastern facade of the Apadana.

In 1933, the courtyard between the Hall of One Hundred Columns and the Apadana was cleared and at the east of this palace, the excavators found a stairway leading to the subterranean canal system. In October of 1933, Reza Shah officially visited Persepolis. Herzfeld and Godard were present to welcome the king, and Herzfeld guided a comprehensive tour of the monuments and his recent discoveries.

Herzfeld concentrated the major part of his activities on executing excavations, exposing and recording the architectural remains of the terrace rather than making necessary interventions regarding their preservation. The vast area of the terrace which for a long time was exposed to natural and human destruction was not dealt in

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he conducted at Samarra and Persepolis. to the Freer Gallery of Art in 1946.

In 1927 he wrote up a two-page synopsis in the Illustrated London News, titled "The Past in Persia II: The Achaemenian Period: Remarkable Discoveries at Persepolis (550–330 B.C.)." The large-scale architectural drawings, the major plans, and some of the elevations exhibiting the exquisite draftsmanship of Friedrich Krefter, Karl Bergner, and Herzfeld himself, have been published in Iran in the Ancient East, the three-volume publication of Persepolis by Schmidt, and in the Archäologische Mitteilungen aus Iran. Herzfeld's sketchbooks from the 1930s include stone-by-stone elevations of most of the terrace wall and of several of the buildings he and his team explored, in addition to the outlines of a stone-by-stone plan of the terrace (with all clamps as carefully measured as the stones). These detailed elevations and plans were not published in Iran in the Ancient East but instead were summarized by means of "isometric plans," which indicate the height of the standing remains by means of slanting shadows drawn in on the ground.

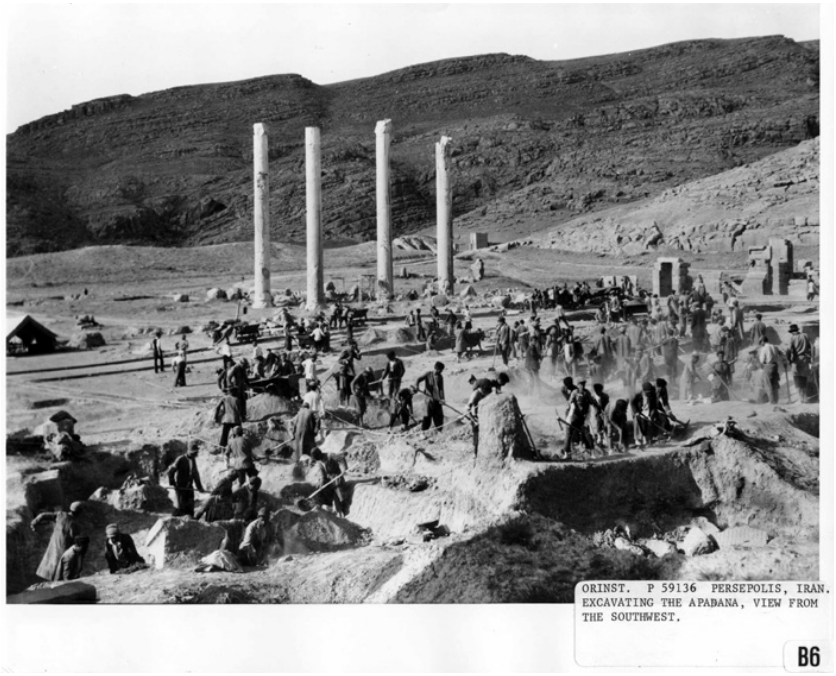


Figure 2.20.
Persepolis: excavation of the Oriental Institute of Chicago, excavation of the Apadana palace.
Photo n. P59136, Persepolis and ancient Iran, Oriental Institute Photographic Archives, Oriental Institute of Chicago.

Figure 2.21.
Persepolis: excavation of the Oriental Institute of Chicago, excavation of the service quarters in the main wing.
Photo n. P57891, Persepolis and ancient Iran, Oriental Institute Photographic Archives, Oriental Institute of Chicago.

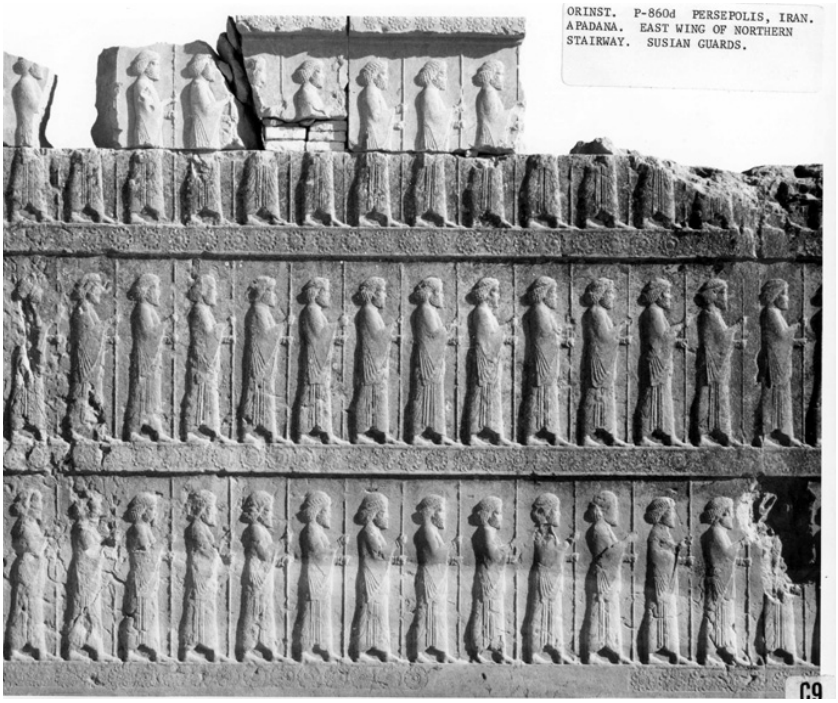


Figure 2.22.
Persepolis: excavation of the Oriental Institute of Chicago, the stairway of Apadana., Photo n. P860-d, Persepolis and ancient Iran, Oriental Institute Photographic Archives, Oriental Institute of Chicago.

Figure 2.23.
Persepolis: excavation of the Oriental Institute of Chicago, Apadama, Northern stairway.
Photo n. P860-d, Persepolis and ancient Iran, Oriental Institute Photographic Archives, Oriental Institute of Chicago.

any systematic way and remained a major issue in archaeological preservation.

Figure 2.24.
Reza Shah at Persepolis.1933.
National Archives of Iran, Tehran, Iran.
During the excavations of Persepolis, due to the importance of the excavations, Reza shah 2 times visited the Persepolis and got informed about the recent work progresses. In the photo Ernst Herzfeld(right) is giving Reza Shah(left) explanations about the progress of the excavation works at Persepolis.

Schmidt began to work at Persepolis in 1935 by excavating the southeast sector of the terrace, where his team found the impressive architectural remains of the garrison and discovering remains of the fortifications at the base of the mountain led to a thorough study of the defense system of Persepolis.
In 1936, the excavation of the Treasury began, which resulted in the discovery of the so-called audience reliefs[122] attributed to Darius the Great.
The season of 1937 involved a great deal of activity, mostly concentrated on excavation in the interior of the Hall of One Hundred Columns and on the continuing excavation of the Treasury. In this year, due to the particular importance of the Persepolis, Reza Shah and his crown prince, Mohammad-Reza, visited Persepolis to get informed about the progress of the work.

122 During the 1960s, the meticulous observations and studies of IsMEO showed that these reliefs had been originally removed from the main staircases of the Apadana.

In 1938 and 1939, during the last two excavation seasons under the directorship of Erich f. Schmidt, focus turned to southern parts of Persepolis and completing the excavation of the Treasury; the sections of the mud brick walls of the Treasury were lowered to a uniform "preserve-able height" which were unsuccessful and was continued and completed by the Iranian teams after the departure of the Oriental Institute.

Interventions of the Scientific Bureau of Persepolis during the 40-60s

After the departure of the American expedition in 1939, due to the importance of the Persepolis and the necessity of terminating the unfinished works in the terrace and in the monuments, the Iranian government took over restoration at Persepolis[123]. During his directorship,the main objective was excavating in the northern part of the terrace; moreover, in this period the plan of the subterranean drainage system[124] was finally completed which " ... seemed likely to enable the excavator to reestablish the ancient evacuation system of the site so as to avoid the deterioration of the structures by the waters flowing down from the mountain.."

To give a brief framework of the activities of the Scientific Bureau of Persepolis in a chronological order these activities are listed:

During 1939-42 the work of clearings in the terrace was continued and the dumps remained from the Oriental Institute excavations were removed.

During 1942-43 the unexplored spots between the Apadana and the Hall of One Hundred Columns were excavated.

In the 1943-44 excavations were continued in the northern court of the Hall of One Hundred Columns.

Between1944-47 a thirty-two-columned hall in the north of the Hall of One Hundred Columns was uncovered and excavations in the northern and eastern areas of the Hall of One Hundred Columns were completed.

123 During the twenty years of his tenure at Persepolis (1941-61) he excavated various parts of the site and explored other sites of the region, notably Pasargadae. His reports, published in two thick volumes of Gozareshhay-e Bastnshenasi (ArchaeologicalReports) in 1951 and 1961, are organized in chronological order,summarizing annual work at Persepolis.

124 Drainage system of structures of Persepolis: Vertical chimney-like drainage shafts were constructed inside the thick walls with bricks and covered with bitumen, directed the rainwater from the roof into the underground channels and through these into the plain. Part of this elaborate drainage system still remains in various places and performs the intended function flawlessly.

During 1947-49 adjacent rooms to the east of the Hall of One Hundred Columns were uncovered and between1949-51 excavation were executed at southern rooms of the Harem and northern area of the thirty-two-columned hall and at the Palace of Artaxerxes III (Palace H) in southwestern corner of the terrace. In 1952 the area known as the Main Mound, in the west of the Harem was cleared; during 1954-56 excavations at the northern part of the Persepolis, beyond the main avenue linking the two gates were executed and between1956-58 the excavations were executed in the eastern part of the Treasury.

The archaeologists of the Scientific Bureau of Persepolis conducted important restorations during their activities; restoration of the stairways of the Apadana and the Central Building, restoration of the mud brick walls of the Treasury and the stone staircase linking the Harem courtyard to the original vestibule leading to the Apadana courtyard, that was always used by visitors to and from the Harem and had become a dangerous slope, was restored by walling up the eastern sector of the Central Building with stone slabs, thus "reconstructing the original form" of the main hall and its southern portico.

As Herzfeld had concentrated the major part of his activities on excavating the terrace rather than executing measures for their preservations, some parts of the uncovered structures of the terrace and specifically the mud brick walls needed urgent conservative attentions; as the first activities of the Scientific Bureau of Persepolis, the mud brick walls in front of the Harem and mud brick walls of the Treasury, which had remained partly intact to a height of 2 m since the time of their discovery, were lowered to a height of 30 cm in order to be protected against heavy rains.

In order to protect the staircase of Apadana gainst heavy rains it was managed to affix a folding wooden roof,which proved to be both aesthetic and protective, over the staircase; during the restorations of IsMEO, this wooden roof was discarded and substituted by a huge metallic roof[125] which was installed over the eastern staircase of the Apadana and that of the Central Building.

The other important initiative of the Scientific Bureau of Persepolis was publishing detailed reports entitled as "Archaeological reports" where annual work at Persepolis and other archaeological sites subjected to their explorations, organized in chronological

125 This roof, supposedly set up to protect the reliefs from the sun, is too elevated and the rays of the sun easily penetrate and reach one section or another of the reliefs at almost every time of day.

order, are described. These publications make possible follow the progress of the activities in Persepolis in a precise order. Referring to the publications of Scientific Bureau of Persepolis the activities done in the terrace of Persepolis can be summarized as follows: clearing, excavating, uncovering and restoring.

From 1941-1961, Ali Sami (1910-89), one of the major figures of Iranian archaeology and director of the Scientific Bureau at Persepolis, was in charge of excavations and excavating and restoring the site. Excavations were initially conducted by Andre Godard under the supervision of the Department of Archaeology until the establishment of the Scientific Bureau of Persepolis in 1950s, and then by Ali Sami on behalf of the Iranian Archaeological Service but under the supervision of the Scientific Bureau of Persepolis; these excavations did much to reveal the plan of the few remaining unexamined areas of the site.

While the major part of the activities of Oriental Institute of Chicago were concentrated in the clearing of the courtyard between the Hall of One Hundred Columns and the Apadana and excavations in the in the interior parts of the Hall of One Hundred Columns and treasury, the archaeologists of Scientific Bureau of Persepolis, the newly hired members of the General Office of Archaeology, during their activities which took 20years concentrated their efforts on the completion the clearance of the terrace and excavating the unexplored parts; moreover, they managed to commence explorations in imperial site of Pasargadae parallel to the activities in Persepolis. It is with the activities of the Scientific Bureau of Persepolis that the most parts of the terrace of Persepolis is cleared and gets ready for the conservative instruments.

3. Restoration in Iranian context

3.1. Preservation of historic monuments in Iranian context since the 20th century

The existing literal resources where there could be found citations regarding the interventions in historic edifices date back to late 18th century; referring to these resources which are in fact the itineraries written by foreign travelers and adventurers, it is in some extents possible to estimate that from the 18th century on and specifically during the Qajar period there had been initiated several, state-sponsored attempts for repairing and maintaining a certain number of important edifices, including those considered having artistic/historic values; the Qajar king, "Naser al-Din Shah Qajar" (1831-1896) attempted to execute some expeditions in Persepolis and ordered to repair some historic buildings[125]"; there are also scarce citations regarding repairing sacred and religious buildings of public/private sponsored type in the memoirs and itineraries of the travelers and adventurers.

Due to the lack of any further description about these repairs[126], it is not possible to find out the characteristics of these interventions, but it could generally be told that these interventions were limited just to necessary preparations, finalized to take the edifices back to the ordinary use, not in a structured and organized way based on the principles of interventions of historic buildings, but to guaranty and prolong their permanency in Iranian urban contexts; this trend, which further in this chapter will be defined and analyzed in its characteristics, constitutes the base of the traditional derivation of the concept of restoration in Iranian traditional culture and can be traceable till the last years of 19th century and the first years of the 20th century; just like archaeology which in its scientific aspect and as a science was introduced in the late 19th century, it is in the middle of the 20th century which"restoration" in its modern and up-to-dated derivations is introduced into Iranian context, with a quasi 30years delay respect European context.

While the abstract and pre-mature definitions concepts of "Mo

125 The citations regarding the preservation of historic monuments for about half a century in during the reign of Naser al-Din Shah Qajar are mentioned in "Al-Moaser and Aasaar".

126 In these resources, the edifices which were subjected to repair are solely named and listed without any further description.

numents","Restoration","Conservation" and their (inter)related disciplinary aspects were in their own way versus acquiring an international general agreement and comprehension, Iran twas experiencing the very first steps versus regularization of the archaeological activities. It is in fact the Restoration Charter of Athens that different aspects of the matter were accumulated and an internationally acceptable general definition was set for the concept of "restoration"; at the same time in Iran, considering the fact that the very first systematic archaeological excavations in the country were commenced in the late 19th century, the Law of Antiquity was released that in major part was limited to set limits and boundaries for archaeological excavations.

In this context, the "restoration" remains limited to its traditional derivations till almost 30years after and obviously all existing literal resources which have used the word "restoration" as the interventions executed in historic buildings destined to take them back to normal use, just give vague ideas of a series of interventions which include a wide range of interventions in historic constructions from simple and regular repairs to structural modifications and even complete renovation and reconstruction of the subject but not the restoration itself.

Although these interventions can not be referred as the examples of restoration, even marginally, however they preserved certain historic buildings and helped them to resist in time; these initiatives, which were executed quasi in arbitrary, not organized and even in a personalized way included certain types of constructions: holy shrines, sacred and royal edifices.

While there are scarce examples of attempts in historic monuments for resolve their problems, there are remarkable and obvious evidences of the destructive interventions in these monuments; in a very general way, it can be said that there are more examples of the destruction of the historic buildings than the examples of their restoration; the main factors which stand as the main destructing and threatening factor for the life and permanency of the historic monuments and their continuity thorough the time are human and nature generated factors and the lack of sufficient legal support.

Apart from the indispensable impacts of the nature on old edifices, a great number of historic buildings have experiences different signs of human-based damages manifested in brutality and vandalism.

Human based damages

Vandalism

In many cases, referring to the existing documents and evidences, human-caused damages are identified as the most destructive element for the life of historic monuments; from the time of the invasion of Alexander which resulted the destruction of the terrace of Persepolis and its palaces, vandalism and neglect, intentional and (un)intentional, have been always the two most important and remarkable type of human-caused damages which have threatened archaeological and urban monuments of Iran and resulted in the loss and destruction of precious heritage of the country including historic palaces, castles, bridges, beautiful gardens, monuments' portals and other urban and extra-urban monuments thorough time; even in the immediate early days right after the Islamic revolution in 1979, again the archaeological remains become the sites of violent demonstrations and targets of attacks of revolutionary guards, when a bunch of revolutionary guards intended to destroy the archaeological site of Persepolis as the symbol of the monarchial regime.

Other identified types of intentional human-based damages in archaeological/architectural monuments are damages to the archaeological monument itself: many precious unrecoverable ornamental and decorative elements of these monuments were destructed or, during the excavations, were easily taken out from their original places; referring to existing documentations, in some cases, even the original materials of historic and archaeologic sites were utilized in the construction of new buildings; as for example, nice and magnificent designs and pillars of Zand's period monuments were transferred to complete and decorate the Qajar period[127] palaces in Tehran and as documented during the restoration of IsMEO in the 60s, in the case of Persepolis, stone and pillar parts were found in the other archaeological monuments nearby. In fact, historic sources and traveler's itineraries, help to trace and identify this trend back in Iranian historical background, from the pre-Islamic Achaemenid and Sasanid eras, when the paintings and stone epigraphs of Naqshe Rostam were covered and replaced with some Sasanid paintings, till the Islamic 17-18th

127 Another example is in the time of the opinionated Safavid Prince, Masoud Mirza Zel-Al-Soltoan, who ordered to cut the old trees in Safavid streets and destroy historic buildings of Isfahan and even transport their remained materials to Tehran in order to distract the Qajar Shah from attentions to Safavid monuments and palaces.

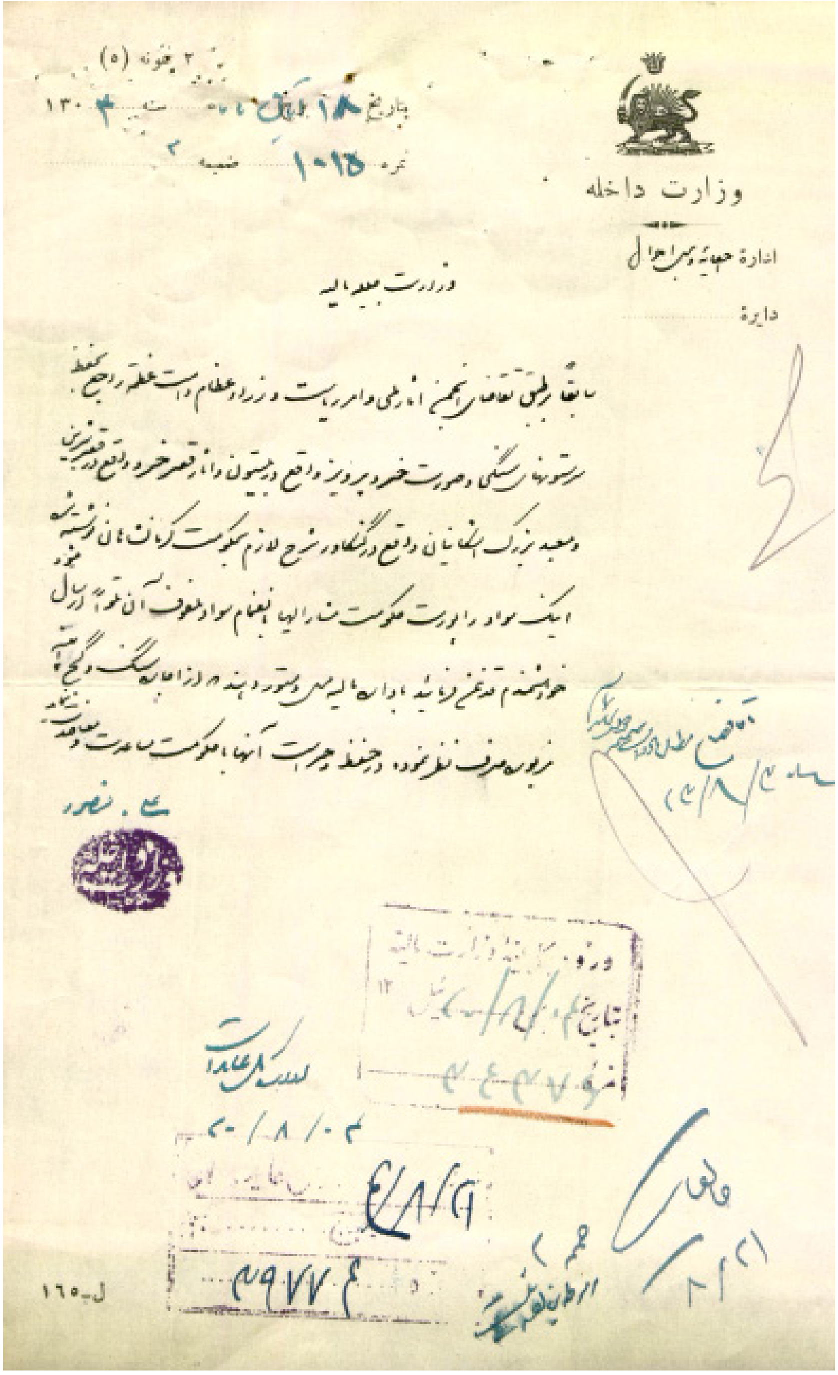
centuries, when precious decorative elements of the monuments of Safavid period in Isfahan or Zand period in Shiraz were destroyed.

Neglect

Apart from the obvious impacts of the vandalism, as intentional human-based damages,on the historic constructions, documented in the itineraries and scarce literal resources , there exist, un-intentional damages which have caused damages in historic constructions not less important than the vandalism acts. Due to simply neglecting the importance and the necessity of the conservation of the historic constructions and lacking the execution of ordinary maintenance interventions finalized to guaranty the minimum standards of survival, many historic monuments have been deteriorated gradually and destroyed thorough the time; due to the particular characteristics of the Iranian historic constructions, the documented impacts of the neglect and the lack of care of in the historic constructions which gradually resulted different grades of deterioration and decays and finally led them to total destruction are:

1. Accumulation of dust, dirt and superfluous material including the growth of plants thorough insufficient cleaning which have caused permanent surface damages in the monuments and destroyed their appearance; especially vegetation, as a natural phenomenon or as deposited seeds by the wind or by animals in adobe walls or roofs accelerate and generate different levels of deteriorations in adobe constructions[128] and has caused important damages in these constructions;
2. The lack of the presence of skilled labor for the execution of the necessary maintenance interventions in the old roofs against heavy rains, has resulted that protecting the roofs from the penetration of rain water was simply neglected of at maximum be dealt with temporary and inadequate measures; the results of the lack of protection of exposed surfaces against heavy rain were disastrous in the adobe constructions of the country and there are numerous examples where the adobe material has been dissolved against heavy rain and the whole structure has been destroyed;
3. Neglect of the original, indigenous characteristics due to the adoption and acceptance of new integrations or incompatible materials for repairing modifying or altering old ones; in this

128 For example the action of vegetation may break down adobe bricks or cause moisture retention which will harm the adobe structure.



وزارت داخله

نمره ۱۰۱۵

بتاریخ ... سنه ۱۳۰۴

وزارت جلیله مالیه

Figure 3.1.
Official request of the National Monuments Council.
National Archives of Iran, Tehran, Iran.
Even after the establishment of National Monuments Council, there are evidences of the intentionally damaging and destructing the historic monuments. In this document, the National Monuments Council asks the governor of the province of Kermanshahan to prevent from dismanteling the collumns of the archaeological site of Bistoun and to collaborate with the authorities in preserving the archaeological site.

regard, some of the examples of inexpert repairs of traditional materials with incompatible materials are: positioning adobe bricks with Portland cement; replacing deteriorated wooden lintels and doors with steel ones; reinforcing degraded adobe walls with spraying with plastic or latex surface coatings;

4. Due to lack of understanding the value of "old", "antique" and "monument" and the necessity of preserving " Old (and/or) antique monument", except some certain monuments, selected on the basis of a very flexible criteria, the other monuments were easily demolished to give place for new constructions and in fact, despite scarce initiatives and reparations, there are numerous resources confirming that in many cases old constructions were easily destroyed by the orders of governors for giving place for the construction of new ones or during the urban projects; 17th century Safavid and Zand edifices of Naqsh-E-Jahan Square in Isfahan and Vakil Bazaar and Mosque in Shiraz were founded on the ruins of predecessor monuments or in the Qajar period, Soltaniyeh mausoleum original dome's materials were used in the construction of a summer palace in its near garden which caused some damages to the structural parts of the monument;
5. Inexpert and non-structured repairs which in the lack of a comprehensive understanding of the values of "Old (and/or) antique monument" had resulted in the aggravation of the condition and the loss of the artistic and historic values of the monument which it was designed to rectify; in fact, A more specific factor affecting the integrity of historic buildings was the habit, over the past fifty years, of "renewing" wall paintings and decorations, which could be found even in modest buildings, with inappropriate materials, for example, linseed oil, which does not preserve the decorated surface but instead forms an impermeable film that is subject to rapid physical and chromatic transformation.

The lack of legal support

Parallel to the vandalism and the neglect which caused important irreparable damages to the historic constructions, the lack of a well structured legal support, form other hand, is another cause of the deterioration of important parts of the historic contexts; apart from scarce personal interests in constructing public edifices and preserving certain historic buildings by means

of ordinary repairs[129], restoration of historic buildings till the years 30s of 1900, in its modern derivations or at least based on the definition of the "Restoration" in the Charter of Athens released quasi at the same time, for governors, legislators and state was never considered as important as it had to be; the very first attempts, systematic organized and structured ones are born in the last years of 20s from the nationalistic sentiments of the Pahlavi government which wanted to recover, crystallize and symbolize the selected monuments of the past to manipulate them for political purposes.

In the lack of legal supports, many damages happened in the urban historical context during the urban projects of the 20s which in the search of modernization following the criteria of "Renovation" and "Demolition" destructed precious parts of the historic urban context; during these programs, important parts of the historic contexts of the cities where existed the characterizing elements of the traditional urban morphology such as "Bazar"[130], the traditional commercial center, were destructed to give place for constructing large streets designed based on the European[131] model of "Boulevard" for the new imported cars and moreover the old streets of the historical parts of the cities were modified and widened, in order to give sufficient place for the entrance

129 Some gracious statesmen attempted to restore, preserve and establish non-profit buildings. Mr. Mohammad Hossein the Prime Minister of Isfahan (in Qajar period) made important attempts to preserve and restore Safavid palaces and monuments and it can be stated that without his efforts there was nothing left of Isfahan's historic buildings., E. Negahban, *A Review to 50 Years of Iranian Archaeology,* Tehran, Iran, 2005, pp. 20-86.

130 These actions bring fundamental changes to the old fabric and by cutting the "Bazaar", the traditional place of business, the major part of commercial activities is transferred to streets, to the new stores built in the ground floor of buildings located on streets; result of this transfer is gradually loss of the role of the old bazaar in many cities. One of the significant examples regarding the impact of urban planning on Bazaars is the division of the Tehran Bazaar and destruction of many of its historic buildings in order to build wide straight avenues in its center.

131 As one the hi main policies, Reza Shah followed the modernization and Westernization of the country, in this regard, in this period, the European models of urban planning such as Boulevards and other urban elements were adapted in Iranian cities without any precedent references in order to make a new panorama of a modern Iranian city; as the result a new style in Iranian urban planning was formed known as the Tehran style. Reza Shah believed that ancient buildings, the city fortifications and the old citadel should not be part of a modern city. They were systematically destroyed and modern buildings with pre-Islamic Iranian style, such as the National Bank, Police Headquarter, Telegraph Office and Military Academy were built in their place.

of the cars and the motor vehicles into internal parts of the “Old city”.

Figure 3.2 & 3.3.
Tehran and Modernization.
Old photos, Tehran, Phototec, National Archives of Iran, Tehran, Iran.
During the urban projects of the 20s, the trend of “Demolition” and “Renovation” destructed precious parts of the historic urban context of many cities of the country; the narrow streets and connections of the old parts were widened, modified or demolished and turned to European model boulevards to leave place for the new imported cars; in order to unify the facades of these boulevards, the elevations of the prospecting houses were demolished and a uniform two storeys facade was designed for all the edifices prospecting.

3.2.“Restoration” : definitions and interpretations in Persian language

There are clear differences between the word “Restoration” in traditional Iranian context, in literal and practical levels, as it has always been intended, with its today’s derivations. Although there have been always many interventions executed in historical buildings which helped historic constructions to survive thorough the time, however, as they clearly lacked the basic characteristics of the modern restoration interventions, it is hard to classify any of these interventions and refer to them as “genuine” and “proper” restoration example.

Although the lack of sufficient documentations till the first 30years of 1900 complicates the classification and exact identification of the traditionally executed interventions for systematic studies, however, there are scarce citations of the word “Restoration” documented in different literal resources. Contradictory interpretations of the word “Restoration” in these documents[132] and resources, confirm that restoration was intended almost always as a temporary solution not a definite and lifetime solution, finalized to safeguard the continuity of a certain building with respecting and maintaining its artistic and historic values.

The definitions and interpretations of the “Restoration”, contradictory and personalized, in lexical and theoretical levels, in first place complicate classifying and identifying the traditional interventions in historic buildings as genuine “Restoration”s; this complication is mostly due to the characteristics of the so-called traditional restorations: the personalized techniques of intervention, the materials applied in these restorations, and the lack of sufficient documentation before/during and after the interventions are remarkable characteristics of the traditional restorations.

In Persian language, the word “Restoration” appears in several types of documents; main literal resources where there are citations of the word “Restoration” in singular or in combinational forms are vocabularies, literal resources and documents:

Restoration in Persian vocabularies

The word “Restoration” in Persian language is

132 See E. Negahban, *A Review to 50 Years of Iranian Archaeology,* Tehran, Iran, 2005, pp. 20-86.

"Marammat", which is an Arabic word; lexical definitions of the word "Restoration" as "noun", "verb", "adjective" and its combinations are given in Persian reference vocabularies of "Dehkhoda"[133] and "Moin"[134] which are general vocabularies and not technical, written in the years 30, which use the verbs "Reparation" and "Modification" to define and characterize the word "Restoration" in its pure form and in its combinations; the word "Restoration" , in singular form, is defined as the verb of "reparation and modification of anything"[135], still remained unchanged. The literal combinations of the word "Restoration" in Persian reference vocabularies are "Restoration-able", "un-Restoration-able", "Restoration-needed", which all are defined thanks to direct application of the verbs "Reparation" and "Modification" to the relative adjectives:

- "Restoration-able": "Repair-able", "Recover-able";
- "un-Restoration-able": "un-Repair-able", "un-Recover-able", "un-Modify-able";
- "Restoration-needed": "Reparation-wanted", "in need of Modification and Reparation".

In the Persian vocabularies the word "Restorer" is defined as a

133 The Dehkhoda Dictionary is the largest comprehensive Persian dictionary ever published, comprising 15 volumes (more than 26000 pages), a forty-five years of efforts by Allameh Ali Akbar Dehkhodā ,(1879, 1956) a prominent Iranian linguist, and his other linguist collaborators. It was first printed in 1931; its importance resulted that in 1945 a special budget was allocated to its completion and to establishing the Dehkhoda Institute in the College of Humanities of the University of Tehran. The series initially consisted of 3 million records (up to 100 records for each word or proper noun),currently containing 343,466 entries that according to its latest digital release are based on an ever-growing library of over 2300 volumes in lexicology and various other scientific fields.

134 The Moin Persian Vocabulary is one of the major Iranian vocabularies prepared within 20 years by Mohammad Moin, (1914-1971), a prominent Iranian scholar of Persian literature and Iranian Studies. A six-volume vocabulary developed and published several times in Iran is consisted of the words definitions, foreign compounds, and pronunciations that characteristics of each of these two sectors are listed as follows:

The words part includes (dictation, pronunciation, origins, grammar, semantics and concepts, evidence and examples, synonyms and antonyms, explanations, vocabulary of approved Academy);

The foreign components part includes (spelling, pronunciation, origins, grammar, semantics, and describe the evidence, explanation).

With using this vocabulary, one could inform about words and phrases of Persian language and imported phrases and words used in European languages, their origins, pronunciation, and combinations.

135 The translation of the word "Restoration" in "Dehkhoda" and "Moin" vocabularies.

person who "Repairs" and "Modifies" anything that needs to be "Repaired" and "Modified".

Still in this context, the commonly used term for Conservation in Persian language is *hefazat* which is another Arabic word; in fact, the definition of the term conservation in Persian and Arabic language is the same; in both Persian and Arabic languages the terms *hefz, hefazat, mohafezat* , the lexical combinations of the term *hefz*, are used interchangeably for both conservation and preservation with slight differences depending on their context of application and referring to the citations of the term *hefz* in its lexical combinations in Arabic[136] and Persian language it could be summarized that the term "to conserve" the verbal for of the term conservation in its Persian language's definition includes the activities of protection, recording[137], preserving, guarding and keeping.

Restoration in in-situ inscriptions

In "A review of the 50 years of archaeology in Iran" existing in-situ inscriptions in the mosques and other architectural monuments like caravansaries are called as reliable and important resources[138] where there could be found solid proofs regarding the executed interventions in historic constructions[139].

"Inscriptions and existing plates in mosques, historic monuments, caravansaries regarding the reparations, decorations and their supplementations, do scarcely exist in most parts of Iran… "[140] or "… Important historical information lies thorough the inscriptions...". The importance of inscriptions is due to the fact that " … they are considered among the most documented records for researching about the building and are always privileged over historical quotes."

In the absence of historiography and relative documentations the

136 Referring to the definition of the verb conserve on its Persian and Arabic language definition as memorize based on Islamic ideology, the imam (leader of prayers during the pray) must be a hafiz, "conservator", committed to memorize the Qur'an in its totality.

137 The term hefz in Persian language as verb means committed to memory.

138 The importance of these inscriptions is due to the fact that numerous manuscripts are dedicated to the explanations of the content of the inscriptions of important monuments.

139 E. Negahban, *A Review to 50 Years of Iranian Archaeology,*Tehran, Iran, 2005, p. 27.

140 E. Negahban, *A Review to 50 Years of Iranian Archaeology,op.cit* , p. 27.

first resource for getting general information about a building and its history, is referring to in-situ inscriptions, which provide us with precise and sufficient information about the monument, the year of its construction, the founder(s), the duration of its construction, the construction motives and other necessary information. It has been a long tradition that after finishing an edifice an inscriptions was made of stone or brick, usually decorated with calligraphies or other ornamental details, and was installed in the entrance of the buildings or in the immediate vicinity of its entrance or in the corner and edges of the representative parts of the buildings[141] or significant facades and components. In many cases, in these inscriptions there are citations of executed interventions, modifications, alterations, constructions or demolitions which serve as a resource for getting informed about the transformation of a monument thorough the time.

Restoration in documents

The applications of the word "Restoration" in documents could be found in separate distinct resources:

1. in memoirs: one of the literal resources where there are citations of the word "Restoration" is in the memoirs written by scholars as the request of local authorities or governors; in these documents, the word "Restoration", without any differentiations, comes next to "Realization", "Construction" usually for addressing major construction activities or interventions executed on important buildings in the territory of their control.
2. in "Waqf Nameh"s: "Waqf-nameh"s[142] are important existing references where there are citations of the word "Restoration"; "Waqf-nameh" is a document prepared and dedicated to an object, subject of donation, or, in our case, a certain building; "Waqf-nameh"s are prepared prior or after the building is being donated; in "Waqf-nameh" the donated object is described in its general characteristics like its history, its builder and its localization[143]; moreover, the motivations of its donations and its donor(s) are mentioned; in "Waqf-nameh"s, there are clear

141 The importance of the inscriptions as decorative elements is due to the fact that for making these inscriptions famous artist and calligraphists were selected and called.

142 "A review of the 50years of archeology in Iran"; page 27

143 In the absence of sufficient documentation prepared by the department of archeology, till the 30s of 1900, the cited information of the donated buildings in their relative "Waqf-nameh"s remain as unique resources for getting general information about them.

instructions for utilization of the donated item(s); regarding its preservation, its responsible(s)and allocated percentage of its income for its management; despite the fact that "Waqf-nameh"s are of general character and are more legal in aspect than practical, however they served as reliable documents regarding the important historic constructions through time.

3. in official documents: The citations of the word "Restoration" could be found through official writings, as well as telegraphs or letters, released by local authorities asking the central government[144] to intervene in certain constructions to preserve them from ulterior deterioration; as generic as it may seem, these documents, however constitute important resources for getting informed about interventions in historic constructions; in these documents the word "Restoration" as a name/verb is addressed for emphasizing the necessity of executing certain type of interventions in a certain edifice finalized to take it back to ordinary use conditions; analyzing the structure of these documents results that:

- "Restoration" is intended as "Reparation" and/or "Restructure" of an existing edifice[145], not necessarily registered in the index of national monuments;
- There are not any specifications, detailed and technical, and documentations to help identifying the origins of the problems of the edifice subject of interventions;
- Guarantying the continuity of the functionality of the subject of the edifice is the scope of the future interventions;

There are not any citations regarding archaeological monuments and the determining aspect of interventions is "taking an edifice back to working order for ordinary use".

The selected document is an official example in which the Department of Archaeology is called as the official responsible for executing necessary intervention in the historic monuments when needed, supervising and directing the interventions; in this document, dated February of 1936, the Department of Archaeology is asked to make all the necessary measures in some of the architectural monuments cited within the request in order to preserve them from ulterior deteriorations; moreover, it is mentioned that the ministry of Waqf has asked the local branch of ministry of education in the province, where the cited monuments

144 Before the establishment of the department of antiquity in the 30s, the requests were always referred to the central government.

145 As it could be seen, in the absence of an index of national monuments till the 20s of 1900.

do exist, finance the interventions from the allocated budget. In this document the use of the word “Restoration” is intended as “Repair” and the word “Reparation”, as intended in this document, is addressing certain types of interventions finalized to conservative scopes.

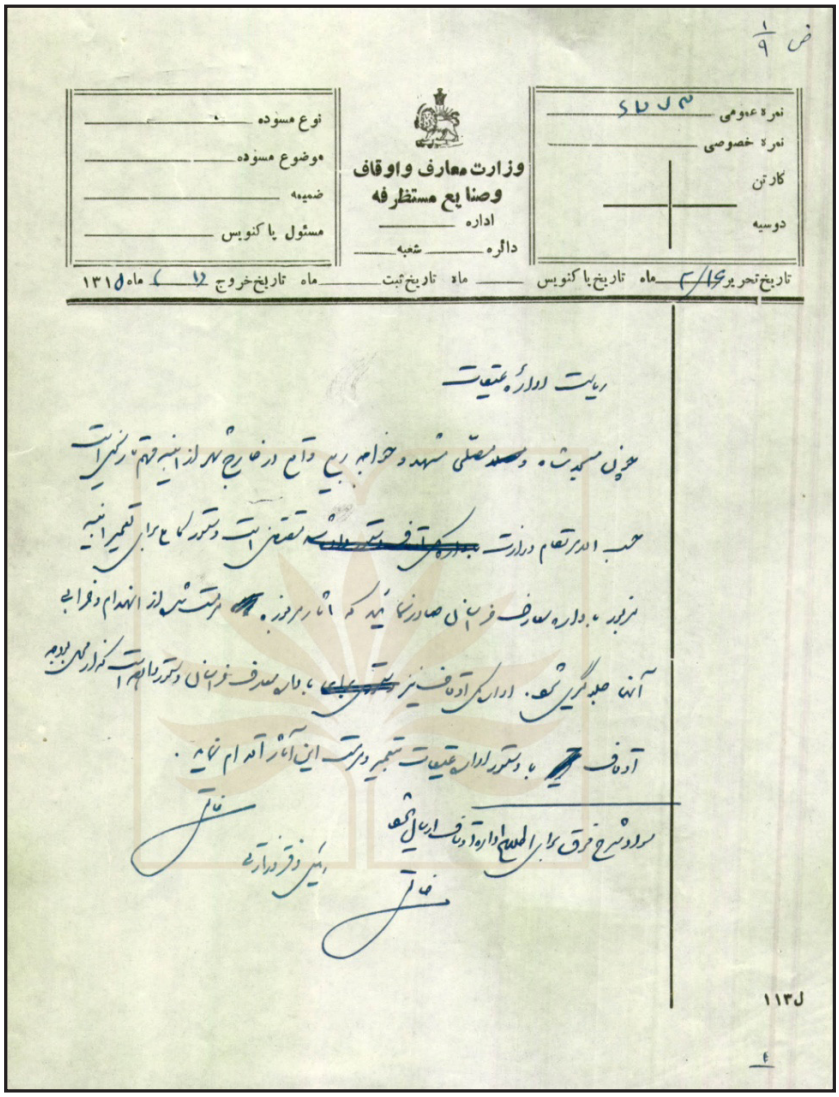


Figure 3.4.
Official request issued by the Ministry of Education and Religious Affairs and Antique Beaux Industry asking the department of archaeology to make necessary interventions on “Masjid Shah”, “Mosalla Mashhad” and “Khaje Rabi” and prevent them from ulterior destruction and damage.
National Archives of Iran, Tehran, Iran.

3.3. Traditional restoration in Iranian context: Origins and fundaments

Ideological fundaments

Restoration in Iran and social factor

Despite neglect and the lack of constant preservation of the historic edifices, the lack of legal supports and official responsible organizations[146], in Iranian traditional context, there has always been a social awareness versus the necessity of preserving the historic monuments and it has been this awareness that helped major parts of historic constructions to survive thorough time. This social awareness is closely related to the morphology and the development of the Iranian cities. Many of Iranian old cities have been developed a long a main axis which connects principle urban places together and as the result important urban places of old cities like Mosques, Bazaars, public baths and gardens have been developed along this main structure as an integrated structure; due to the particularity of the urban morphology of Iranian cities, the social life of Iranians has ever been in a close relation to the urban contexts and there has been always a constant reciprocal connection between people and the surrounding architectures[147]; in this background, it is obvious that the historic monuments take always an important part of quotidian urban life of the Iranian societies.

In the course of time, in Iranian society, it has been formed an awareness versus protecting and preserving these architectures not just for preserving these ones for themselves, but for guarantying the continuity of the society itself; in other words, in Iranian traditional context, the necessity of protecting living places is born in fact from the gathering of the individual and collective awareness and not from organizations or institutions; all citizens are responsible for maintaining their living place, including the constructed edifices, in reasonable conditions; this was a civil duty for the society and for each citizen of this society. This so-called

146 The administrative and organized protection of historic monuments came by the establishment of department of archaeology in 1928 and coincided with the preparation of the index of national monuments by the National Monuments Council of Iran , all in the shadow of political forces; consequently all interventions on historic monuments began to be supervised by the department of archaeology and its local superintendents all over Iran and the department of archaeology began to formulate specific programs for the preservation of historic monuments.

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civil duty remained for a long time in Iranian context and began to decline from the early years of Pahlavi government when certain specialized institutions and organizations were established and took the responsibility of directing the interventions and projects regarding the preservation and conservation of the historic constructions; moreover, the development of urban projects, which intervened directly, in large scales, into the morphological identity of the old cities, trying to monumentalize some selected architecture as symbols of a new modern emerging society, reduced the level of public participation and finally it was the lack of legal supports: referring the Law of Antiquity and the index of national monuments not all the old constructions, which took part of old cities and urban context, were considered valuable and important to conserve; in fact the immaturity and contradictory interpretations of law of antiquity caused confusions in the public duty regarding the conservation of urban context.

The nature of traditional social awareness versus the necessity of preserving the historic constructions, is the ideological origin of the traditional restoration in Iranian society. Obviousley, this so-called traditional restoration is characteristically different from what that could literally be defined as "Restoration" in its modern and up-to-date derivations; as historic monuments were always considered as edifices in ordinary use, which have always been considered as regular constructions not necessarily important artistically and historically, the way they were treated when needed interventions of maintenance and/or repair, of any kind, was completely different from the way a historic monument is treated, nowadays, when needs conservative attentions; the priority of the society regarding the executing necessary interventions in old edifices, was almost always conditioned by providing the minimum necessary conditions and returning to normal use and not more.

As traditional restoration is born from the need of the society to protect and preserve its living place, it is influeneced by the characteristics of this society; here enters the religious factor which becomes the motivator for preserving and maintaining the constructed ambient of the society; in this context, a major part of the interventions, of traditional restoration type, in historical context, regarding the conservation of historical monuments specifically the sacred and religious monuments, is executed under a specific circumstance called Islamic Waqf[148].

148 Despite the neglect of historic monuments by responsible authorities, in the lack of necessary maintenance and more importantly due to the fact

In almost every historical period some restorations in historic monuments have been undertaken through the efforts of charitable individuals and especially many old constructions survived, protected and continued to work by a specific non-governmental charitable system called Islamic Waqf.

In Islam, Muslims are always invited to take care of religious constructions meant for divine and spiritual means[149]; in the lack of an official responsible for execute conservative measure in historic monuments, local organizations used Waqf as the main resource and took care of necessary interventions on minor scale in religious constructions, as Islamic Waqf is a religious type initiative aims in the first place to be devoted to Islamic architectures, which helped them to survive thorough time.

In Islamic countries generally and in Iran, particularly, the idea of Islamic waqf, as an inalienable religious endowment in Islamic law, represents an important principle in the development of non-governmental sectors, which aims at the public benefit and socio-economic development.

Waqf generally means denoting certain types of goods for Muslim religious or charitable purposes; the donated assets could be or in the form of a dedicated budget or in the form physical item like a building or plot of land or by allocating a percentage of a certain building's income, retention of a specific building in trust and devoting and permanently dedicating its profit for charitable purposes. The donated assets were held by a charitable trust and there are managers in charge of securing that all maintenance and profits are well taken care of waqf activities for then using them in religious activities and, as we concern, maintenance interventions in religious buildings.

There has been always effective relationships between the Waqf, architecture and urbanism in Islamic cities and Waqf has always played important role in achieving a good urban environment and providing user needs with a high degree of efficiency; moreover, many historic buildings survived the danger of destruction by being subjected to Waqf; once a Waqf has been established, there

that, since the establishment of the department of Archaeology, in late 20s of the 1900, there was no specified account in the government's budget allocated to preserve and restore historic buildings and monuments, there have been always public and non-state sponsored organizations which have highly contributed in guarantying the continuity of the lives of the historic monuments, especially public and religious constructions, and resolving their problems by a specific religious charity type system called Waqf.

149 M. Arkoun, *Building and meaning in the Islamic World* in *Mimar: architecture in development*, No.8, 1983, pp.50-53.

are no possibilities for alterations or cancellations, and this fact guaranties the continuity of the presence of historic monuments of maintenance interventions in religious monuments.
Since the allocation of sufficient fund for restoration of historical monuments after the department of archaeology, Islamic waqf continued to constitute the main financial resource for the maintenance and ordinary type reparations in religious buildings in Iran; as the result the traditional restoration in Iranian societies is highly influenced by the religious ideologies.

Technical aspects

The term "Traditional Restoration" in Iranian context is referred to all interventions executed on "traditional architectures", finalized to resolve their problems, regardless of artistic, historic and intrinsic differentiations; the principle of these so-called "traditional restorations", was based on prevailing temporary functionalities over intrinsic values. The lack of a coherent comprehension of monument[150] as "Work of art", a type of structure either explicitly created to commemorate a person or important event or which has become important to a social group as a part of their remembrance of historic times or cultural heritage, resulted that economic affordability for necessary repairs became the determining factor and resulted that repairs considered just resolving the temporary problems of the building without any profound study of the nature of the problems and conserving the artistic and historic traces of the monument/ building becomes a secondary subject. Due to the given definition of the traditional restoration it is almost exclusively applied on traditional architecture or architectures traditionally built; although there is not a unique and definite description for defining Iranian traditional architecture and all given definitions for "traditional architecture" are general and none of them is better than the others, but generally the term "Traditional Architecture", in Iranian context, is referred to all types of building, regardless of common classifications based on dimension, importance or functionality, constructed by locally trained masons and the use of traditional construction techniques and locally in-situ available traditional masonry materials[151] like timber, stone, adobe or

150 Even in the executive decree of Law of Antiquity the definition of "Monument" is based on its historicity rather than its spiritual values and artistic values.

151 Among the characterizing factors of traditional building construction, the use of traditional masonry materials is of great importance; the first factor

possible combinations of these materials[152]; this general definition serves to have a general idea about the characteristics of the traditional restorations and the identifying factors of the traditional restorations are the same factors of the traditional architecture and in short words, there has been always a very close relationship between traditional architecture and traditional intervention in the architectures; since the arrival of new technologies in the late 40s and in 50s which introduced new constructive materials and techniques for building construction and consequently affected the traditional techniques, "traditional architecture", constituted the dominant architectural aspects of Iranian cities[153]; in fact, it is the same period that it starts to apply new technologies and techniques for the restoration of the historic constructions; as over time, declining expertise in traditional building techniques, lack of regular maintenance, and poor management of resources led to the decay of traditional architecture, the traditional techniques of the intervention in historic constructions and consequently traditional restoration began to disappear.

influencing the development of traditional construction practices is related to the availability of local building materials. The reasons why locally available material has always been considered as the first choice in traditional building constructions are:
They are low-cost materials;
Environmental compatible;
Easy to utilize.
In many areas, the locally available resources have governed the use of the following constituent materials for walls:
adobe (mud blocks or whole walls)
masonry (stone, clay, or concrete blocks)
timber:In the Northern parts of Iran, for example, where there is a high rainfall, and there is a great amount of ground covered by jungle, timber is used in structural parts of the buildings as well as architectural parts, like walls, windows, and doors., M. Sassu, *Vernacular Housing Construction*, University of Pisa, Italy, edizione Tipografia Editrice Pisana, 2002, pp.1-6..

152 "Traditional" methods are meant as techniques which are executed with the use of the same materials, (or similar materials, as far as possible,) used in the original construction of the monument., E. Galdieri, *Metodi avanzati nel consolidamento di alcune strutture antiche* in *Ismeo's special series of its restoration centre*, 1980, pp.19-23.

153 The traditional construction methods continued to remain in pre-industrial Iranian context since the late 30s when Westernization, absorption of the occidental theories, the lack of academically trained Iranian experts of matters and modernization of the building techniques, as well as the industrialization of the building material production, resulted indirectly to the creation distances between traditional context and new exigencies of the society and resulted to the decadence of the traditional constructive techniques as well as traditional restorations.

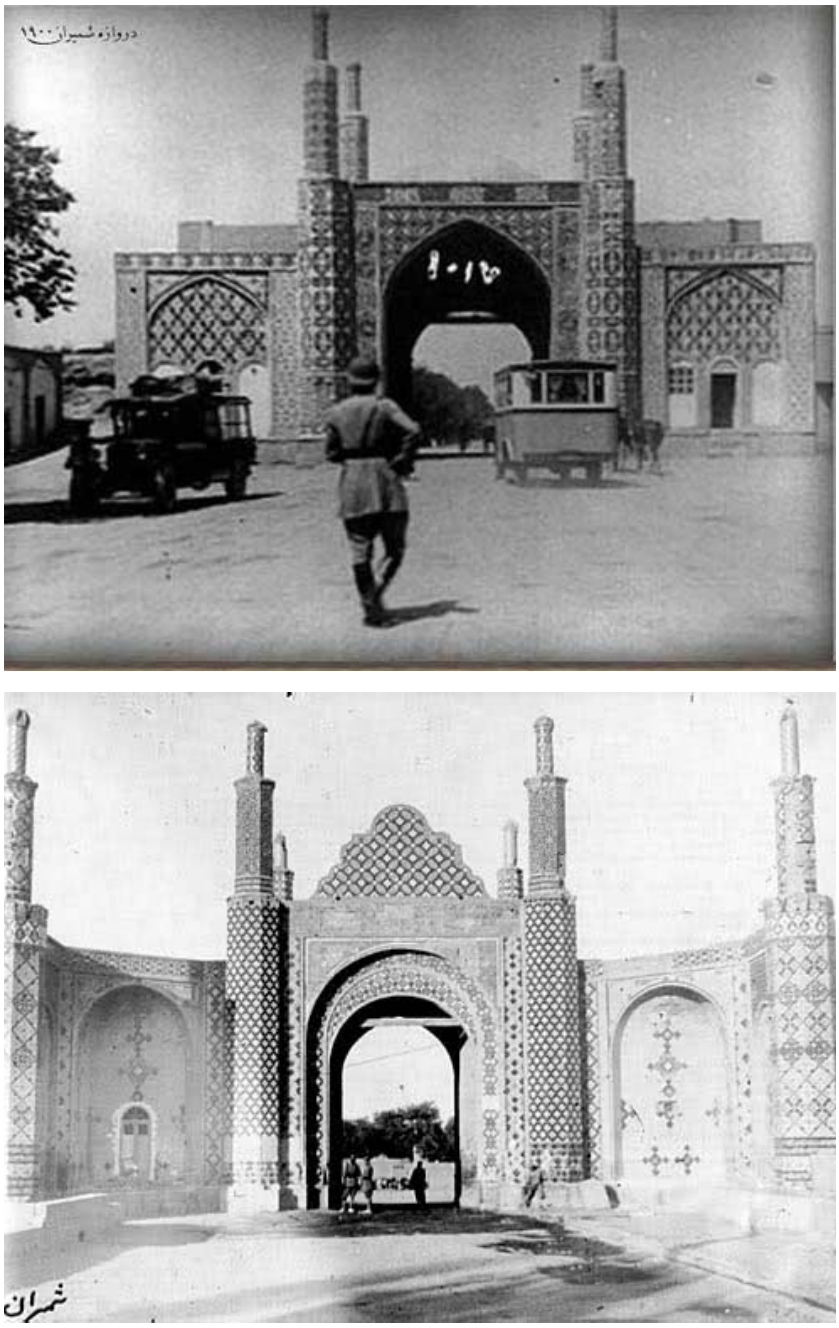


Figure 3.5& 3.6.
Tehran's old Shemiran Portal: originally built in Qajar period.the photo in the left, is the portal in the late Qajar period and the right photo shows the portal after the repairs in 1900; all the Qajar period's ornamental components have been taken out and repalced.
Old photos, Tehran, Phototec, National Archives of Iran, Tehran, Iran.

Referring to the given definition in the precedent paragraph, traditional mason, traditional technique and traditional masonry material[154] are important factors which have characterized the "Traditional Architecture" of Iran for many years and have conditioned all further developments in the construction[155] methods as well as developing intervention technologies on traditional constructions.[156]

In the case of important edifices, the responsibility for the whole restoration interventions on these edifices in Iranian traditional context has been with the master usta - the reliable chief mason, traditionally trained. The title of usta, the highest in the hierarchy of traditional masonry, is not always hereditary and, to obtain it, the patronage of a qualified usta is required as well as practical experience. In Iranian traditional context, chief masons or ustas were responsible of all interventions in traditionally constructed buildings; as construction techniques were all well-known from old times[157], they were called for all interventions the traditionally built edifices needed. In a general background, the combination of "try and error" process and traditional methods done without any coherent documentation preparation before/during and after the interventions generally characterize the way they executed necessary intervention in traditional constructions.

Due to the climatic conditions of the country and the abundance of the dry soil the dominant aspect of the Iranian traditional architecture is earthern/adobe architecture and consequently traditional restoration techniques are commonly related to the

154 Like earth construction in areas with alluvial deposits and stone construction in the rocky slopes; moreover, during interventions, the dismantled materials were used as far as possible in the reconstruction, only when they were changed that had lost their static characteristics., S. Nassehzadeh, *Studying Local Standards of Masonry Structure of Traditional Baazars in Iranian Cultural Heritage* in *Latest Trends on Cultural Heritage and Tourism*, 2009, pp.209-214.

155 For example possibilities and variations in adobe constructions have been always limited to the physical constraints of its primitive material, clay., M. Sassu, *Vernacular Housing Construction*,*op.cit*, pp.1-6.

156 The preliminary studies of IsMEO demonstrated that in the case of ancient interventions in Persepolis and architectural monument of Ali Qapu, all ancient interventions were executed with the use of local and in-situ materials., G. Zander in *Travaux de restauration de monuments historiques en Iran.*

157 For example, foundations and roofs which were always constructed along similar principles with minor technical variations, a masonry structure with vertical support provided by load-bearing stone or brick walls pierced with arched openings., M. Sassu, *Vernacular Housing Construction*,*op.cit*, pp.1-6.

techniques applied in adobe constructions for resolving their problems.

Adobe architecture, traditional architecture, traditional restorations

In most parts of Iran, due to the abundance of the appropriate soil for the construction purposes, clay soil, a formed-earth material, a little stronger than soil and naturally destined to deteriorate, in its pure form or in its combinations as mud/sun dried mud-brick, is widely used as the main construction material of Iranian traditional building; the antiquity of the use of earthen architecture in Iran can be identified through archaeological excavations in different parts of the country that have highlighted the use of earth for human settlements since the Antiquity; Recent excavations have shown that constructing mud-brick buildings in Iran traces back to the 6th millennium B.C. The remains in Choghamish and Zagheh, are some evidences of using mud-bricks during this ancient period; the excavations of Ernst Herzfeld and the Oriental Institute of Chicago have revealed the existence of the mud-brick walls in the archaeological site of Persepolis; in Persepolis, the rests of adobe constructions were found as roofs which only partially in place, foundations and drainage systems which were quasi destroyed, and much of the original structure was buried. The remaining earthen building materials in the historic sites, from the prehistoric and ancient periods to the present day rural houses, demonstrate the development and the evolution of manufacturing techniques and their influences on the quality of remaining architectural heritage; earthen materials in their different combinational form have been developed architecturally, artistically and technically in Pre-Islamic era during the Achaemenids, Parthian and Sassanid periods to an outstanding level and turned to be the main building material in constructing public and social buildings and in general, residential structures after the advent of Islam.

In adobe architecture various parts of the edifice, architectural as well as structural, including roof, walls and foundation, are constructed using clay combinations. The combinations of clay as mud brick, sun-dried brick are extensively used in the developments of most of building construction techniques and constitute the major material used in the building construction in many parts of Iran especially in central and southern parts. Contrary to the preliminary impression arisen from the simplicity and similarities of various adobe, the original materials (clay, additives and fillers), curing and manufacturing techniques, and

the ways they are utilized based on the cultural and environmental characteristics of each geographical regions, have produced, during the course of history, very diverse compositions in the type of the products, forms, dimensions, and their qualities. The ancient tradition of constructing with unbaked brick has been continuously prolonged in time and by applying changes in its form, dimensions, and in the matter, in order to obtain an optimum performance reached to certain levels of perfection and gave birth to many vernacular traditions which the testimonies of flourishing building cultures enlightening the genius of builders, and contributing to the cultural identity of the places.

Iranian adobe architecture has developed over centuries in response to the Iranian plateau's arid climate, scarcity of acceptable building stone and wood, and extremes of temperature. The types of clay used, the types of bricks produced, the way they are fired and integrated into buildings comes from the knowledge acquired over many generations. Till the systematic studies of IsMEO in the mid 60s, in the case of the restoration of the Safavid palace of Ali Qapu, there is not much documentations that show how interventions in traditional adobe constructions were executed; however it is obvious that because of the characteristics of the primitive materials used in adobe constructions, they usually needed frequent maintenance. In Iranian traditional context, as adobe construction techniques were well known to traditional masons who applied these techniques in different construction typologies regardless of the importance or dimension, as the result, in the absence of the specialists of the restoration, these masons were called for execution of the necessary interventions in adobe constructions when needed; there are scarce resources to show how traditional masons worked to restore and resolve the problems of the adobe constructions.

Adobe structures are typically low cost and built from readily available material by local communities[158]; adobe construction constitutes the major part of the traditional constructions in central and southern parts of Iran; Iranian adobe constructions including the great masterpieces of the Safavid architecture are usually consisted of sun dried mud bricks[159] joined with a

158 In addition to its low cost and simple construction technology, adobe construction has other advantages, such as excellent thermal and acoustic properties.

159 The essential constituents of mud bricks are soil, chopped straw and water: these elements are manually mixed into a consistent mixture, which is formed into bricks of a standard size using an open mould. Sun-dried mud-

mud mortar, with the material obtained in the local vicinity[160]. The most important and primitive combination of clay used extensively in adobe constructions is sun-dried compressed molded clay (Khesht). Little variations of making it through the time resulted its diffusion in traditional building construction as a readily and inexpensive available material. Sun-dried mud-bricks, in architectural as well as structural parts[161], were used in many types of traditional buildings from building domestic houses to fortification systems.

Despite differentiations in materials, architectural and functional characteristics, in constructive methods, adobe constructions generally present a similar constructive trend and regardless of typological diversities, they are all composed of certain structural components; most of the historical monuments are constructed using a system based on masonry bearing walls, mainly made of unburned sun-dried mud brick, with flat or vaulted roofs.

bricks is composed of mud with pounded pebbles and sand mixed with straw, as a binder to make bricks shrink more uniformly while they dry, and then put in brick or wooden molds in the sun to dry; The molds were (and still are) madewith four wooden boards embedded and each mold could be used several hundreds of times before the alternation of wetting and drying of the wood would make it practically useless. Traditionally, adobe bricks were never kiln fired. After several days of drying, the adobe bricks are ready for air-curing. This consists of standing the bricks on end for a period of 4 weeks or longer. Because adobe bricks are not fired in a kiln as are clay bricks, they do not permanently harden, but remain unstable-they shrink and swell constantly with their changing water content. Their strength also fluctuates with their water content: the higher the water content, the lower the strength. The maximum compressive strength of mud or mud-straw, where wood was scarce, as a homogenous material was achieved when it was used in the structural parts like load bearing walls; although due to its low structural strength, adobe walls tended to be massive. In more important buildings, adobe walls were made of sun-dried bricks laid with mud mortar, composed from the same properties and representing the same characteristics like thermal expansion and contraction, and deterioration of the bricks; at the highest height of the wall to provide long horizontal bearing plate for the roof, a long wooden timber were placed within the last courses of adobe bricks and helped to distribute the weight of the roof along the wall.

160 Adobe structures are generally self-made because the construction practice is simple and does not require additional energy resources. As the structures are normally built without the input of an engineer or an architect, they are described as "non-engineered" buildings., M. Sassu, *Vernacular Housing Construction*,*op.cit*, pp.1-6.

161 For example, arches and domes are developed from soil and burned-bricks in construction of palaces, mosques and houses., T. Mahdi, *Performance of Traditional Arches and Domes in Recent Iranian Earthquake* in *13th World Conference on Earthquake Engineering*, Paper No.2871, August 1-6, Vancouver, Canada, 2004, pp.1-15.

The structural parts of mud-brick traditional buildings are walls[162],roofs[163] and foundations[164].

Based on this similarity on the constructive methods and considering the fact that damage signs were more identifiable in the structural parts, the major part of the interventions were concentrated in the reinforcement of the structural parts; in the absence of any preliminary study and analysis to formulate a well structured solution, these interventions were done by traditional masons following a "trial and error" pattern on the parts which needed urgent attentions. Because of the constant threat of earthquakes, the local population had learned the principles of resistant construction method and minimum level of necessary interventions, all through a "try and error" process with the application of the same type of materials, structural and constructive materials, as the ones of the edifice, to increase seismic resistance performance. Successful and respondent solutions were then improved and adopted in other architectural

162 Mud walls are one of the oldest structures found in Iran because of simplicity of construction and availability of materials. In mud or adobe walls, wall thicknesses are ranged from 0.25 m to 0.80 m with a thickness not exceeding 60 cm; wall thickness depends on the weather conditions of the region and it is possibile to make monolithic walls up to 5 meters.

163 The other structural component of the traditional constructions is the roof; roofs are built in arched form, using adobe and mud, or flat form, using wooden beams, mud and branches of trees as covering materials. The most diffused form of the roof in the traditional constructions is arched form roofs. Different arched-pressure structures are formed in Iran's architecture due to the expansion and combination of the arches. There are different types of arched roofs: quadripartite arched roofs, crescent-shaped arched roofs, dome roofs, vaulted roofs and complex arched roofs. Complex arched roofs are most diffused type of arched roofs used in the important buildings. Complex arched roofs consist of different parts; "Lengeh" the load bearing component of the roof which is positioned every 20 to 60 centimeters. The space between "Lengeh"s is filled with adobe. This assemblage is called a "Toveizeh" that is repeated every one meter. The space between these parts is covered with adobe blocks and form the "Tagh" or complex arched roof. Because of numerous layers, each layer about 2 to 5 centimeters thick, of soil that cover the adobes, these roofs are too heavy. Arched roofs transmit the pressures to the columns and arch bases or pillars and then to the earth; in order to increase the resistance of the arches they are constructed with mud (or sun dried) bricks and mud mortar, as stabilizer, in the moment of setting the arch, with thickness not less than 25 cm; the pillars as elements which transmit the pressure directly to the foundation should be dense and thick and it is difficult to make an opening in them., T. Mahdi, *Performance of Traditional Arches and Domes in Recent Iranian Earthquake*,*op.cit*, pp.1-15.

164 The foundation is made of medium- to-large stones joined with mud or coarse mortar., M. Sassu, *Vernacular Housing Construction*,*op.cit*, pp.1-6.

typologies; as the result, in many cases good results have been achieved which are manifested in numerous constructions which have survived several earthquakes. This non-engineered method, especially regarding important edifices, revealed essential difficulties, in understanding the nature of problems and providing efficient solutions; in many cases without identifying the nature of the problem to provide a long-term efficient solution, just temporary solutions were applied which finished to be limited in hiding visible deterioration signs with plastering it; as more precise analyses demonstrated that while deterioration evidences, due to static problems, in traditional adobe constructions are visible and easy to see, their causes are not; for example, cracks[165], especially extensive cracks due to serious structural problems which necessitate urgent conservative attentions are generally quite visible, but their causes may be difficult to diagnose. Although all interventions in traditionally constructed edifices were arbitrary and non-programmed and difficult to classify, however base on the existing examples and also the studies of the IsMEO especially in the case of architectural monuments it is possible to identify the most used interventions used to resolve the problems of edifices in traditional context.

Earthquake and traditional architectures

Earthquake is the most important attack that has always attacked the traditional architecture of the country especially the adobe constructions, considering the fact that Iran is located in high seismic risk zones[166].

Generally it can be said that earthquake influences the structural parts of adobe constructions and these constructions fail due to the static problems.

Adobe buildings are not safe in seismic areas and responds very

165 The most obvious sign of structural problem in traditional buildings are visible cracks in walls, foundations and roofs. Some kinds of cracks like short hairline cracks, caused as the adobe shrinks and continues to dry out, are normal while other types need urgent attentions., J. Hardwick and J. Little, *Seismic Performance of Mud Brick Structures in From Small Steps to Giant Leaps...putting research into practice*, EWB-UK National Research Conference 2010, 2010, pp.1-6

166 In fact the areas of the diffusion of the adobe constructions are located in the two most important "circles seismic", circumpacific (or Andean-Japanese), where 38% of the earthquakes of the entire world happen, and the Mediterranean-European, Asian and American - (or Alpine-Himalayan), with other recorded 54%., A. Bakhshi and others, *Seismic Vulnerability of Traditional Houses in Iran* in *SeismoAdobe*, 2005.

poorly to earthquake ground shaking, suffering serious structural damage or collapse. The way structural parts react to earthquake shakes is very important to determine the stability of the whole structure. Vertical and lateral load bearing behavior of an adobe structural system comprised of individual structural elements is very important during a moderate or severe earthquake. During average and medium earthquakes, adobe constructions could absorb the shakes and thick walls of adobe constructions can resist in moderate earthquakes without almost any serious deformation while thinner walls absorb deformations during earthquakes.

In adobe constructions, damage due to seismic forces appears directly in structural elements as columns, beams, beam-column joints, staircase towers, floor slabs and the connections between floors and walls and foundations. Structural component of an adobe construction play important roles in seismic behavior of structures and it is essential to study the characteristics of these elements in order to understand how an adobe construction react during the earthquake. For example, the walls of adobe constructions are heavy and they have low strength and brittle behavior; the most impressive adobe constructions are characterized by a considerable mass, substantially free of internal voids, as the result, during strong earthquakes, due to their large mass, these structures develop high levels of seismic forces and therefore fail abruptly.

Obvious and identifiable signs of failure of the adobe constructions during earthquakes are visible in their structural components as:

- Severe cracking and disintegration of walls;
- Separation of walls at the corners;
- Separation of roofs from the walls, which can lead to collapse.

Because of the constant threat of earthquakes, the local population, in the central and south-eastern part of the country where the concentration of the adobe constructions is maximum, had learned the principles of resistant construction method and minimum level of necessary interventions in order increase seismic resistance performance of the building and to reinforcing its structural parts, all through a "try and error" process with the application of the same type of materials, structural and constructive materials, as the ones of the edifice, available in-situ. Some of local solutions which were used in the traditional masonry materials constructions to confront earthquake[167] are:

167 A. Azarbakht, *Seismic Rehabilitation of traditional un-reinforced masonry buildings in Iran* in COMPDYN 2011: III ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake

1. Choosing a regular architectural form especially for floor and inferior plans; symmetrical and regular planned constructions have survived better than irregular planned constructions.
2. Using the reinforcing elements such as timber blocks in the structural parts such as loading walls or important connections. one solution that in past was adopted to increase the resistance of the mud-brick walls against earthquake was installing a wooden ring beam at the top of the walls to take the bending forces[168]; this solution proved its efficiency to resist earthquakes by creating sufficient connections between walls, roofs and other structural parts.
3. Using lightweight roofs which reduce the mass on top of the walls.

Characteristics of the Traditional Restorations

In the absence of new techniques and sufficient instrumentations, interventions in traditionally built constructions were done without any preliminary program to reveal, identify and analyze the origin(s) of the causes of physical and material deteriorations; the main principle of the interventions in buildings was to resolve the temporary problems of the buildings by the means of executing ordinary-maintenance interventions and take them back to condition of use; without any particular variations, same methods and procedures applied to simple individual domestic constructions were applied to all type of traditional constructions from religious/non-religious constructions to public and private buildings, mosques, royal palaces and noble residences.

Traditional interventions generally involved repairs, resurfacing which occasionally entailed major modifications or the actual replacement of a monument and even completely renewal of the monument, usually without knowledge and respecting its original context or concern with its historic authencity[169]; in the case of decorative components like decorative tiles, the process was constituted of dismantling the tiles of the structural parts, numbering them, remaking or repairing them, if possible, and reinstalling them in their original position.

Engineering, Corfu, Greece, May 26-28, 2011, pp. 1-11.

168 This system belongs mainly to mountainous areas, but can be also found in other parts of the country, especially in large cities.

169 In the modern culture of conservation, the historic authenticity of cultural property arises as a prioritary value.

All replacements, reparations, and/or reproduction of damaged materials were done with same materials and same construction techniques of the original constructions; the instruments required for interventions were those required for building constructions: wood forms and paddles for earth construction, hammers, chisels and steel squares for stone masons and carpenters, floats and knives for plasterers and plaster carvers. Scaffolding was used wherever was needed and only in minor scale interventions; if decoration or repair work needs to be done on the walls the artisans work from ladders or platforms suspended by ropes from an upper level supported by the muscular strength of helpers.

Traditional restorations were carried out by the traditional methods in the lack of any academic knowledge, sufficient documentation, modern instruments and necessary controls[170], almost always by traditionally trained architects (me'mārs), artisans (ostādān), and decorators, whose efforts are often recorded in inscriptions on the restored monuments; due to the lack of a technical vocabulary regarding the thematic of conservation and restoration since the establishment of the National Organization for the Conservation of Historical Monuments of Iran (NOCHMI) in the 1965,the citations of "Restoration "in the scarce documents of interventions present different and contradictory interpretations in lexical and practical definitions.

In 60s, the analyses of IsMEO during the preliminary phases of the restoration works in Ali Qpau, revealed that in many cases, without any specific technical knowledge, good results have been achieved through the application of the traditional interventions and these interventions proved to be effective and helped historical monuments to survive thorough the time and face several earthquakes.

Although in certain cases, the traditional interventions have helped many historic monuments to resist thorough the time, but, generally, in many cases inexpert repairs not only have not contributed in resolving the problems[171] of historic monuments

170 The law of antiquity and the existing documents where a king comands masons to operate in a certain monuments.

171 The coexistence of modern and traditional restorations in Iranian context becomes problematic when choosing the methodology of restoration in historic monuments. Traditional restorations, traditionally taught, were results of long term experiences while the modern restoration techniques were unknown in Iranian pre-industrial context; form other hand this strangeness makes difficult for the restoration experts when dealing with unprecedented types of monument which academically trained restorer has not a reference point. , trained on the basis of different cultural matrix, accustomed to subjec-

but actually have aggravated and accelerated the degrades in these ones because traditional techniques were unable the complexity of the influencing factors which may cause damages, as they provide temporary solutions which are not efficient in long-term as was revealed by IsMEO during the preliminary studies for diagnosis the cause(s) of the problems of the architectural monument of Ali Qapu; the reasons of bad conservation in historic monuments are be due to main factors: un-researched, careless or thoughtless intervention due to lack of appreciation of the subtle qualities of the original building and the lack of technical knowledge, which resulted the repairs to be made with unsuitable materials which react unfavorably with the original ones and hence cause further damage; an example of a bad restoration in historic monuments which accelerated the deterioration of the exterior surfaces was the use of thin skim coat of a finishing plaster of gypsum and lime which due to its different thermal expansion rate does not remain for a long time on a sub-plaster containing cement without cracking and flaking off.

The traditional restorations were composed of certain identified interventions which were executed by chief masons in traditional architectures and historic monuments; the most important identified interventions were:

1. Integrations in structural components;
2. Re-plastering with traditional mortar[172];
3. Structural reinforcements or changing of structural elements.

Integrations in structural components

Where some parts of the old walls had fallen down, new mud-brick walls were constructed and attached to the old ones to reinforce them[173]; in the case of un-baked adobe bricks, the

tive confrontation, classifying problems and applying solutions by referring to academically based theories, sustained to be respondent; as happened in the case of adobe construction of Safavid period in Isfahan during the restoration mission of IsMEO in 60s.

172 The mortars were (and still are) made of earth, and never more resistant brick below to avoid of "tear", and so were a real "surface of sacrifice". Other than the simple plaster, there were also other types of protective plaster straw and mud, animal hair and mud paste, kaolin, gypsum or lime, balls of fat land, soil and molasses or latex figs, but also cones argil-based, slightly glazed, lastlrine shale and shells.

173 In some cases, the rests of the destroyed walls have been used in the new integrations, however, the studies of IsMEO showed that the material which has fallen out of its original place should not be reused because it frequently contains a high concentration of salts., M. Ferrante in *Travaux de restauration de monuments historiques en Iran. Rapports et etudes préliminaires,*

deteriorated adobe bricks were scraped out and new bricks were inserted in their place[174].

The studies of IsMEO in the case of architectural masterpiece of Safavid architecture, Ali Qapu revealed that although in historic monuments and the masterpieces of the traditional architecture, walls were finished with durable materials, brick, stone or the hard plasters which have been evolved over many years of experiment, but the cores of these walls were filled by weak and low strength materials, packed rubble or only soil or clay as mortar easily dissolvable if water reaches it, the result will be that a structure which appears externally stable, beautifully decorated, may be actually lacking in structural strength and is liable to collapse at any moment.

As a solution to halt the destructive effects of rainwater, in Iranian traditional architecture, masons often capped parapet walls with fired bricks which were harder and better suited to weather the erosive action of rainwater; however, the addition of a brick cap to an existing parapet wall creates a drastic change in a structure's appearance and fabric.

Re-plastering and surface coating with traditional mortar

Almost all of the adobe construction surfaces were coated and when these coatings deteriorated, they were replaced with new coating. Re-plastering and surface coating is the most used method in preserving old mud buildings surfaces since ancient times: plastering deteriorated parts of original mud walls and the new supporting walls with the same material that originally coated the surface: mud plaster, lime plaster, whitewash, and stucco, to increase their stability and improve and strengthen their existing traditional mortar. When the coating was mud plaster, the deteriorated mud plaster was scraped off [175]and replaced with like materials and similar techniques, attempting in all cases to match the repair work as closely as possible to the original.

One of the applications of mud and surface coatings was for curing the effects of windblown; windblown sand has often been cited as a factor in archaeological adobe fabric erosion; evidence of wind erosion is often difficult to isolate because the results are similar

cit.

174 When most of the brick was not deteriorated, the deteriorated portion was replaced with a half-brick; the un-deteriorated portions of the brick were cut to achieve a flush fit of the new or half-bricks.

175 As much of the deteriorated surface coating as possible was removed without damaging the adobe brick fabric underneath.

to water erosion; maintenance is the solution to mitigating the destructive effects of wind erosion. Wind damage on adobe walls and roof surfaces were repaired with new adobe mud or other traditional surface coating which could protect adobe surfaces against any possible future destructive effects.

One of the most important applications of the traditional plasters was for waterproofing the exposed surfaces of the edifices against heavy rains, especially on the roofs and parapets. Humidity, in its direct form like the rain[176] or indirect forms as the absorption of the humidity or ground water[177] by the adobe material, is one of the worst attacks for the traditionally constructed edifices, especially those constructed with earthen material; the importance in keeping an adobe building free from excessive moisture cannot be overestimated. Humidity attacks the mortar and filling of the walls, depriving them of their strength and cohesiveness, and attacking the plasterwork, especially on internal walls where it is not usually waterproof, the masonry, and the woodwork. Generally, adobe buildings deteriorate because of moisture, either excessive rainwater or ground water; due to the material characteristics,

176 The erosive action of rainwater and the subsequent drying out of adobe roofs, parapet walls, and wall surfaces can cause furrows, cracks, deep fissures, and pitted surfaces to form. Rain saturated adobe loses its cohesive strength and sloughs off forming rounded corners and parapets. If left unattended, rainwater damage can eventually destroy adobe walls and roofs, causing their continued deterioration and ultimate collapse. As the moisture content of the adobe increases, there is a point at which the adobe will become soft like putty. When the wall becomes totally saturated, the adobe mud will flow as a liquid. This varies with the sand, clay, and silt content of the adobe. If the adobe becomes so wet that the clay reaches its plastic limit, or if the adobe is exposed to a freeze thaw action, serious damage can result. Under the weight of the roof, the wet adobe may deform or bulge., M. Blondet and G. Villa Garcia M., *Adobe Construction* in *WHE Housing Report*, Catholic University of Peru, Peru, 2003, pp.1-6.

177 Ground water (water below ground level) might be present because of a spring, a high water table, improper drainage, seasonal water fluctuations, excessive plant watering, or changes in grade on either side of the wall. Ground water rises through capillary action into the wall and causes the adobe to erode, bulge, and cove[Coving is also caused by spalling during the freeze-thaw cycles.], the hollowing-out of the wall just above grade level; as water rises from the ground into the wall, the bond between the clay particles in the adobe brick breaks down. In addition, dissolved minerals or salts brought up from the soil by the water can be deposited on or near the surface of the wall as the moisture evaporates. If these deposits become heavily concentrated, they too can deteriorate the adobe fabric; during hot seasons, as the adobe dries out, shrinkage cracks usually appear; loose sections of adobe bricks and mud plaster may crumble.,, M. Blondet and G. Villa Garcia M., *Adobe Construction*, *op.cit,* pp.1-6.

no adobe and mud-brick construction can remain in pristine condition for a long time unless it is in a virtually waterless and wind-free situation; the quality of mud-brick buildings depends upon the waterproof skin and frequent renewal of the mud coating. In consequence the adobe constructions are not recognized for what they are and conservation becomes essentially a matter of maintaining the outer skin.

In mud-brick walls, the cracks in the outer material allow water entry and decay occurs by the weakening of the bond between coat and wall because of the emergence of salts carried out of the earth wall to its surface by moisture movement. Attempts to strengthen the bond between external skin and wall involve mechanical bonding to link these two materials physically together; a very regular traditional method of preservation was surface coating of the weak surface, but due to its nature, the success stabilization, restoration, and the ultimate survival of an adobe material building depended upon how effectively the exposed surfaces were protected against humidity by surface coatings and a regular maintenance program.

Structural reinforcements or changing the structural elements

When an individual adobe brick was partially disintegrated, it was patched in place; the deteriorated material was scraped out and replaced with appropriate adobe mud; in patching and replacing disintegrated adobe bricks it was tried to find clay with a texture and color similar to the original fabric; moreover, the in-situ fallen fragments of the original adobe bricks, were mixed with water, and reused to patch the eroded area.

Because of the constant threat of earthquakes, the local population had learned the principles of resistant construction method and minimum level of necessary interventions in order increase seismic resistance performance of the building and to reinforcing its structural parts, all through a “try and error” process with the application of the same type of materials, structural and constructive materials, as the ones of the edifice, available in-situ; as the walls are the main earthquake-resisting elements of adobe houses, the most important factor for the improved seismic performance of adobe construction is to provide reinforcement for the walls; earthquake shaking will cause adobe walls to crack at the corners and to break up in large blocks. The role of reinforcement is therefore to keep these large pieces of adobe walls together.

Due to the fact that during the earthquake the damages happen

in the structural component of the edifice and inadequate lateral load resisting and the weakness in the element connections had been defined as two important reasons of deteriorations and degrade of clay and mud-brick constructions during earthquakes, the local populations, even if not mason, had learned to intervene with some simple methods in order to increase the stability of the structural parts; increasing the width of the bearing walls or by adding extra loading beams and changing the damaged or broken bricks or reinforcing the structure of the arch-domed roofs by the means of erecting wooden scaffoldings are some of the methods which were used for the consolidation of structure of the roof in traditional edifices; in the case of loading pillars the experience methods were: weighing the arch bearing, use of restraining wooden elastics, use of supportive elements and increasing the thickness of arch base pillars.

3.4. 1965: Formation of the culture of restoration in Iran

A comparison between the existing documents of executed traditional interventions for resolving the problems of historic monuments in Iran, before the years 30 and the establishment of the department of archaeology and the release of the *Law of Antiquity,* with what intended by the concept of Restoration in international contexts[178], at the same time, confirms that although scarce restorations of late 19th and early 20th and centuries before, have helped the major part of historic constructions to resist through the time, they lacked essential characteristics of the modern restoration. In the absence of official responsible organizations, till the establishment of the Department of the Archaeology in the late 20s and further the establishment of the national association for the conservation of the national monuments in 60s, interventions on old constructions had little dependence on administrative procedures and the whole intervention activities were just based on intensive human participation and utilizing materials available in-situ; in many cases, these traditional interventions were deficient in understanding the problems of the historic constructions and providing efficient solutions with respect to the importance of the values of the monument; the lack of technical knowledge in many cases led to repairs with unsuitable materials which reacted unfavorably with the original and hence generated further damage; in many cases, stripping away the damaged arts and completely remaking it from scratch was the most suitable solution. For better understanding the damages due to the lack of understanding of the value of the antique/old monument, it should be said that in many cases an ideal restoration was considered as the exact reconstruction of the original building using the original materials and finishes executed all in the original way and efforts to make it retain the effect of aging so that the building still appears to be an ancient monument.

In archaeological sites, since the last years of 30s and the release of the Law of Antiquity, there are very rare and scarce attempts to conserve and sustain the archaeological site as a resource for the use and reinterpretation by future generations and the interventions were still limited to treasure hunting and commercial intentions instead of scientific/cultural scopes and due to the lack of qualified local expert and the lack of controlling measures,

178 Almost at the same time of the release of the Athens charter of restoration, in Iran the department of archeology is founded.

the archaeological sites, after being dug, in arbitrary and not-structured ways, were abandoned in urgent state of conservative attentions, as was in the case of Persepolis or other archaeological sites elsewhere in the country.

The augmentation of foreign archaeologist's excavations in the late years of 19th century and the first years of 1900 resulted the increase and acceleration in archaeological filed studies in Iran and contributed in shaping the general Persian history/pre-history profiles. Although, the abolition of the French monopoly in the archaeological matters of Iran, accelerated and the increased the archaeological activities and the presence of foreign scholars in the different parts of the country, exemplified by the expeditions of the Oriental Institute of Chicago in Persepolis and other Islamic/pre-Islamic sites of the country or other foreign initiatives in different archaeological sites of Iran, very little efforts were taken by these scholars regarding the restoration of historical monuments and their presence and their activities remained limited to just excavate archaeological sites and did not resolve the problems of the these ones; in fact even in some cases, as for example the excavations of French expeditions accelerated the process of the deterioration in the archaeological sites.

During the first 30years of 1900, in the very first years of Pahlavi government, important movements, unprecedented in Iranian traditional context, happened which highly contributed in the formation of modern derivations of restoration in Iranian context and the raise and birth of first serious attentions versus the necessity of preserving historic monuments as national heritage in Iran, in its so-called "modern" derivations, could be considered the fruit of the contemporariness of these unprecedented events which resulted the foundation of the concept of historic monuments conservation in its very first principles and its further evolutions.

In a brief look, it could be said that the very first attentions to the historical patrimony of the country begins in the last years of 20s with the abolition of the French monopoly in the archaeological matters of Iran; the successive steps were organizing and preparing legal supports for the protection of historic monuments which led to the establishment of department of archaeology in 1928, preparation of the index of national monuments by the National Monuments Council of Iran and the release of the "Law of antiquity", all in the shadow of political forces; furthermore, in the same years, the first set of restoration activities in architectural monuments were commenced and programmed directly by the newly established department of the archaeology. Referring

to the Law of Antiquity the government was responsible for protecting the historical patrimonies registered in the index on national monuments and executing necessary attempts to extend this protection to all historical monuments of the country. While in the lack of an official responsible the interventions in historical monuments were done in uncontrolled and unorganized ways, the department of archaeology tried to formulate a unique approach and accumulate both aspects of excavations and interventions in the archaeological /architectural sites.

It is with the "Executive decree of the law of Antiquity" that interventions in historic constructions began to be regulated and executed based on certain norms and regulations; in 1932, the Executive decree of the law of Antiquity stabilizes national regulations for interventions in old constructions and defines the limitations for interventions in the vicinity of old buildings, including constructing, digging, planting trees and constructing the cemetery; for example, in the case of minor interventions, of private owner types, in this executive decree the necessary conditions for the commencement of conservative interventions is defined and it is emphasized that local offices of Department of Archaeology should be informed of any intervention in details. It is emphasized that any intervention in old buildings should be communicated to the Department of Archaeology and interventions should be commenced with the permission released by the department of archaeology; all types of interventions should be done under the supervision of the Department of Archaeology and with the complete conformity to its norms and regulations; it is emphasized that any violation[179] of these norms or any intervention which may cause insecurity or radical change to the physical and structural characteristics of the building, results the cancellation of the released permission. Furthermore, all interventions on historic monuments began to be supervised by the department of archaeology and its local superintendents all over the country and the department of archaeology began to formulate specific programs substantially finalized to resolve the problems of the architectural monuments based on a unique the stabilized criteria for the preservation of historic monuments.

Political derivations of historical patrimony, emerging in 20s, from

179 Moreover, it is cited that in the case of refusing the completion of the necessary actions and any violations of the terms from the part of the owner, Department of Archaeology can stop the owner and force him to restart the restoration according to the permission given; in this case there are also penalties for damages to the buildings provided in the law of antiquity.

other hand, thorough a manipulative process, misuses pre-Islamic archaeological/architectural testimonies, as potential instruments for taking control over the mass, inserting itself within the Iranian historical context and as the existing foundations for reconstructing a new national and modern identity; the obsessive emphasis on the preservation of selected ancient archaeological testimonies, finalized to satisfy political goals, although contributed in the preparation of legislative structures for tutelage of historical monuments, clarify the nature of political approaches versus regarding the historic monuments in these years.

The other remarkable movement, not to be omitted, was the 30s Iranian nationalism which supported the idea of re-foundation of a new Iranian national identity based on pre-existing testimonies and transmissibility of this new identity to future generation; the reinforcement of the new born nationalistic sentiments of the 20s contributed in the establishment of the important professional organizations which executed the government financed program for the conservation and restoration of historical monuments; in this regard the most important of these institutions was the National Monuments Council of Iran established in 1922 as the first professional organization which highly contributed in the preservation of the historic monuments of Iran; In the lecture entitled "National Heritage of Iran (Athàr-e Melliy-e Iran)", given in1925, Herzfeld, as the archaeological adviser of the Iranian government and the first foreign member of the National Monuments Council of Iran, outlined the importance of preserving historical monuments and its significance for the identity of a nation, and he concluded stating that: "To prevent the vandalizing of historical remains, the government should establish appropriate regulations, and forbid the destruction of historical monuments in the provinces. Moreover, through the press, one should get the people interested in their national heritage and its preservation, and for this it is necessary to make plans and photographs of ancient monuments, and to keep the records in a suitable place. Equally, one should immediately attempt to take necessary measures for preserving the monuments that are in danger. Those who consider preserving national remains should also take into account the question of excavation and discovery of antiquities because important historical documents and fine treasures of antiquities are buried beneath the Iranian soil. Arrangements for excavation should therefore complement the preservation of national heritage, and the ensuing results should be exhibited in a national museum to encourage public interests

so that Iranians can take advantage of them in their present technological improvement in order to revive and appreciate their civilization."

Although these movements have resulted the formation of the principles of historic conservation in Iranian context, in their quasi modern principles, however there have been always evidences, although scarce, of restorations, traceable in different resources, in its traditional ways and thanks to these interventions many of historic constructions have been able to survive thorough time.

Parallel to the neglect and human damages which had destructive effects on historic edifices and monuments, in the absence of systematic academic structures, till the years of 1920 and the foundation of university of Tehran and department of archaeology, the lack of coherent lexical comprehension of the concepts of "Conservation", "Restoration", "Recuperation" and "Maintenance", resulted irreparable unintentional damages for historic monuments. "Antique", " Conservation", "Preservation", in their modern derivations, as representatives of definite theoretic disciplines, derived and born within occidental academic debates, were completely new and vague to Iranian traditional context and appear for the first time in the "Executive Decree of Law of Antiquity" in 1932; it could be said that all executed interventions were executed in the lack of understanding the concepts of "antique"," monument", the differences between "restoration" and "reparation", the value of "antique/old" and the necessity of preserving for future generations.

The Law of Antiquity of 1930 tried to give and define certain criteria for the excavations in archaeological sites, but it was in great parts limited just to define the commercial aspects of the excavations and regularizing the commercialization of the recovered objects; because of the complexity and due to the fact that still in the 30s, in Iran first steps in the organization and institutionalization of the archaeology were taken and hence this law could not give sufficient technical instruction or recommendation regarding the modality of the excavation in archaeological sites, the necessity of the post excavation preservation in these sites nor giving and defining some solid definitions for the concepts like "old","antique" or "monument"; consequently, due to the lack of legislative support in relation to the preservation of the historical context and the neglect of the evaluation of the historical importance of the old edifices in the law of antiquity and parallel to the development of the urbanistic programs of the years 20-30s, vast areas of historic cities of the country where contained basic elements of and the

precious urban fabrics from the Safavid, Zand and Qajar period, were demolished during these programs.

In fact it takes almost 30 years after the release of the "Law of Antiquity" that the concepts of "antique" and "historic" to be evolved from an individual sparse monument or recoverable items, portable to museums to unmovable items including decorative parts, facades of the architectural/archaeological fabrics, to a set/complex of the monuments in a certain area; it was in the 1963 and the release of the first decree of the National Monument Council of Iran regarding the preservation of historical monuments of the city of Isfahan, in the form of technical instructions, which then was printed and extended in national level. As the economic position of Iran improved in the period between 1950s-1970s substantial funds were allocated to conservation and restoration of monuments. In this regard, in the first years of the 60s, benefiting from the economic growth of late 50s and continuing the political strategy of the Pahlavi government in representing selected architectural and archaeological monuments as testimonies of the Iranian dynastic glory, vast cultural programs, all state-sponsored, were commenced in order to introducing and representing the Iranian art and culture in international levels; apart from the political intentions behind these state sponsored programs, they all contributed highly in introducing new and modern principles of restoration into Iranian traditional context.

Important parts of these programs are the organization of national/international seminars and congresses on the art and architecture of Iran and their contributions to the world, the commencement of cultural exchanges and international collaborations between Iran and foreign specialized institutions and organizations which drew new horizons and highly contributed in introducing new principles of conservation and more importantly the establishing specialized institutions like the National Association of conservation of ancient monuments in 1965 which for the first time officially is called as the responsible of executing conservative instruments in architectural/archaeological patrimony of the country. National organization for preservation of the historic monuments of Iran was established by royal decree in the Ministry of culture and arts (Wezārat-e farhang o honar); under its aegis technical bureaus were opened in the provincial capitals, each headed by an archaeological seconded by a civil engineer and experienced local architects.

Already since the first years of 60s, archaeological service of Iran reached its maturation levels; local offices of the department of

archaeology had been established within the national territory and many of important historic monuments in different parts of the country had been registered in the index of national monuments; according to the law of antiquity that had defined the department of the archaeology as the official responsible of promoting specific programs regarding the preservation of the historic monuments, special dossiers were prepared for historic monuments; moreover, in academic context, elaborate historical researches or numerous expeditions and archaeological activities of the foreign or Iranian which had begun/finished or were in progress, since the late 19th century, in different parts of the country continued their contributions in completing the historic/pre-historic profile of the Iran and its ancient civilization; important monuments of the country were introduced to public thanks to the publication of the specific manuals or other literal resources; in this regard, the elaborate publications of the department of archaeology "Athār-é Īrān: Annales du Service Archéologique de l'Īrān" directed by Andre Godard and published in French from 1936 to 1949, massive and well-illustrated volumes of "A Survey of Persian Art" in english, prepared by Arthur Upham Pope, the director of the American Institute for Persian Art and Archaeology and the elaborate publications of Oriental Institute of Chicago entitled "Persepolis" are of great importance; moreover, in national level, from the late 30s on important resources were published in Persian language which contributed in introducing the art and cultural heritage of the country to public.

From the other hand, parallel to the department of the archaeology, the faculty of archaeology of the university of Tehran, which since its establishment in 40s had promoted specific programs finalized to training the generation of Iranian archaeologists, reached its maturation phase as the result from the late 30s on, many of the expeditions in archaeological zones of Iran were commenced, continued or directed by Iranian archaeologists and Iranian archaeologists graduated from the faculty of the archaeology of the university of Tehran conducted systematic researches on archaeological zones of Iran which contributed in promoting the historical knowledge of the public and training the generation of Iranian archaeologists; in this regard, as the very first examples is the excavations in the archaeological site of Persepolis which after the departure of the American expedition in 1939, which were continued and directed by the first generation of the Iranian archaeologists graduated from the faculty of the archaeology of the university of Tehran.

Decree of the National Monument Council of Iran in 1965

In 1963, as the result of the international collaboration between the National Monument Council of Iran with UNESCO, IsMEO and other active international organizations in the field of cultural heritage, the NMC of Iran issues technical recommendations for executing conservative interventions in historic monuments/areas of the city of Isfahan and in 1965, this decree, in the form of technical instructions, published in national level that could be considered as the first series of technical guidelines for the protection of historic monuments in Iran.

These technical instructions present some similarities with the contents of the Venice Charter adopted in 1964.

The cited references in the decree regarding the historic contexts could be mentioned as follows:

- Considering sufficient free area for buildings and historic contexts;
- Forbidding new and/or disproportionate, construction in the proximity of the buildings and the historic contexts[180];
- Adapting urban planning programs in accordance with the characteristics; of the historic buildings and urban fabric;
- Correct illumination, utilizing the indirect irradiation for the illumination of the domes, porticos, gardens, parks, decorated columns and the historic buildings and avoiding from disproportionate illumination installations in the historic sites and buildings[181].

National Association of conservation of ancient monuments

National Association of Conservation of Ancient Monuments benefited from Iranian specialists/ technicians and consultants and was extended in the national level

180 The lack of legislative support regarding historic buildings could be seen in the publications of the time, especially the periodical of "Art and People", n.10, 1963, while referring the experiences of the European countries regarding the acquisition and conservation of the precious/historic buildings as museum or the library for future generations and the role of professionals and experts as consultants, the author argues that in the lack of sufficient legislative support from historic buildings in Iran, they are destroyed by their owners in order to new, modern, constructions., A. Tajvidi, *Maintain our beautiful and ancient buildings*, in "Art and People", No.10, Tehran, 1963.

181 For example installation of the light bulbs in the Naghsh-e- Jahan and in other historic buildings and sites is cited in the n.3 of the periodical of Historic Surveys in 1966.

by establishing offices in major cities considered historically/ culturally important.

As the first specialized organization, regarding restoration and conservation activities of the historic monuments, the tasks of this organization include the consolidations in the structural and decorative parts of the buildings, executing simple and complex protective measures for both individual buildings and historic areas. In addition to administrative duties related to the restoration of buildings, the organization established an archive, including a complete documentation relating to the buildings in the phase of interventions, including maps and drawings, representing the features of the building, the decorations and the period of construction, and began publishing reports of the ongoing operations of the restoration at that time, for making them available to the public, and identifying historic monuments over the Iran. General principles of the organization, approved in 1966, clearly show particular attentions to the importance of conserving historic monuments and providing necessary and standard measures, thanks to Italian scholars which took the responsibility of scientific supervision of the operations in progress and training the specialized staff, for executing coherent conservative interventions, respecting their identities and characteristics, under the supervision of Italian experts according to the established principles of international charters.

The other principles of National Association of Conservation of Ancient Monuments are: sensitizing public attentions to the importance and necessity of conserving ancient monuments as a national duty, preparing programs for public education, establishing relationships with universities and academic institutions for training technical experts, encouraging National Associations for participating and providing funds for private sector investment, determining and specifying specified and public[182] limits for historic monuments/areas where any destructing / deforming operation is forbidden, and determining specific conditions for construction and development in historic contexts, guarantying the continuity of harmony and characteristics of the surrounding buildings should be determined.

In Iran, in 1970, the First International Congress of Architects (Ministry of Development and Housing. Isfahan - 1970) entitled "The possibility of a link between the traditional architecture and

182 The public limit will be defined according to its requirements and its specific situation.

new methods of construction", is held where specifically argues about the necessity of maintenance and restoration of historic buildings and historical urban structures, their understanding, retention and combination, as the legacy of civilization and the Iranian culture, with the existing physical fabric and the structure of the cities society and current international achievements. In this congress, it is argued that the preservation and revitalization of the values of the architectures of the past, as the representative documents of the history of the nation, and local styles and techniques is indispensable for the future of preservation of historic edifices; it is recommended that constructive traditions, identities, the human-material characteristics of the city, the region and the country should be respected; in this regard it is recommended that specific, qualitative and quantitative, research programs should be organized in order to identify and gather information on these models and systems and it is discussed that the practical way of respecting the architectural traditions is to build houses, cities and the environment under the conditions of time and constant research to maintain a balance between these techniques and technological progresses.

IsMEO and restoration activities in Iran

In 1964, Iranian authorities of the National Association of conservation of ancient monuments[183], in charge of the conservation of historical monuments, were concerned with the dangerous state of deterioration of Ali Qapu; this concern was the reason of the beginning of the 15year program of the activities of IsMEO for the restoration of Iranian historical monuments ; the activities of Ismeo were not limited just to formulate restoration solutions for the architectural monument of Ali Qapu, but were extended and included other Safavid architectural monuments of seventeenth century Chehel Sutun and Hasht Behesht; moreover, the partial rehabilitation and restoration of the peripheries of the great Maidan-i- Shah, in the designation of a protected historical zone, in the publication of major new studies of Safavid architecture, the training of Iranian restoration experts, and more importantly the foundation of the modern culture of restoration in Iranian traditional context; in providing the full local support for the commencement of the interventions, the National Association of conservation of ancient monuments

183 It is also called as the National Organization for the Conservation of Historical Monuments (NOCHMI).

established its own construction department to ensure a stable and increasingly well-trained work force to avoid difficulties with individual contractors. Due to the particularity and importance of the architectural monument of Ali Qapu, the restoration program developed its own specialists in masonry, plastering, carpentry, wood and mirror work. At the same time, the students of the Faculty of Fine Arts were assigned restoration work, particularly that of the painted decoration, as part of their academic curriculum. Moreover, 19 young specialists receive advanced training in restoration in Italy and the specialists employed by NACAM had the unparalleled opportunity to collaborate and take charge of various aspect of the restoration program.

4. Restoration experiences in Iranian context: case studies

4.1. National Monuments Council

Reconstruction and architectural reinterpretation of a monument: the Mausoleum of Ferdowsi

As the very first set of activities of the NMC of Iran was the project of reconstruction of the mausoleum of Ferdowsi which was inaugurated in 1934.

Tomb of Ferdowsi in its current form, is constructed in two separate phases; the first one during the Reza Shah Pahlavi period and the next one during his son, Mohammad Reza Shah period. Earlier in the Qajar era, based on the evidences and researches of the French delegation, a building as Ferdowsi's tomb had been made of mud brick. The importance of constructing a monument for Ferdowsi is due to the fact that its concept dates back to the very first days of establishment of NMC of Iran and parallel to the preparation of the index of national monuments.

Figure 4.1.
The old tomb of Ferdowsi in Qajar period prior to its reconstruction.
Old photos, Phototec, National Archives of Iran, Tehran, Iran.

In fact, Ferdowsi, from the political and cultural view of the Pahlavi government was the revitalize of the history and the culture of ancient Iran and the symbol of Iranism against Arabs, Muslims and Turks and Pahlavi Government sustained that immortalizing the record of Ferdowsi highly contributes in reconnecting to the ancient, pre-Islamic, Iran.

Moreover, the rise of nationalism in early 20th century motivated scholars and dignitaries to urge the government to build a suitable mausoleum for the poet who had done so much to preserve Iranian identity and history. In this regard, the contribution of the NMC and the role of the foreign scholars is of great importance, specifically is remarkable the speech of Ernst Herzfeld in 1925 when he stated that: "National buildings and monuments are not limited to old buildings, inscriptions, and sculptures. For example, the true Iranian heritage is the Shahnameh, which is the masterpiece of Ferdawsi, the only great poet of this country."

Figure 4.2.
The proposal of Andre Godard for the reconstruction of the mausoleum.
Old photos, Phototec, National Archives of Iran, Tehran, Iran. This project was rejected by the National Monuments Council as it did not represent the Iranian symbols and the importance of the Ferdowsi.

From other hand, Ferdowsi was a well known figure within the public and the common figure between public and government and Pahlavi government believed that construction of the Ferdowsi's monument would bring the national acceptance and prestige and would help government to follow its ancient nationalistic projects. The project of the construction of the mausoleum of ferdowsi, which then became the pattern of successive similar projects, was commenced in 1926 when the NMC of Iran sent a team for the localization of the tomb of Ferdowsi; due to its importance, the design of the Ferdowsi mausoleum was put in an architectural competition and important Iranian and foreign architects like Andre Godard and Ernst Herzfeld prepared their projects. Especially, Andre Godard had prepared a pyramid shape design which even was approved and its construction began, but it stopped as NMC of Iran stated that Ferdowsi merits a greater and

Figure 4.3.
The tomb of the Cyrus the Great at Pasargadae which inspired the project of mausoleum of Ferdowsi.
Photo n. P31667, Persepolis and ancient Iran, Oriental Institute Photographic Archives, Oriental Institute of Chicago.

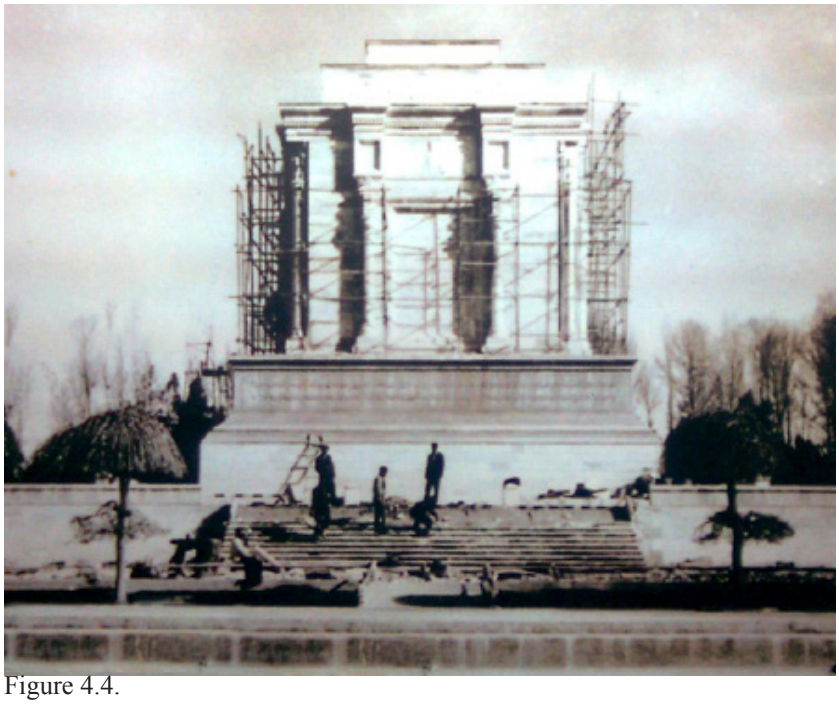


Figure 4.4.
The construction of the tomb of Ferdowsi.
Old photos, Phototec, National Archives of Iran, Tehran, Iran.

the Pahlavi government and the intellectuals of the National Monuments Council of Iran believed that the efforts of Ferdowsi in preserving the unity of Iranian nation is like the Cyrus the Great, so his monument's form should be as Cyrus the Great's tomb.

more elegant monument not an arabic style form.

It seems that just from the very first moments of the commencement of the project of the mausoleum of Ferdowsi, NMC of Iran had in mind constructing a Cyrus the Great's tomb similar project as the government of Pahlavi believed that as the efforts of Ferdowsi in preserving the unity of Iranian nation is like the Cyrus the Great, so his monument's form should be as Cyrus the Great's tomb; the NMC of Iran approved a proposal which was similar to the Cyrus's tomb and had elements of the capitals and pillars of Achaemenid period.

Morphologically proposal for the the mausoleum of Ferdowsi was a synthesis between the Parthian mausoleum buildings and Cyrus's tomb as examples of Iran's pre-Islamic architecture and the engaged columns of the Persepolitan rock cut tombs; it was designed as a massive cube of marble, which its central front façade was a direct copy from Persepolis' Hall of One Hundred Columns or The Throne Hall; the other sides were decorated with two columns in the style of Persepolis with additional columns within each corner angle.

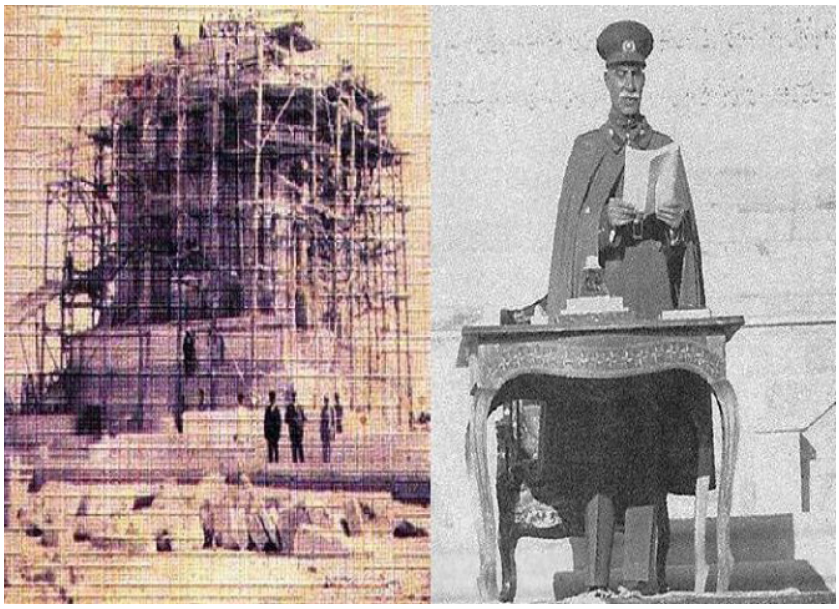


Figure 4.5&6.
The inauguration of the project of the mausoleum of Ferdowsi.
Old photos, Phototec, National Archives of Iran, Tehran, Iran.
The inauguration of the project of the mausoleum of Ferdowsi was held during the celebration of millennium of Ferdowsi when Reza Shah in person in a special speech talked about the importance of the role of Ferdowsi and the necessity of preserving the unity of the country.

The mausoleum was consisted of three parts: (1) An innermost section centered around a two-stepped marble platform on which lies the cenotaph, a marble slab (150x100 cm) some 50 cm high. (2) A square (16x16 m) chamber built of dressed marble and ornamented on the interior with faience work.(3) An outer stepped-platform of dressed marble, on which stands the chamber.

The supporting idea of constructing the mausoleum of Ferdowsi

was that revitalizing and linking the memory of Cyrus the Great to Ferdowsi, a poet with a forgotten tombstone, and realizing it through architecture demonstrate this belief that such connections are not only viable but also necessary to the rebirth and raise of the nation.

Construction of the mausoleum began in 1932 and was completed 18 months later at the time of the celebration of the Millennium of Ferdowsi in 1934.

The monument was situated in a garden of fruit trees measuring 25,248 m2 and later was enlarged to 30,000 m2. Despite extensive cost and effort, however, due to the lack of detailed technical analyses and considerations like the strength of the ground and the foundations, for a 18 meters height building, and demands for its rapid construction, from other hand, the monument did not sustain its structural integrity for long and began, just from its early days, to absorb moisture and displacements.

After 30 years of fruitless efforts for repairing and restoring the monument, finally, in 1964, it was decided that it had to be completely dismantled and reconstructed, where was and as was, otherwise, there are serious risks of its total destruction.

In order to rescue the monument from destruction, the solid floor of the original chamber was hollowed out and the area beneath expanded on all sides to form a hall measuring some 900 m², with an entrance from the west and decorated walls. At the same time the garden was expanded on all sides, covering an area of 56,753 m2, and the site was provided with restaurants, hostels, and a library. A statue of the poet was also erected southeast of the monument, and the entire complex was officially “re-inaugurated” by Mohammad Reza Shah Pahlavi in 1968.

4.2. Oriental Institute of Chicago

Ernst Herzfeld and restoration experiences at Persepolis

During the presence of Ernst Herzfeld as the field director of the excavations since 1935[184], scarce restoration works were carried out at different spots on the terrace; the fallen architectural fragments were found and the Apadana's eastern staircase's reliefs were protected by the means of a screen made of reed. As already indicated in the proposal of Herzfeld for excavations in Persepolis, restoration of the one of the palaces of Persepolis to house the expeditions team and to serve as a museum for the site's findings was one of the Hersfeld's program of activities in Persepolis.

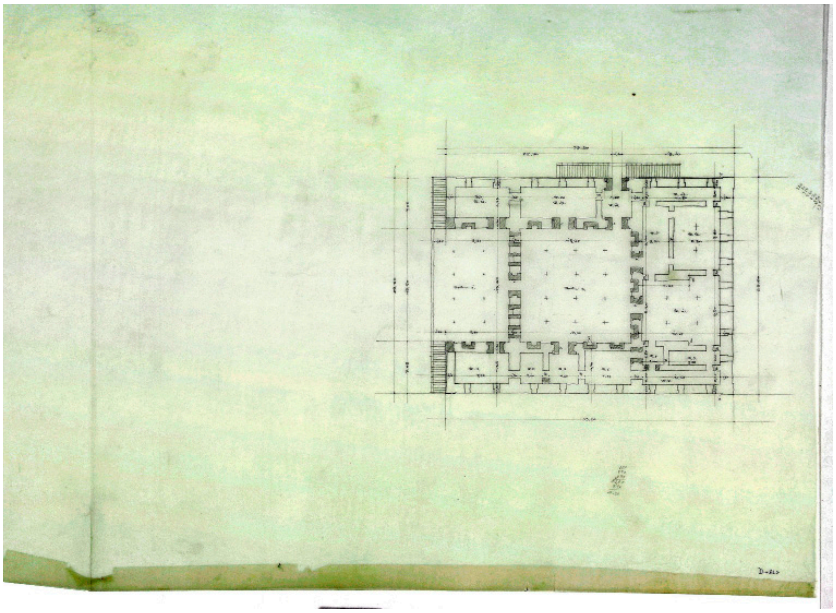


Figure 4.7.
Persepolis, Tachara Palace (Palace of Darius), measured plan prepared by Herzfeld during his first visit to the site.
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.
This carefully prepared plan clearly shows that Herzfeld had intended to reconstruct this palace as the place for the expedition team and as the museum for the archaeological findings of the site, but then decided to restore the Harem of Xerxes instead.

Prior to the commencement of the activities, Herzfeld had intended to reconstruct the Palace of Darius, but finally and as the clearing works of the site were in progress, decided to reconstruct the Harem[185] which was larger, its northern portico was in a

184 Leadership of the Oriental Institute expedition was temporarily given to Krefter, who remained in charge until Erich Schmidt's Arrival in 1935.

185 Ernst Herzfeld, called this building a harem, because of its relatively hidden and protected location. Herzfeld thought the structure once housed the many wives and concubines of the king. There is no Achaemenid source mentioning the function of the structure as such, however, and nothing in the building's architectural remains would support this conclusion., A.mousavi, *why Darioush built Persepolis* in *Odyssey,* 2005, pp. 22-51.

Figure 4.8.
First detailed architectural relief of the Harem of Xerxes which was chosen as the future museum of the Persepolis was prepared in 1931 by Friedrich Krefter, the assistant of Herzfeld.
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.

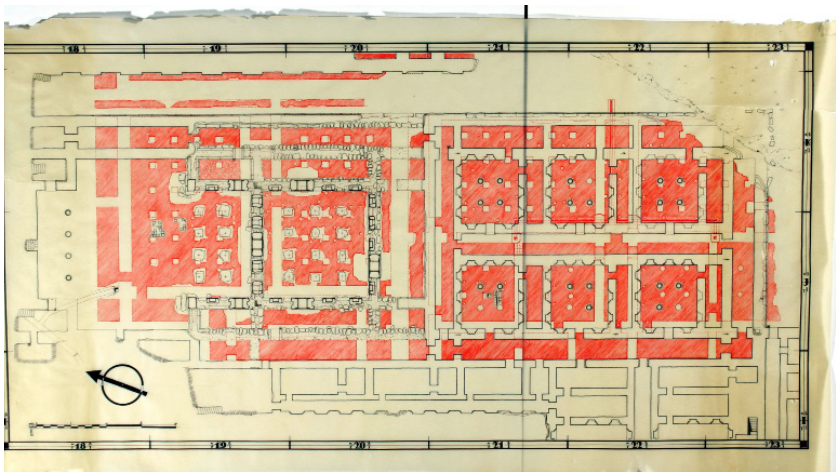


Figure 4.9.
Persepolis:The Harem of Xerxes.
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.
Parallel to the progress of the excavations more complete designs and representations of the Harem of Xerxes by the Herzfeld team were prepared which serve to show the progresses of the restoration of the Harem.

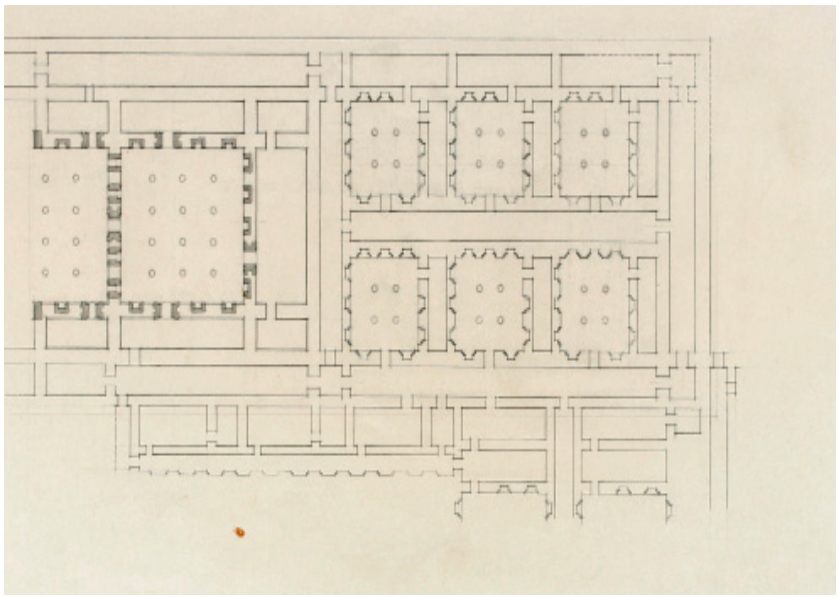
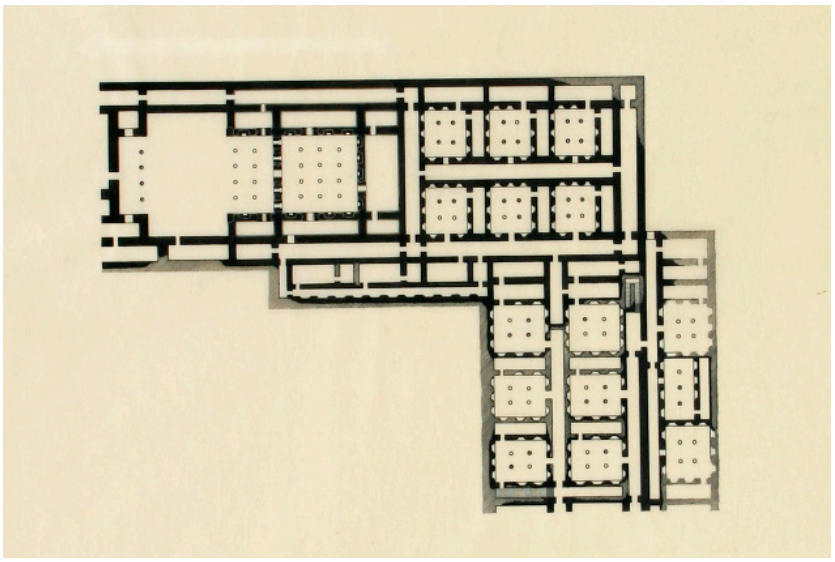


Figure 4.10.
Persepolis: the Harem of Xerxes.
Ernst Herzfeld, Freer Gallery of Art and Arthur M. Sackler Gallery Archives.
This architectural relief of the Harem of Xerxes including the Two Wings was prepared in 1934 by Karl Bergner when the major part of the excavations and the clearings of the Harem were finished.



good state of preservation and its construction method were very similar to that of the apadana.

The project of the restoration of the Harem of Xerxes was began in the first season of the excavations in 1931 when a large part of the Harem was cleared and first relief of the palace were prepared by Herzfeld's team.

Parallel to the clearing of the Harem in order to prepare it for restoration works and in order to proceed with the works of restoration and preparation of the Harem of Xerxes, Herzfeld's collaborators prepared architectural relief of the palace. Different architectural relief of the palace confirm that these drawings were prepared parallel to the excavations.

Maintaining the aesthetic integrity of the site as a whole and executing necessary modifications on the structures of the terrace of Persepolis during the reconstruction of the Harem were the most important challenges that Herzfeld had to resolve. The northern hall of the Harem was suggested to be configured as a museum, while the smaller rooms located in the southern part as the residence for the staff and equipment of the expedition[186]; moreover, the Harem was more accessible from the southeastern corner of the terrace than the Palace of Darius.

186 It has served as the Museum of Persepolis and housed the administrative quarters of the Institute of Achaemenid Research at Persepolis from 1973 to 1978 and the Foundation for Parsa-Pasargadae Research since 2002.

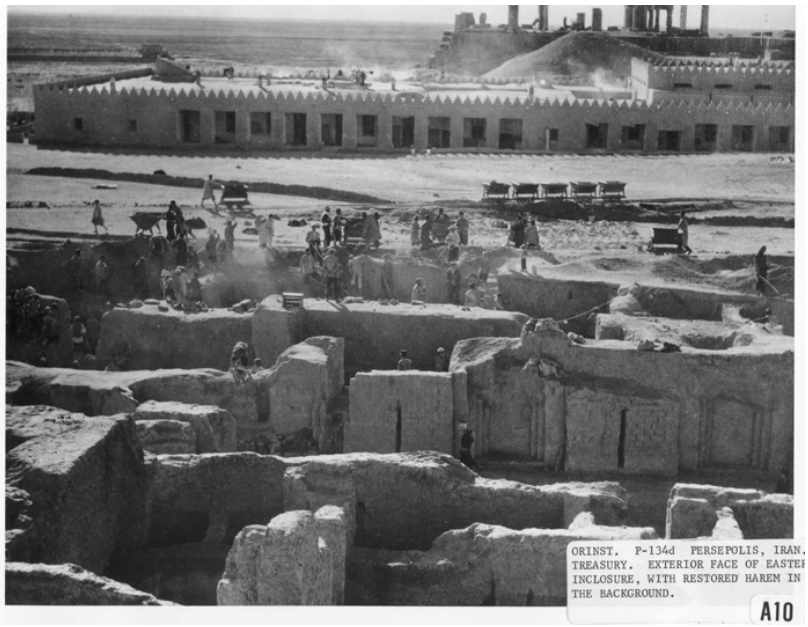


Figure 4.11.
Persepolis, the restored Harem of Xerxes; photo taken after the restoration works were over. Photo n. P134-d, Persepolis and ancient Iran, Oriental Institute Photographic Archives, Oriental Institute of Chicago.

Figure 4.12.
Persepolis: Harem of Xerxes.
Photo n. P58149, Persepolis and ancient Iran, Oriental Institute Photographic Archives, Oriental Institute of Chicago.
After being restored, the Harem of Xerxes became the main place where the findings of the site were deposited.

Figure 4.13.
Restored northern facade of the Harem of Xerxes.
Photo n. P24789, Persepolis and ancient Iran, Oriental Institute Photographic Archives, Oriental Institute of Chicago.

Figure 4.14.
Restored northern facade of the Harem of Xerxes.
Photo by Pooya Zargaran, 2011

Figure 4.15.
The Harem of Xerxes.
Photo by Pooya Zargaran, 2011

4.3. Department of Archaeology

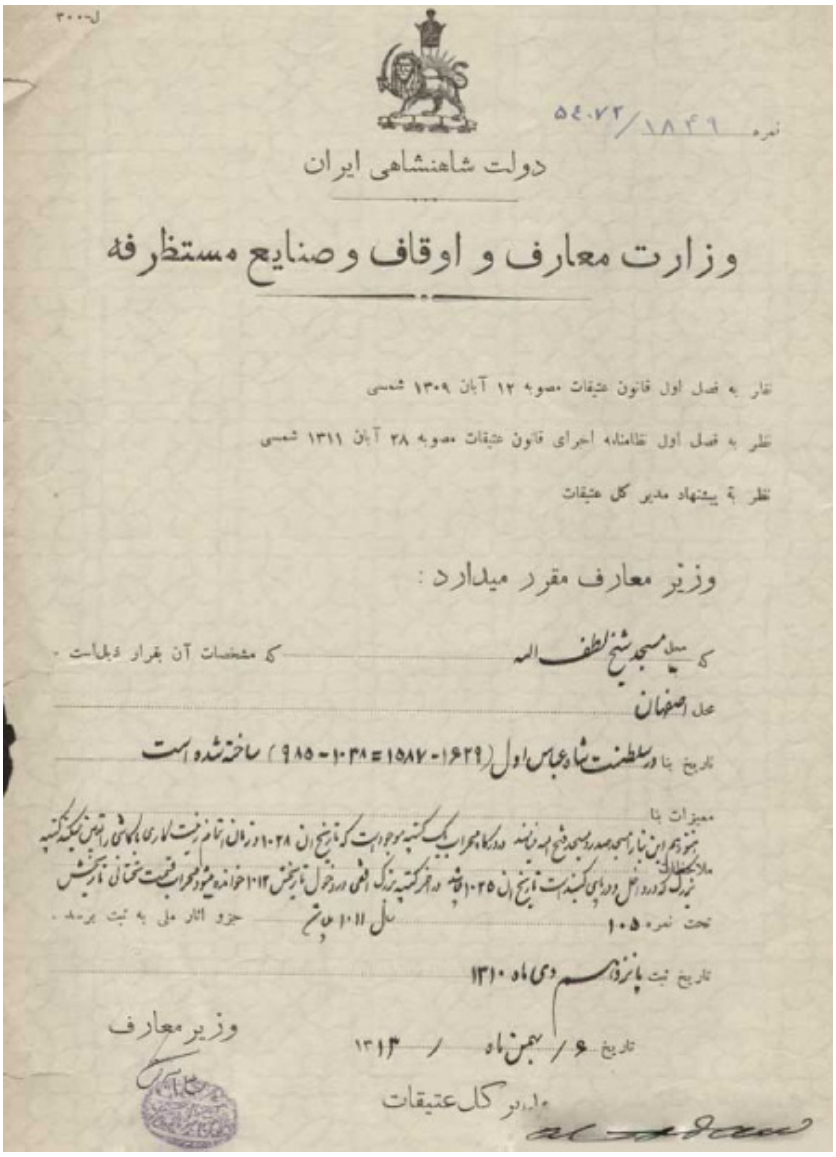
Restoration of "Sheikh Lotf allah" mosque

As one of the first initiatives of the department of archaeology after its establishment was programming for the restoration of the Safavid architectural monuments of Isfahan which included the masterpieces of the 17th century Iranian traditional architecture which were in very bad states of conservation and needed urgent interventions in order to save them from ulterior deteriorations; despite the elegancy in the form and compositions, the major part of these masterpieces had some serious structural problems due to the velocity of their constructions and the quality of the used materials which threatened them and necessitated urgent structural interventions. Although due to the lack of academically trained restoration expert, the lack of sufficient instruments and documentations, the lack of sufficient knowledge of the constructive techniques of the Safavid architectures and the lack of a well organized strategy for adapting the most respondent solutions, these restoration finished to be quasi executed in "traditional" ways and by the local masons, hired by the department of archaeology and the traditional instrumentations; however, these restorations are considered as first attempts of preservations of the architectural monuments under the directorship of the specialized organization. The second, chronologically speaking, of the significant mosques of Isfahan is the mosque of Sheikh-Lotf allah Mosque[187], which is located in the east side of Shaah- Square,"Naghsh-i-Jahan"; the Sheikh-Lotf allah mosque[188] is counted as one of the most precious Safavid architectural works in proportion, shape of the dome and the inside light conduction[189]. Sheikh Lotf-Allāh Mosque is unique among Isfahan's mosques in several respects. Consisting of a single domed chamber, all the standard features of a four-ayvān courtyard-centered mosque, including minarets, are foregone here, for this is a mosque designed to serve private royal functions rather than congregational prayer. Covering

187 According to the façade epigraph in Sols by Alireza Abbasi, the building is established on 1012 and finished on 1028 lunar year.

188 The nomination of the mosque came to be associated with Shaikh Lotf-Allāh (d. 1623), the father-in-law of Shah Abbās the Great and one of the principal religious doctors of his time.

189 It is registered, along with the Naghsh-i Jahan Square, as a Unesco World Heritage Site.



دولت شاهنشاهی ایران

وزارت معارف و اوقاف و صنایع مستظرفه

نمره ۵۴۰۷۲/۱۸۴۹

نظر به فصل اول قانون عتیقات مصوبه ۱۲ آبان ۱۳۰۹ شمسی

نظر به فصل اول نظامنامه اجرای قانون عتیقات مصوبه ۲۸ آبان ۱۳۱۱ شمسی

نظر به پیشنهاد مدیر کل عتیقات

وزیر معارف مقرر میدارد :

که مسجد شیخ لطف الله ..... که مشخصات آن بقرار ذیل است .

محل اصفهان .....

تاریخ بنا در سلطنت شاه عباس اول (۱۶۲۹-۱۵۸۷ = ۱۰۳۸-۹۸۵) ساخته شده است .....

ممیزات بنا .....

ملاحظات

نحت نمره ۱۰۵ ..... سال ۱۰۱۱ چاپ .....

تاریخ ثبت پانزدهم دی ماه ۱۳۱۰ ..... جزو آثار ملی به ثبت برسد .

وزیر معارف

تاریخ ۶ / بهمن ماه / ۱۳۱۴

مدیر کل عتیقات

Figure 4.16.
The Sheikh Lotf allah mosque, the resgistration document.
National Archives of Iran, Tehran, Iran.
The Sheikh Lotf allah mosque is registered in 1931 in the index of national monuments; based on the reccomendations of the Law of Antiquitiy regarding the preparation of the necessary documentation for the registration, an inventory with the general information lkie the name and nomination of the mosque, the date of construction, its eventual modifications and restoration whith necessary documents are prepared.

almost 2,500 square meters, the Sheikh Lotf-Allāh Mosque was conceived as an integral part of Shah Abbās's conversion of Isfahan into his new imperial capital. The façade is covered in tile mosaic work and the portal contains the first monumental variation of the Safavid declaration, standardized by Shah Abbās the Great, of the shah to be the "propagator of the faith of the Infallible Imams". Construction of the mosque started in 1603 and was finished in 1618. In 1932, Sheikh-Lotf allah Mosque is registered in the index of national monument.

Figure 4.17.
The Sheikh Lotf allah mosque.
Photo by Pooya Zargaran, 2011

The project of the restoration of Sheikh Lotf allah mosque began in 1928 with the official request issued by the local financial office of Isfahan asking the ministry of finance to send to Isfahan an experienced mason "Usta" for visiting the dome of "Sheikh Lotf allah" mosque and proposing necessary measures for its protection.

On the request of the governor of the province, the reliable chief architect of the department of archaeology was sent to evaluate the problems and formulate the intervention program. Still after the establishment of the department of archaeology, due to the lack of academically trained technician and experts of restoration, the whole responsibility of the interventions in historic monuments is with expert traditional masons or "Usta"s who underthe supervision of the department executed the necessary interventions in historic monuments.

The restoration of Sheikh-Lotf allah Mosque in began in 1933 as the result of an official demand of the governor of the province of Isfahan; the restoration works lasted in 1937 and again restarted

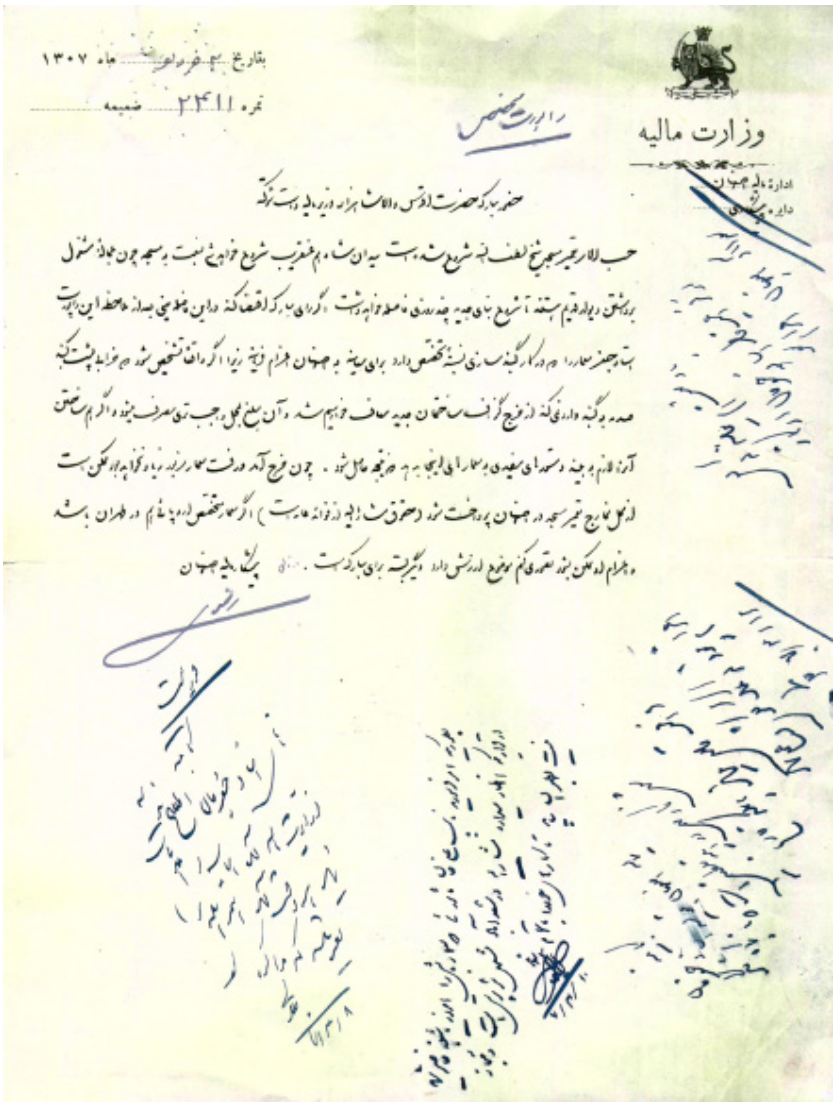
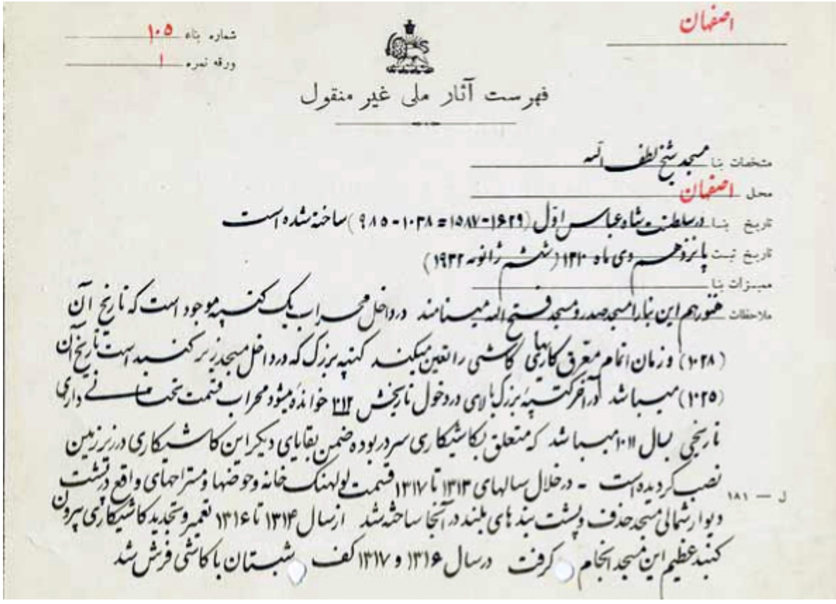

وزارت مالیه

Figure 4.18.
National Archives of Iran, Tehran, Iran.
This document clearly states that the “reparations” are began in the “Sheikh Lotf allah” mosque and informs that the “reparations” are about to begin in the “Naghsh-e Jahan” plazza; moreover, the necessity of a higher supervisory regarding the execution of the interventions is understood where the central office of the ministry of finance is asked to send an experienced “Usta” for verifying the static problems of the dome of the mosque, subject of intervention, and giving sufficient orders to local masons; and adds that if in Tehran there is an European architect it’s better to send him because of the importance of the subject.

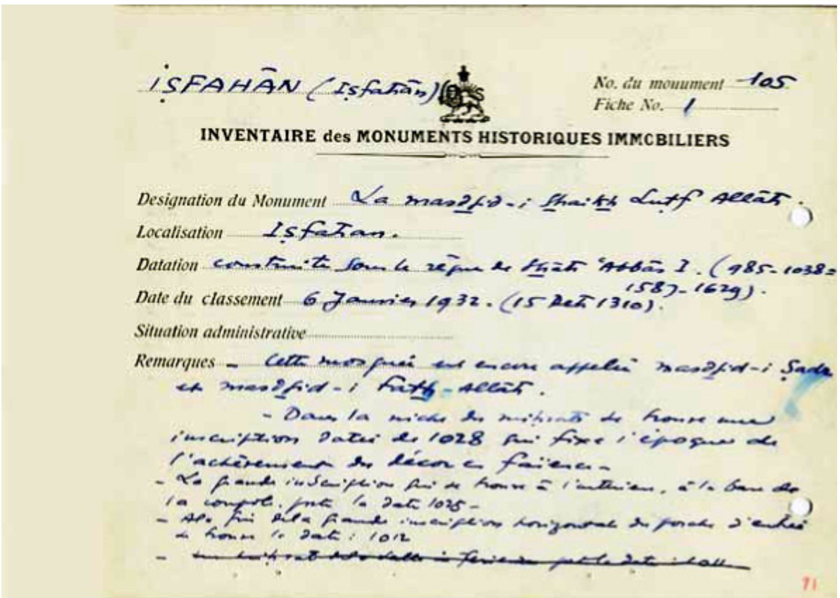


اصفهان

شماره بناء ۱۰۵
ورقه نمره ۱

فهرست آثار ملی غیر منقول

مشخصات بنا مسجد شیخ لطف الله
محل اصفهان
تاریخ بنا در سلطنت شاه عباس اول (۱۶۲۹-۱۵۸۷ = ۱۰۳۸-۹۸۵) ساخته شده است
تاریخ ثبت پانزدهم دی ماه ۱۳۱۰ (ششم ژانویه ۱۹۳۲)
ممیزات بنا
ملاحظات



ISFAHĀN (Iṣfahān) No. du monument 105
Fiche No. 1

INVENTAIRE des MONUMENTS HISTORIQUES IMMCBILIERS

Designation du Monument La masdjid-i Shaikh Lutf Allāh.
Localisation Iṣfahān.
Datation construite sous le règne de Shāh ʿAbbās I. (985-1038 = 1587-1629).
Date du classement 6 Janvier 1932. (15 Deï 1310).
Situation administrative
Remarques – Cette masdjid est encore appelée masdjid-i Sadr et masdjid-i Fath-Allāh.
- Dans la niche du mihrab se trouve une inscription datée de 1028 qui fixe l'époque de l'achèvement du décor en faïence.
- La grande inscription qui se trouve à l'intérieur, à la base de la coupole, porte la date 1025.
- Au-dessus de la grande inscription horizontale du porche d'entrée se trouve la date : 1012
- [illegible]

Figure 4.19&20.
National Archives of Iran, Tehran, Iran.
Following the recomendations of the Law of Antiquities any alteration or modification and eventual restorations and repairs should be cited and inserted in the dossier prepared for any national monument; in the dossier prepared by the department of archaeology the repairs of structural parts of the Sheikh Lotf allah are mentioned and listed.

in 50s; the restoration activities were directed and executed under the supervision of the department of archaeology and by Mr. Ma'arefi[190], Godard's reliable and the department's official chief architect, a highly specialized traditionally trained mason, as the responsible of the restorations these restorations included:

- Fundamental structural consolidations in the dome area; by removing springhouses and some toilets in the north side of mosque's corridor which, by causing different sized cracks, had jeopardized the structural stability of the bedchamber area under the dome and reinforcing the back wall of the dome by allocating 4 strong brick columns;
- Restoration of the tiles in the dome area and the relative spaces and in the bedchambers; during the tiles' restoration process deposited unused tiles were served to decorate the under dome interior space, which helped them to survive further destructions; moreover, their design were used for making new tiles during successive restoration of the mosque's portal in the next years; during the restoration of the dome's tiles it was tried to maintain, as much as possible, the unbroken tiles in their original position of and limiting interventions to just substitute the damage tiles with new ones;

In 1950, restorations in the Shikh-Lutfollah mosque were recommenced in the forecourt and entrance portal of the mosque by repairing and reinforcing the rooms and terraces around the portal by the means of iron filature, repairing and remaking the collapsed tiles of the forecourt and the portal and substitution of the old and damaged pavement stones with new ones.

190 Hossein Ma'arefi was born in 1893 in an average family in Isfahan. Besides his father and ancestors, also his uncles were famous architects, in other words architecture was his family heritage. Ma'arefi started to learn the family profession as a builder when he was 10 under the guidance of his father and uncle. Mr. Ma'arefi had his first experience in restoration in 1922-23 with restoring the badly damaged east minaret of "Menar Jonban", when he had about 30 years. With the establishment of Organization of Education and Building in Isfahan, Ma'arefi is given the responsibility of building and restoring some schools. By the establishment of the department of archaeology , Mr. Ma'arefi followed his activity in preserving and restoring historic buildings and several Safavid architectural monuments were restored by him as follows: Zolfaghar Mosque, Ali Mosque, Haroon Velayat, Baba Ghasem Monument, Emamiyeh Mosque, Jafariyeh Monument, and Esmaeel Monument.
Due to lack of facilities and not making plans and pictures and reports of the buildings before its restoration, there was no record on them.

5. IsMEO and contribution to the formation of the culture of restoration in Iran

IsMEO, acronym for the Istituto Italiano per il Medio ed Estremo Oriente[191] was founded in 1933[192] under the inspiration and encouragement of Giuseppe Tucci[193], then became its executive Vice-president, and official support of Giovanni Gentile[194]; the foundation of the IsMEO was clearly seen as the answer to the political need for developing cultural relations with the entire Asiatic world with a deep interest for the politico-economic affairs.

The new phase in the life of the Institute begins in November 1947[195] with archaeological excavations; between 1950 and 1955 a number of expeditions to Nepal were organized directly under the chairmanship of Giuseppe Tucci; in 1956, the archaeological campaigns in Pakistan begin, followed by other archaeological missions in Afghanistan (from 1957) and in Iran (from 1959). ISMEO begins publishing the results of archaeological excavations and the restoration activities from 1960 through the publication of two new series of the "Reports and Memoires," (in two Series: Major and Minor) and "Restorations" (in two Series: Major and Minor). Moreover philological, historical and religious researches in the field of Iranian studies have been mainly published in the Rome Oriental Series and in East and West.

The archaeological excavations are then accompanied, from 1960 on, by specific restoration and conservation programs of the important architectural monuments of the countries subject

191 Scholarly activities are defined as IsMEO's main goal.

192 IsMEO was founded by Royal Decree no. 142 as a moral institution (Ente Morale).

193 Giuseppe Tucci, Indologist and Tibetologist, (1894-1984), born in Macerata, June 5, 1894, graduated in 1919 from the University of Rome. Was sent by the Italian government to teach Italian and Chinese at the University of Shantiniketan and Calcutta and was recalled to Italy in 1930 to teach Chinese language and literature at the Istituto Universitario Orientale of Naples. In 1932, moved to the Faculty of Arts, University of Rome where he taught Religion and Philosophy India and the Far East until 1969. In 1933 with Giovanni Gentile founded the Italian Institute for the Middle and Far East of Rome (IsMEO), with the main purpose of developing cultural relations between Italy and Asian countries.

194 The first President of the institute, and the Minister of Culture in the Fascist government, who exerted important influences in the field of cultural politics.

195 Between1943 and 1947, IsMEO remained inactive.

of archaeological activities, in particular at Kabul and Ghazni (Afghanistan), Persepolis and Isfahan (Iran). From 1964, the IsMEO with the direct involvement of its "Centro Restauri" and with the support[196] of the Ministero per gli Affari Esteri begins a long series of restoration and conservation activities regarding architectural monuments in tow main geographical areas of Iran; in Isfahan and in Fārs.

196 Centro Restauri of IsMEO made its restoration activities in Iran via collaboration between Iranian government, the Archeological Department of Isfahan and Shiraz, the Italian Ministry for Foreign Affairs and prof.Guglielmo De Angelis d'Ossat, Engineer and Architect and prof.Giuseppe Zander, Architect

5.1. IsMEO and the archaeological activities in Iran

From 1959 archaeological excavations of Italian began in two archaeological sites of Iran: the city of Isfahan and the Sistān basin.

As one of the very important missions of Italian archaeologists was conducting scientific excavations parallel to the development of the restoration in the mosque which had already been in progress; in fact, after the expeditions of the Oriental Institute of Chicago during the 30s at Persepolis where restorations were made parallel to the execution of archaeological excavations, the Masjed-e Jom'e of Isfahan is the most important site where excavations and restoration get together at the same time in a certain site; as the archaeological site of Persepolis represented the imperial glory of the Pre-Islamic Persian civilization, the Masjed-e Jom'e of Isfahan is the masterpiece and the museum of the Islamic architecture and its evolution through centuries.

Archaeological mission in In *Masjed-e Jom'e*[197]

In the frame of the collaboration between IsMEO and the National Organization for the Conservation of Historical Monuments of Iran (NOCHMI), an Italian Archaeological Mission was invited to conduct a series of researches in the Masjed-e Jom'e at Isfahan, working together with the Italian Restoration Mission directed by the Eugenio Galdieri which was already in progress; already Galdieri in his first series of researches had identified the pre-Seljuk mosque of the classic "Congregational" type and the recognition and the evolution of the constructive phases of the mosque, as well as the independent development of the dome of the sanctuary; the archaeological mission directed by Professor Umberto Scerrato was finalized to resume and complete the work of Galdieri by a series of trial excavations whose objective was to establish the static condition of the foundations of the building, and to complete historical, archaeological and artistic knowledge of the monument and the site on which the mosque situated, which partially had been studied by Andre Godard and had been published in the series of Athar-e-Iran.

The excavation of archaeological mission revealed that all of the round pillars which were out of plumb owe their condition to the precariousness of the foundations; moreover, these excavations

197 Called also Masjid-e Gium'a or Masjed-e-Atigh

revealed that the pillars are not solid and no where rest on virgin soil as the mosque itself was not built on an unoccupied surface, but rests on a close web of mud-brick structured, oriented obliquely in the northeast-southwest direction, attributable partly to Sassanid period but modified and reused in the Islamic period; the rests of Sassanid period were also found during these excavations under the dome area.

Figure 5.1.
Masjed-e Jom'e, Isfahan, Iran.
Old photos, Isfahan, Phototec, National Archives of Iran, Tehran, Iran.

Figure 5.2.
Masjed-e Jom'e, Isfahan, Iran.
Phototec of IsMEO, Istituto Italiano per l'Africa e l'Oriente (IsIAO),Rome.
During the excavations of IsMEO the archaeologists found some rests from the 8th century which showed that the current mosque has been built on the rests of an older mosque and the current orientation of the mosque is different from its original orientation.

Archaeological mission in *Sīstan*

In 1960, excavations were commenced in Sīstan, in the Parthian-Sasanian architectural complex situated in Kuh-e Kāja and in Qal'a Tape and in 1962 were extended to include other Achaemenid sites of Dahāna-ye Golāmān. The scope of the Italian scholars from executing archaeological excavations in Sīstan was identifying important sites, where the excavation could allow to comprehend evolution of cultural phases of Sistan, from prehistory to Islam.

During the excavations in the Achaemenid site of Dahāna-ye Golāmān which were continued till 1966 some of the main monumental religious and civil structures of the area were uncovered. The activities of Italian archaeologist were continued and in 1963, other pre-Islamic sites of the Sīstan, the post-Achaemenid and Sasanian periods, were excavated; moreover, in this year some additional archaeological research was devoted to the Islamic site of Bibi Dust.

In 1967, important excavations of the proto-historical phases of Sistān were commenced in the so-called Šahr-e Sukta "The burned Town," the largest inhabited area of the Bronze Age in Southwestern Asia; during this period the Italian archaeological mission carried eleven excavation seasons always in the autumn months when the climate permitted the execution of the excavations.the excavations in the Šahr-e Sukta which were continued until 1978 did not limit itself just to revealing and uncovering the material culture in the third millennium B.C. but introduced an original multidisciplinary approach of scientific knowledge from the field of Palaeo-botany to physical anthropology, etc. The adopted method of the IsMEO scientific activities was based on interdisciplinary exchanges as anthropological and technological researches and elaborate analysis of the archaeological foundings such as the examination of the materials like glass paste to glass, ceramics, metal, wood, stucco, color, adhesives and human and animal remains. The archaeologists of IsMEO during their excavations constantly benefited from the collaboration of naturalists, paleobotanists, the geomorphologists, paleo-zoologists, anthropologists and geophysicists.

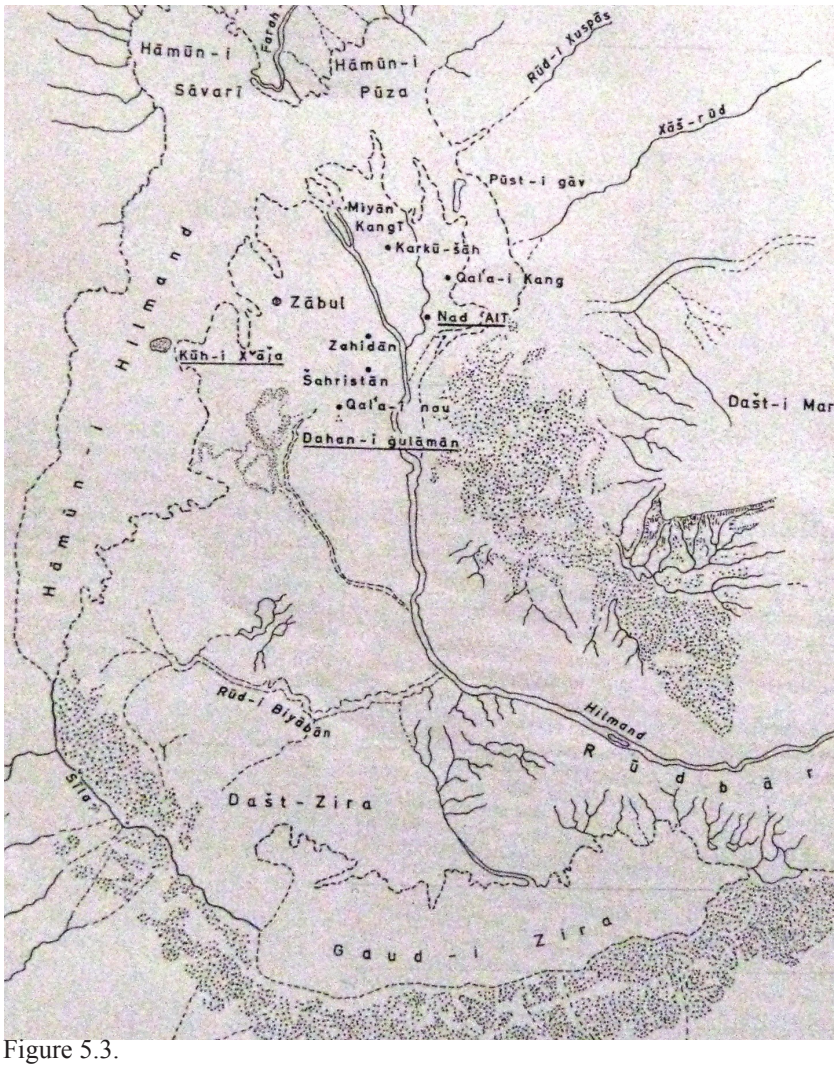


Figure 5.3.
Sistan, Iran.
Phototec of IsMEO, Istituto Italiano per l'Africa e l'Oriente (IsIAO),Rome.
The archaeological areas subjected to the excavations of the Italian archaeologists of IsMEO.

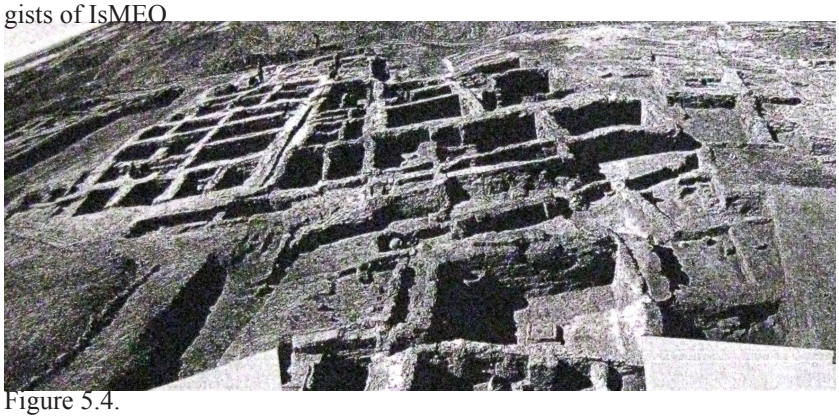


Figure 5.4.
Sistan, Iran.
Ecavated areas during the activities of the Italian archaeologists of IsMEO.
Phototec of IsMEO, Istituto Italiano per l'Africa e l'Oriente (IsIAO),Rome.

5.2. IsMEO and the program for of the restoration of the historic monuments in Iran

IsMEO, supported[198] by the Ministero per gli Affari Esteri, from 1964, on the request of the Iranian authorities, begins the 15year program of restoration/conservation and static consolidation of some of the selected monuments, pre-Islamic and Islamic ones, in two main geographical areas of Iran, in the provinces of Isfahan and Fārs[199], specifically the Achaemenid archaeological complex of Persepolis and the Safavid architectural monuments of Isfahan.

Based on the framework of agreements and necessary interventions in each of these monuments subjected to restoration works, before the commencement of the actual programs two preliminary detailed reports of the eventual interventions were prepared and presented to Iranian authorities; these two detailed reports from the architectural/archaeological complex of Persepolis in the province of Fars and Safavid architectural monuments of Isfahan were prepared by the "Centro Restauri" of IsMEO,as the official responsible of executing these interventions, composed of Giuseppe Zander, Mario Ferrante, Paolo Mora and Cesare Carbone; these two reports[200] were then used as the main reference in drafting the preliminary programs of interventions: Respectively these reports are entitled "Restoring ancient monuments in Fars" in July and "Restoring historical monuments of Isfahan province" in August of 1964.

The principle of IsMEO for conducting restoration works was "try, as far as it is possible, to save the monuments from any further

198 Centro Restauri of IsMEO made its restoration activities in Iran via collaboration between Iranian government, the Archeological Department of Isfahan and Shiraz, the Italian Ministry for Foreign Affairs and prof..Guglielmo De Angelis d'Ossat, Engineer and Architect and prof.Giuseppe Zander, Architect.

199 The IsMEO also from 1965 began training of the local staff of the Archeological Department of Isfahan.

200 The first report was written in Persepolis in the presence of Prof. Tucci(the president of IsMEO) and with the participation of archaeologists Dr Domenico Faccenna Dr Maurizio Taddei, Prof. Umberto Scerrato; in drafting this report, the reports of Scholars who had preceded conservative problems of Persepolis were also referred as reliable resources; in particular reports of Prof. Coremans (UNESCO 1960), Prof. Luigi Crema of the Polytechnic of Milan (UNESCO 1962) and of Prof. Houshang Seihoun (Dean Faculty of Fine Arts of Tehran University).

damage"[201] which they tried to reflect and adopt in theoretical and practical levels, in the prepared proposals and programs of interventions.

While dealing with the problems of historical monuments and proposing respondent solution and the difficulties of executing these solutions in Iranian pre-industrial context, the activities of IsMEO and the programs they adopted in the monuments subjected to their interventions, still referred as the best solutions ever presented for resolving the problems of the archaeological/architectural monuments, took Iranians to a new level of perception of the modern principles of conservation and restoration, in their recent derivations and contributed in forming, the culture of restoration.

The programs of interventions formulated by IsMEO to resolve the problems of monuments present and introduce innovative aspects to Iranian context which reflect the modern approaches of IsMEO in the camp of the conservation of historical monuments; the way they proposed programs and solutions and the way they managed and adopted the proposed solutions in the field all benefited from well-structured theoretical and technical European matrix of the 60s in the field of conservation and restoration and under the supervision of famous "Roman School" protagonists of the 60s in Italy.

Despite the intrinsic diversities of the monuments subjected to the interventions of IsMEO, the proposed preliminary programs of IsMEO present quasi similar factors within a precise systematic method which could be identified in certain precise interrelated consecutive phases; observation, decision making, verification, adoption.

Apart from characteristic diversities of the prepared preliminary programs of interventions[202], the Venice "Charter of Restoration", released just before the official presentation of the preliminary program to the Iranian authorities in 1964, was defined as the reference of all activities of IsMEO and different articles of the proposals of IsMEO clearly address and reflect the thematic of the articles of the Venice "Charter of Restoration". In order to meet

201 A.B. Tilia, *Studies and restorations at Persepolis and other sites of Fars*, Rome, 1972, p.6.

202 The preliminary programs of interventions of IsMEO are represented in Travaux de restauration de monuments historiques en Iran, published in Rome in 1968; in two distinct parts this volume generally documents the initial problems of conservation, the relative prepared programs and the first operational experiences conducted by IsMEO in the provinces of Isfahan and Fārs.

the standards of the Venice "Charter of Restoration", however, the proposals of IsMEO were examined[203] by Giuseppe Tucci and Guglielmo De Angelis d 'Ossat, the supreme councilor of IsMEO in restoration works[204].

Travaux de Restauration de Monuments Historiques en Iran

Preliminary proposals and the preliminary programs for the restoration in Persepolis and the Safavid architectural monuments of Isfahan are published in «Travaux de restauration de monuments historiques en Iran». "Travaux de restauration de monuments historiques en Iran"published in French language in 1968, describes the scientific approaches of IsMEO in confronting the problems of the monuments they had as the subject of their interventions and outlines the general criteria of the conservation and structural consolidation of the architectural complex of

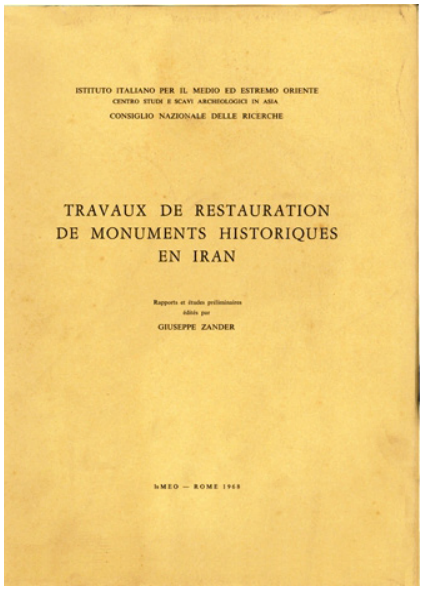


Figure 5.5.
Cover of *Travaux de Restauration de Monuments Historiques en Iran.*
G. Zander, *Travaux de Restauration de Monuments Historiques en Iran, Rapports et etudes préliminaires*, 1968,Rome.

203 President of the lsMEO, assisted by Prof. Guglielmo De Angelis of Ossat, made a preliminary examination of restoration proposals, although they might enter within the standards sanctioned by the "Charter of Restoration".

204 Guglielmo De Angelis d'Ossat (1907-1992) active in the administration of the fine arts and university professor was the most illustrious representative of the Roman School. Regarding the restoration, Guglielmo De Angelis d'Ossat clearly shows to follow philological version of "Scientific Restoration "of Giovannoni which are also reflected during his activity as the Inspector and General Director of Antiquities and Fine Arts from 1948-1960.

Persepolis and Safavid monuments of the city of Isfahan asked by Iranian authorities.

From the philosophical and ethical perspectives conservation posed a number of dilemmas as to how to conserve, to what degree of intervention, with what objectives in mind. The basic guiding principles established by the IsMEO as cited before were the minimum intervention, the reversibility of conservation treatments, the compatibility and sacrificeable(ity) of the repair materials to the historic fabric.

The precise systematic pattern represented in the preliminary programs of IsMEO reflect the main characteristics of an inductive research method and as cited, certain interrelated consecutive phases of observation, decision making, verification and adoption are identifiable in these programs.

Apart from intrinsic diversities of monuments subjected to the interventions of IsMEO, the preliminary programs proposed for each of these categories of monuments have some common elements; all proposals of IsMEO are results of detailed and specific studies on the monuments they intend to restore which help IsMEO to get acquainted with their subjects and make preliminary hypotheses; these studies are always accompanied by accurate documentations; after analyzing the documented materials, preliminary hypotheses are made and followed by necessary feasibility verifying analyses of these hypotheses[205] and their adaptability to relative norms and regulations; after the verification phase, the confirmed hypotheses are elaborated as practical program ready to be adopted in practical level as the executive principles of restorative/conservative interventions of IsMEO.

Preparing comprehensive Documentation and Architectural relief from the monuments subjected to restoration activities of IsMEO characterize always the first phase in formulating the program of the activities during the project of restoration; regardless of the type of intervention, these two elements are always present in the programs of IsMEO.

Documentation

The expert of IsMEO believed that restoration must find its guide in the results of accurate and precise investigation and

205 It should be mentioned that all restoration works of IsMEO are based on a strict multidisciplinary collaboration with interrelated fields., G, Zander in *Studi e restauri di architettura Italia-Iran*.Rome, 1980.

documentation[206] of the monument(s) subjected to interventions and all appropriate treatments for these monuments should be extracted from the results of accurate observations; comprehensive documentation is of vital importance regarding the conservation of architectural and archaeological monuments.

For IsMEO, documentation is a continuous investigation which constantly improves the understanding of the monuments, and has a vital role which makes it necessary during all stages of the project of restoration from the identification of the monument to the quality control of the preservation measures during formulating and executing the project of restoration[207].

In order to formulate effective solutions for monument preservations, a well structured documentation should have some certain characteristics like compilation, registration, processing, evaluation, storage and distribution of comprehensive information; these characteristics turn documentation to a multidisciplinary approach which characterize the methodology of IsMEO's documentation procedure.

IsMEO believed that in the process of documentation, the methodology and the use of most appropriate techniques and principles are of great importance; the methodology of documentation adopted by IsMEO, in order to fulfill conservative purposes, provided a multidisciplinary approach composed of:

- Data acquisition; identifying the materials and techniques used in the structures;
- Processing and analyzing the captured and registered data[208];
- Managing the registered and processed data.

The documentations of IsMEO provided investigating the

206 The importance of the precise documentation for conservative purposes is emphasized in the 16th article of the Venice Charter of Restoration; "… In all works of preservation, restoration or excavation, there should always be precise documentation in the form of analytical and critical reports, illustrated with drawings and photographs. Every stage of the work of clearing, consolidation, rearrangement and integration, as well as technical and formal features identified during the course of the work, should be included. This record should be placed in the archives of a public institution and made available to research workers. It is recommended that the report should be published…"

207 The importance of the documentations for IsMEO is due to the fact that they managed to continue the documentations even when the restoration works were in progress because.

208 This stage of documentation is of great importance; in fact, IsMEO believed that capturing data in itself is not enough to produce a good documentation; a critical eye, able to distinguish between what is relevant and what is irrelevant, between meaningful and accidental, is as important as the capability to use advanced documentation tools.

bibliographic, historical, documentary, archival information, and in-situ observations of the monuments subjected to their interventions to identify the origin(s) of the problems prior to proposing eventual solutions and developing the restoration program.

The preliminary phase of IsMEO restoration activities in Iran began with the study of the monuments subjected to their interventions to constitute a general database for further interventions.

In the archaeological complex of Persepolis, the previous interventions of executed in Persepolis in 1920-30s by the Oriental Institute of the University of Chicago and furthermore during 50s, by the Iranian archaeologists of the department of archaeology as existing references[209], in the form of static consolidations or liberation of the buried structures, had provided IsMEO by valuable resources which let them the possibility of evaluation, direct interpretations of the effects and results of these interventions and revealing that in what extents these experiences were successful in providing long-term solutions for their subjects and what were their positive/negative aspects; IsMEO's experts of restoration then reflected these experiences during formulating and directing the program of restorations in the total conformity to the recommendations of international charters of restoration especially the "Venice charter of Restoration of 1964" regarding the modality of executing conservative instruments in archaeological sites.

Referring to the preliminary formulated program of interventions, IsMEO expert, from the beginning of the restoration activities and even during the formulation of the preliminary program of intervention, had a clear vision about the modality of the execution and direction of the restoration works; in a complete different context, the particularity of the Iranian architectural monuments necessitated IsMEO experts to formulate special conservative strategies of intervention for confronting and resolving the problems of architectural monuments; major difficulties of IsMEO in adapting the restoration programs in Iranian context were cultural diversities, particularities of Iranian architectural monuments, lack of technical instruments, insufficient academic training and shortage of qualified local technician.

209 Constant references to the works of "Oriental institute of Chicago" and the to the activities executed by the "Foundation of Persepolis" show how IsMEO experts of restoration just from the begining of the works of restoration wanted to direct the works in a total conformity to the precedent executed works.

Unlike Persepolis, the lack of coherent documentations of Iranian architectural monuments in general and particularly in Ali Qapu, as the first architectural monument subjected to interventions of IsMEO, forced them to begin specific studies and preparing a coherent documentations of the state do decays of the monument and its pathological study, in order to formulate the preliminary program of interventions. Moreover, the historical and aesthetic characteristics of the architectural monument imposed a respectful approach to conserving the pre-existent and led to a series of analyzes derived from the architectural survey, the state of preservation and collection of the crack pattern and the results of the 'targeted' analysis.

As for IsMEO, the restoration was considered as architecture and restoration intervention as architectonic project, so they tried to adopt a "historical-architectural" criterion in all its disciplinary studies associated to study the Iranian architectural monuments including preparing necessary documentations.

As for IsMEO documentation was a continuous investigation which constantly improves the understanding of the monument they managed to continue and extend their investigations, during the actual restorations, on the constructive characteristics of Safavid architecture.

In Ali Qapu, the experts of IsMEO utilized architectural relief of the monument as an instrument of documentation as well as the instrument of understanding of its basic characteristics, its architectonic language as well as its constructive language and its state of decay.

Architectural relief and the project of restoration

In the project of restoration, a detailed architectural relief helps the restoration team to acquire precious information about the site and its articulation, irregularities, discontinuities, transformations and its states of decay; the process of architectural relief is a process of understanding, characterized by the production of synthetic and interpretative analytical elaborates, open to different scientific interpretations and operating sectors related to the process of conservation itself. In the preparatory phase of the preparation of the restoration project of the architectural monuments, detailed architectural drawings help to define the way the monument is built, what are its structural components, their internal functions and distributions, how they are articulated in the structural system, how they participate in constructive system of the monument from the foundations up

to the roof. Thorough accurately prepared drawings, restoration team can perform a secure articulation and localization of the operations to be performed in the complete perception of the real participating entities; moreover, a detailed architectural survey will help to reduce the interventions to those actually needed, by analyzing the individualizing cases, and avoiding unnecessary, costly and sometimes harmful unnecessary interventions.

Figure 5.6.
The ruins of Persepolis
Images of the Ancient World / Persia (Ancient), Picture Collection., Mid-Manhattan Library.
Although the graphic representations of the archaeological sites served to show their state of abandonment but none of the thoroughly served as a referable document fro extracting necessary information for formulating a conservation program as these representations were all prepared in personalized ways.

In Iran, since the first years of 20th century, there is no architectural relief from the architectural monuments prepared exclusievely for the conservative purposes and the existing architectural drawings of the Iranian monuments were limited to the graphic reproductions of the ruins of famous archaeological sites, especially those of Persepolis and Susa, visited by European adventurers; these graphic representations were limited to personalized[210] drawings and visual registrations of foreign travelers, adventurers and official mandates, who were merchants, theologian, military officers maximally trained as archaeologists but not as engineers or architects with critical and scientific

210 Confrontation between various interpretations of the Persepolis, as the most frequented and represented ancient site of Iran, during different times, clearly shows that these interpretations were prepared a personalized way without any respect to the actual state of the monument and confirms that these drawings and illustrations were not prepared for scientific matters.

interpretational vision[211].

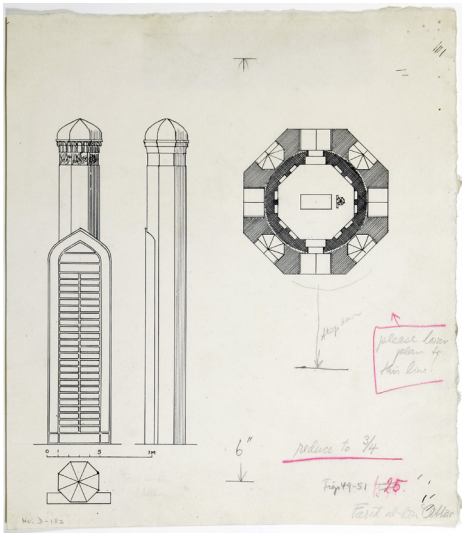
The first attentions versus preparation of a graphic record from historical monuments, which furthermore result the preparation of architectural relief, is born from intentions of Iranian elite of the National Monuments Council of Iran who specifically were interested in conserving and transmitting the ancient archaeological sites, particularly pre-Islamic historical ones, for future generations and for propagandistic scopes.

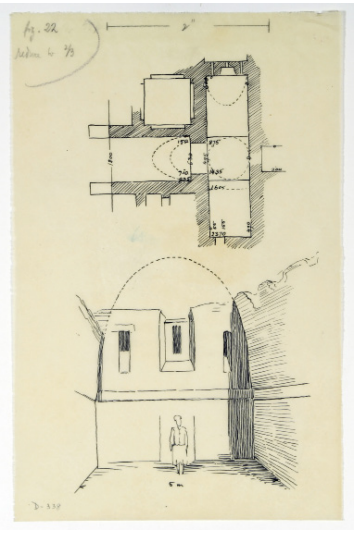
In the first years of 20th century, the illustrations made by Ernst Herzfeld during his visits in Iran, made a great contribution in construction of the very fisrt graphic documentation of the historical monuments of Iran, specifically those of Persepolis and the Fars region; vast collections of graphic production[212], made during 1903-1935, approximately 1,400 drawings and plans, show Herzfeld's fine draftsmanship, his architectural training, reflected with detailed observations on topography, landscape, archaeological remains, architecture, and artifacts. The graphic documentation prepared by Herzfeld[213] includes paper squeezes of inscriptions together with notebooks, sketchbooks with pen and pencil drawings and watercolors of monuments, watercolors

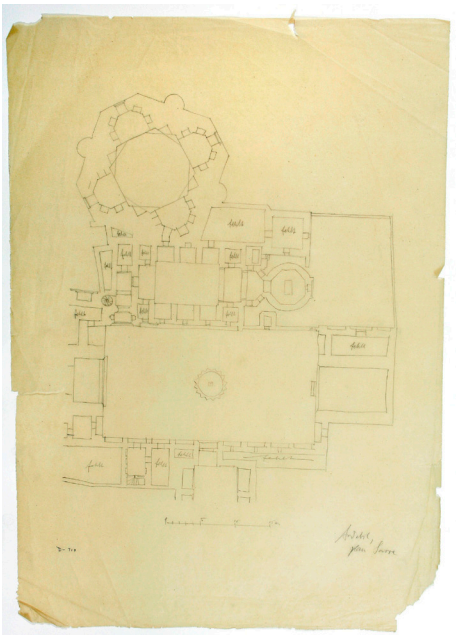
211 The collections of drawings prepared by Jean-Baptiste Eugène Napoléon Flandin(French orientalist and archeologist,1809-1889) and Pascal Coste(architect,1787-1879)during their travel to Iran from 1839-41constitute the most important graphic productions of the architectural/archaeological monuments of Iran since the middle of the 19th century. Flandin's Voyage en Perse, perhaps the most celebrated on its kind and a reliable resource for many years, contains drawings and paintings of Persian monuments, and precious observations on history, archeology, arts, geography, social and court life, royal and provincial administration, military organization, etc. The architecture represented in Voyage en Perse contain architectural renderings and monumental plans by Coste architectural details, large tomb reliefs, picturesque views represented by Flandin. Flandin's archeological drawing, remained an indispensable complement to research and publication and served Italian technicians and experts of restoration in the years 60 regarding the restoration of the Safavid monuments of Isfahan.

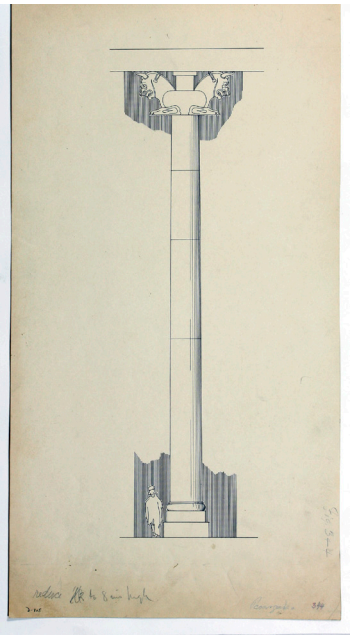
212 Renderings are in pencil, ink, and watercolor, in which Herzfeld often employed tracings to rework his original field sketches. In addition, there are drawings by Friedrich Krefter, the architect who worked in association with Herzfeld for many years, and by drafting assistant Karl Bergner and Donald E. McCown. Approximately 80 maps dating from 1909 to the 1930s, including original maps prepared by Herzfeld, assisted by Karl Bergner and Friedrich Krefter, and printed maps.

213 Many of these photographs and most of his correspondence from the early 1930s are at the Oriental Institute in Chicago. The collection is organized into seven series: Series 1: Travel journals; Series 2: sketchbooks; Series 3: Notebooks; Series 4: Photographic files 1-42; Series 5: Drawings and maps; Series 6: Squeezes; and Series 7: Samarra Expedition.



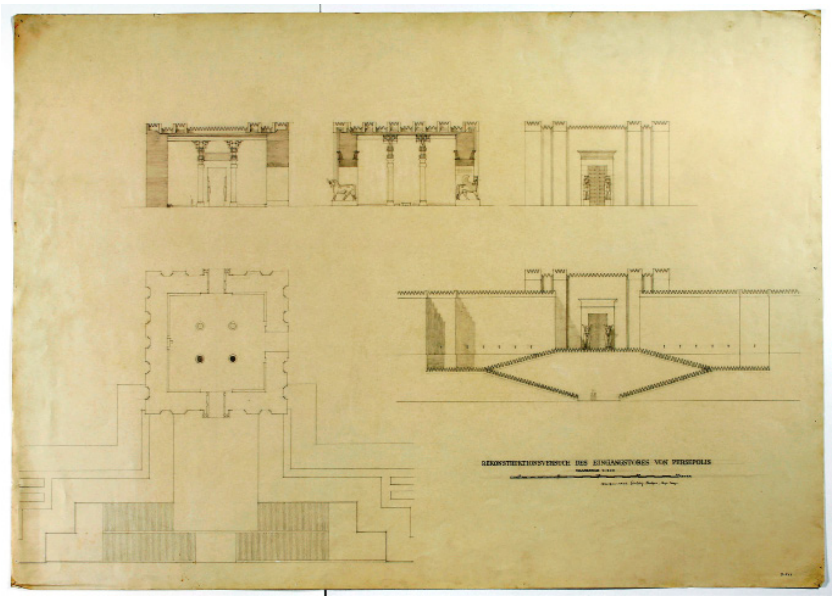




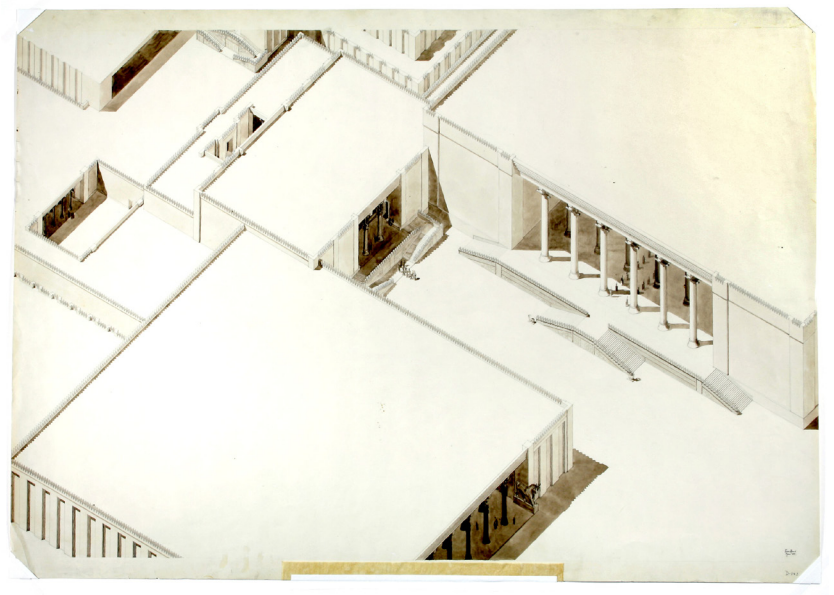


Figures 5.7-11.
Ernst Herzfeld., Freer Gallery of Art and Arthur M. Sackler Gallery Archives.
Collection of graphic production of Herzfeld, during 1903-1935, constitutes approximately 1,400 drawings and plans, including detailed observations on topography, landscape, archaeological remains, architectural components, and artifacts.

prepared for the publication of stone and ceramic vessels and other finds, journals in which Herzfeld recorded his travels and findings, his week-at-a-glance diaries and some financial records.
As the official consultant of Iranian government in archaeological matters, Ernst Herzfeld, outlines the importance of preserving historical monuments in the lecture entitled "National Heritage of Iran (Athàr-e Melliy-e Iran)"and emphasizes the importance of sufficient graphic documentations and architectural reliefs by preparing "…plans and photographs of ancient monuments, and to keep the records in a suitable place…".
Herzfeld utilized these drawings during the excavations of the terrace of Persepolis in 30s, although these carefully prepared drawings were very useful, however it can be said that these drawings were prepared for archaeological and architectonic scopes. In fact, as the ecavations were in progress, Herzfeld and his collaborators continued to elaborate ulterior drawings in order to complete the graphic reconstruction of the complex of Persepolis. Although their drawings served to give a general idea about the archaeological complex of Persepolis, they could not be considered helpful during the project of restoration as revealed in 60s and during the activities of IsMEO; these drawings include general plans and elevations of the different palaces of Persepolis and not the architectonic and constructive language of these palaces contrary to the relief prepared by IsMEO druing the 60s, prior to the commencement of the restoration activities.
Consequently in the last years of 20s and especially after approving the "Law of antiquity" which clearly emphasized the necessity of preparing sufficient documentations from historic monuments in order to insert them in the index of Iranian national heritage, attentions were oriented to prepare graphic documentations from other archaeological sites rather than just famous ruins of Persepolis; however, due to the lack of sufficient legal support and profound scholar studies on Islamic architectures of Iran, till the years 30 and 40, recent constructions missed necessary attentions regarding the production of graphic reproductions for conservative uses.
In 1930-40s, the presence of Andre Godard and his French colleagues in the Faculty of Fine Arts of the university of Tehran, founded in 1934, and modeling the curriculum of the École des beaux-arts system of ateliers since its establishment, introduces the classic method of architectural relief attended more to produce a pictorial representation in "chiaro-scuro" based on the theory of the shadows; this method constitutes of representing plans,



Figures 5.12.
Reconstruction of the Gate of All Lands and the Great Stairway to the Terrace Complex, drawn by Friedrich Krefter,1935.
Oriental Institute Photographic Archives, Oriental Institute of Chicago.



Figures 5.13.
Tripylon (Council Hall), Apadāna, and Great Staircase, Isometric Plan, drawn by Friedrich Krefter, 1935.
Oriental Institute Photographic Archives, Oriental Institute of Chicago.

Although these drawings served to give a general idea about the archaeological complex of Persepolis, they could not be considered helpful during the project of restoration as revealed in 60s and during the activities of IsMEO because they lacked essential information like the architectural and constructive articulation of the palaces.

elevations, sections and perspectives, represented by the produced shadow of the volume generated from predefined sources of light, in pencil or watercolor on white coated grand-scale papers; this method clearly lacked presenting and documenting constructive and technical aspects in the historic monuments; as an example, in archaeological sites, the lack of architectural training, resulted that the drawings made by French archaeologists, mostly trained as mining engineers, to be limited just to stratigraphic information of archaeological site without any ulterior information about the situation and state of the site for conservative purposes.

IsMEO, architectural relief and the project of restoration

In 60s, IsMEO radically altered the traditional method of preparing architectural relief for restoration scopes and gave a different example of making architectural relief by utilizing accurately prepared architectural drawings for conservative scopes and taught Iranian colleagues how to study a monument thorough carefully and complete prepared architectural drawings; for IsMEO architectural relief was considered an appropriate tool to investigate the architectural phenomena, and to talk about architecture, as well as an useful instrument of recording and delivering historical data of archaeological sites/monuments in technical illustrations and drawings.The IsMEO experts believed that when restoration is considered in an interdisciplinary context in constant connections with multiple disciplines, a good architectural survey becomes very fundamental and preparing a detailed architectural relief constitutes a crucial necessary stage in the development of the project of the restoration.

In fact, in the project of restoration, for IsMEO, a preliminary analytic and anatomical understanding and the study of the monuments, subjected to their intervention, especially architectural monuments, begins with the preparation of detailed realistic architectural drawings, as the most appropriate instrument to talk about architecture, understand the architectonic language of the architectural work and to investigate the architectural phenomena. IsMEO believed that a good architectural relief is constituted of a very careful systematic criterion which utilizes technologically advanced instrumentations to collect necessary information through a "direct study of the monument" in its consistency organism; this study should be oriented to gather and represent all significant, analyzable and documentable, information for further analyses; in the process of architectural relief architectural drawing techniques, should be chosen according to the critical

processes of the representation of the architectural reality and respondent to its necessities and exigencies.

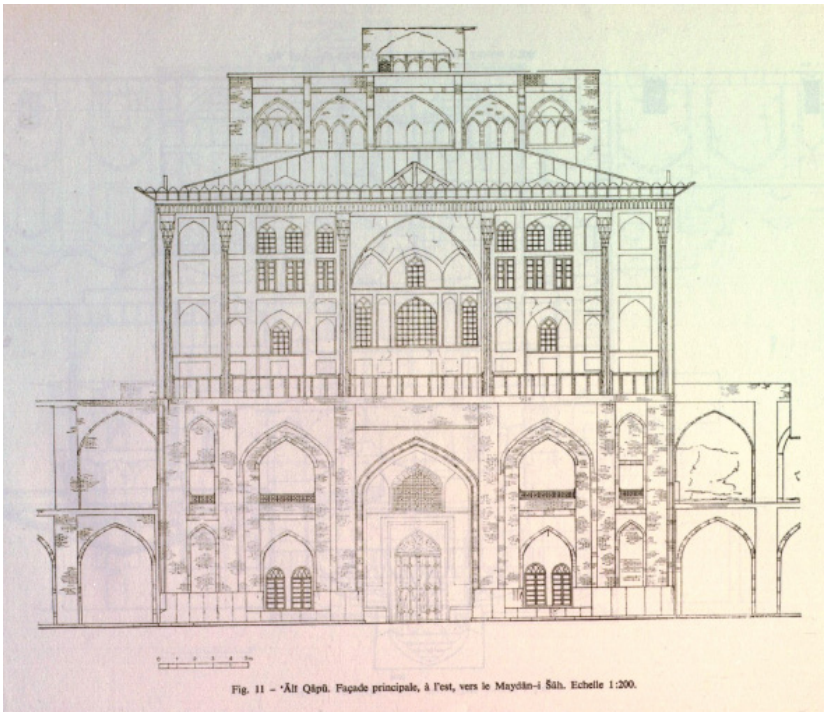


Figure 5.14.
The Ali Qapu, architectural relief of the facade projecting the Shah Piazza, in "Drawings and observations for the restoration of the Palace of Ali Qapu". G. Zander, Travaux de Restauration de Monuments Historiques en Iran, Rapports et etudes préliminaires, 1968,Rome.figure n.11.
The methods the experts of IsMEO used to prepare these reliefs states that there reliefs are referred as a reliable reference for getting informed about the state of the monument and understanding its architectonic and constructive language.

In the lack of sufficient documentations of the Safavid architectural monuments, especially in project of the restoration of Safavid architectural monuments of Isfahan, IsMEO utilized architectural survey of the monument as the instrument of understanding of the basic characteristics of the monument, the architectonic language of the monument as well as its constructive language. In architectural monuments, IsMEO experts of restoration managed to use a combination[214] of photogrammetric relief adequate for simple and essential volumetric study of architectural monument

214 G. Zander, *studi e restauri: consuntivo di quindici anni di collaborazione Italo-Iraniana(1964-1979). Questioni di metodo, in Studi e restauri di architettura Italia-Iran*, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1980, p 102.

and traditional architectural relief techniques for the study of its components. Italian's mode of architectural relief of architectural monuments is deliberately limited to represent few key elements like constructive methods, morphological forms and any important structural and to ornamental details[215]. In the process of making architectural relief from a certain monument, they began with collecting measures of the monument, then processed these measures and turned them to accurately prepared graphic representations in separate categories of plans, elevations and sections.

In archaeological sites, IsMEO used traditional techniques of architectural relief finalized for conservative scopes, for studying the possibility of graphic and in situ[216] re-composition and for eventual replacements or re-integrations. Moreover, in Perspolis, the drawings and designs made by Herzfeld in the 30s, during the activities of Oriental Institute of Chicago, as important resources gave them the possibility of making comparison with the situation of the terrace during 30s and for the destructed and faded away parts since 30s on. Through architectural relief of the stone structures of Persepolis, which were continued quite naturally during the whole process of work, IsMEO got a clearer idea about the original aspect of the monument in question, to complete and correct previous studies made of it, and it led to important discoveries of unknown features of the architecture of Persepolis.

215 G. Zander, *studi e restauri: consuntivo di quindici anni di collaborazione Italo-Iraniana(1964-1979). Questioni di metodo, in Studi e restauri di architettura Italia-Iran*, *op.cit*, p 102.

216 G. Zander, *idem.*

5.3. IsMEO and Architectural Conservation

The involvement of the IsMEO in the architectural conservation of the historic monuments of Iran begins with the project of restoration of the palace of Ali Qapu; prior to the commencement of the actual works, a preliminary program of the activities was presented to Iranian authorities and published in the Travaux de Restauration de Monuments Historiques en Iran. The "Program for the Restoration of Ali Qapu"[217] is actually a real project rather than a program which was prepared by Giuseppe Zander, Giuseppe Kustermann and Mario Ferrante, discussed and approved in 1965 and except for some minor adjustments, was implemented in all its principles; as it was cited this program was preceded by "Restoring historical monuments of Isfahan province" prepared and presented to Iranian authorities in August of 1964.

The "Program for the Restoration of Ali Qapu" introduces innovative aspect of a restoration project on its modern senses based on the very recent progresses of the field;.this program begins with preparation of "Drawings and observations for the restoration of the Palace of Ali Qapu" and proceeds with the "Diagnosis of the damages in structural parts" and finishes with proposing adaptable solutions.

Drawings and observations for the restoration of the Palace of Ali Qapu

In Ali Qapu the analytic and anatomic understanding of the monument, its architectonic language and constructive characteristics were gained thorough detailed architectural reliefs of the monument prepared as the first phase of the commencement of the program of interventions; IsMEO gets acquainted with Ali Qapu through very precise realistic sketches from actual state, plans, elevations, sections and perspective views, full of notes and descriptions about the formal and constructional

217 In fact before presenting the final program for restoration of Ali Qapu, two other programs were presented; a report, dated December of 1964, written by Giuseppe Zander after a few more visits accompanied by Professor. G. Tucci and after the results of the individual studies, observations, measured drawings prepared by Mario Ferrante and another program presented by Kustermann, who had previously focused his entire attention to the problems of the supporting pillars, on the general criteria for the technical work.

characteristics, the materials used and the state of degradation of the monument. Prior to the commencement of the interventions, in 1965, M. Ferrante in "Drawings and observations for the restoration of the Palace of Ali Qapu"[218] gives a complete graphic presentation and description of the monument with essential drawings, including structural and graphic details, accurately prepared details for controlling the thickness of the walls, of the supporting arches and the supporting roofs, to increase morphological and constructive techniques knowledge (the plans and sections were in scale 1: 50, the details of 1: 10, 1: 20), to help restoration team to understand the monument, discovering its static function[219] and to determine the nature of the problems and the causes of damages and proceeding with the general diagnosis of major causes of static damages in the its characterizing parts.
In Ali Qapu, IsMEO experts of restoration managed to use a combination[220] of photogrammetric relief adequate for simple and essential volumetric study of architectural monument and traditional architectural relief techniques for the study of its components. Italian's mode of architectural relief of architectural monuments is deliberately limited to represent key elements like constructive methods, morphological forms and any important structural and to ornamental details[221]; during interventions, the expert of IsMEO taught, Iranian colleagues how to use and interpret these collected knowledge during for conservative scopes and during actual restoration interventions.
Anatomical and analytic approach governs the procedure of preparation of the architectural relief of Ali Qapu; the monument is studied and presented by accurately prepared drawings which describe it by the identification of characterizing components, the architectonic language, constructive system and materialistic characteristics. In a general classification of interior and exterior

218 Ferrante, M., *Dessins et observations preliminaires pour la restauration du palais de'Ali Qapu* in *Travaux de Restauration de Monuments Historiques en Iran*, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1968, pp. 137-206.

219 This documentation includes essential drawings of structural, prepared for controlling the thickness of the walls, of the supporting arches and the supporting roofs, to increase the knowdledge of constructive techniques used in the construction of the monument.

220 G. Zander, *Consuntivo di quindici anni di collaborazione Italo-Iraniana(1964-1979). Questioni di metodo, in Studi e restauri di architettura Italia-Iran* in *studi e restauri*, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1980, p 102.

221 G. Zander, *Consuntivo di quindici anni di collaborazione Italo-Iraniana(1964-1979)...*, *op.cit*, p 102.

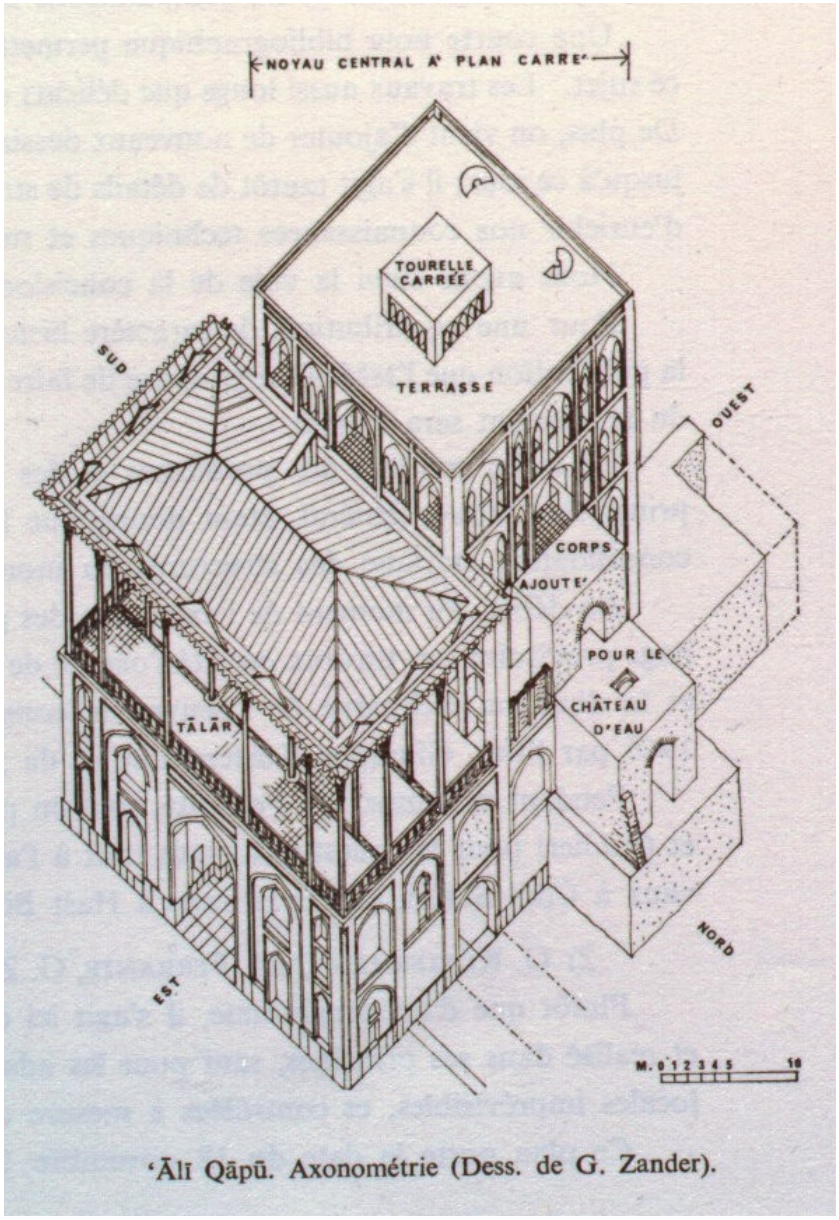
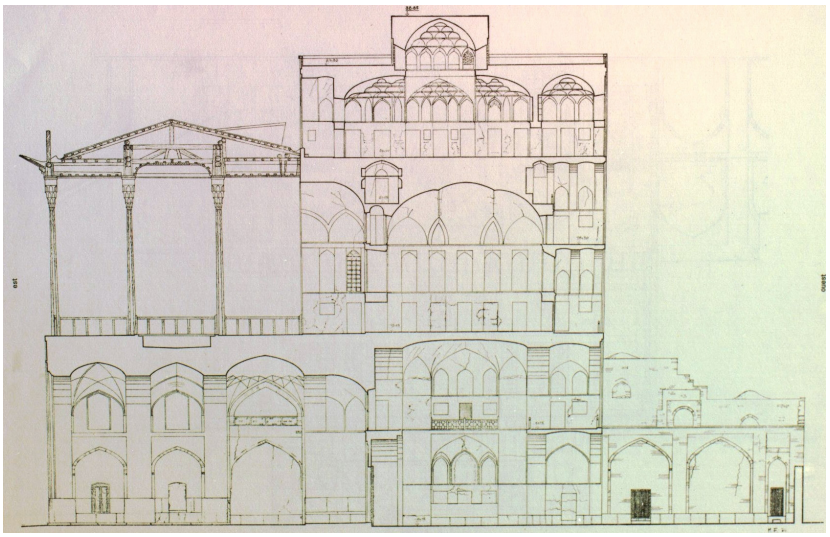


Figure 5.15.
Ali Qapu axonomteric view, designed by Giuseppe Zander, in "Drawings and observations for the restoration of the Palace of Ali Qapu".
G. Zander, Travaux de Restauration de Monuments Historiques en Iran, Rapports et etudes préliminaires, 1968,Rome.
Prior to the commencement of the restoration project, detailed reliefs of the Ali Qapu were prepared by the experts of IsMEO in order to understand the architectonic and constructive language of the monument.Unlike precedent reliefs of the historical monuments prepared either by Herzfeld or by Andre Godard, here architectural relief bocems an instrument of investigation and helps the restoration team as a reliable resource during the formulation and execution of the restoration activities.



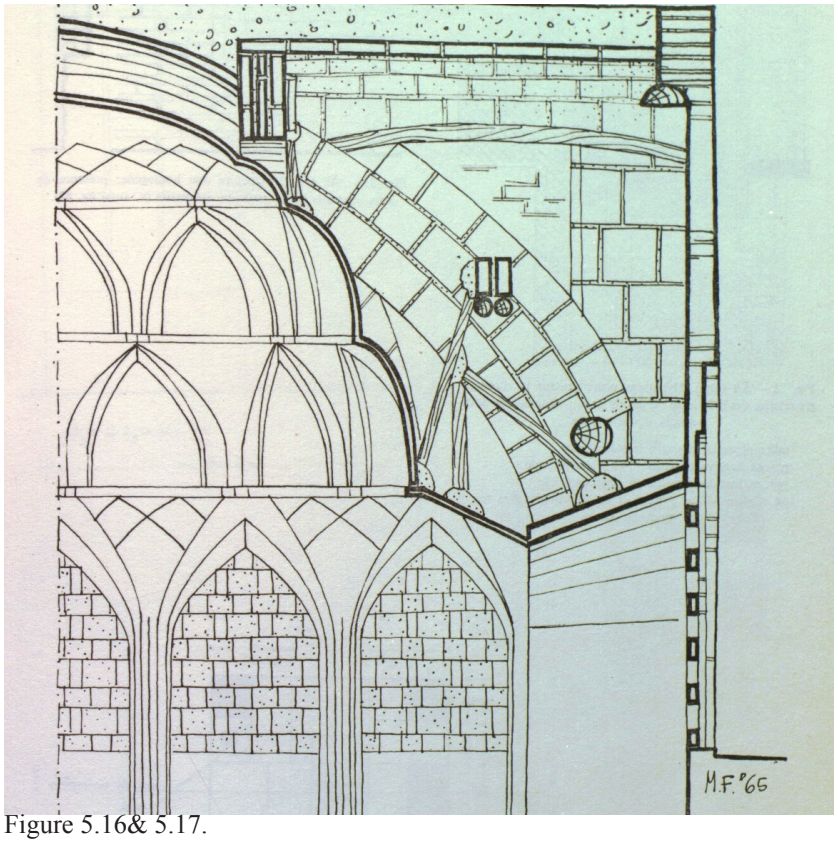


Figure 5.16& 5.17.
G. Zander, *Travaux de Restauration de Monuments Historiques en Iran, Rapports et etudes préliminaires*, 1968,Rome.figures n.10 and 31.
Precise designs were prepared from actual state, plans, elevations, sections and perspective views, full of notes and descriptions about the formal and constructional characteristics, the materials used and the state of degradation of the monument. Detailed reliefs from constructive particular were prepared in scale 1:10-1:20 which helped the restoration team to understand the constructive language of the eidifice, to determine the nature of the problems and the causes of damages and to define its different building phases.

spaces[222], all characterizing components of the monument are described and explained; the anatomical approach in preparing architectural relief helped IsMEO to make hypotheses about the functions of structural parts and the constructive method of the monument.

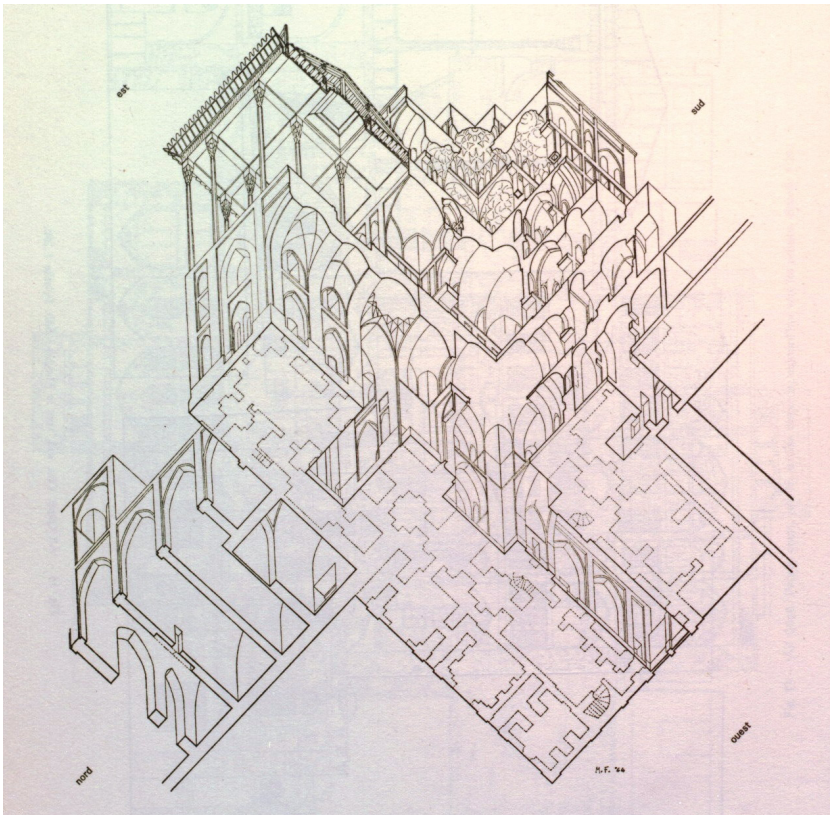


Figure 5.18.
Axonometric view of Ali Qapu in "Drawings and observations for the restoration of the Palace of Ali Qapu".
G. Zander, Travaux de Restauration de Monuments Historiques en Iran, Rapports et etudes préliminaires, 1968,Rome.figure n.15.
Axonometric view of Ali Qapu which shows the characterizing components of the edifice and its constructive system.

Diagnosis of the damages in structural parts

The program for the restoration of Ali Qapu proceeds with a general diagnosis of the major causes of the static damages; an anatomical diagnosis approach of the damages in structural parts of the monument and classifying them in priority order.
IsMEO believed that every single monument constitutes a

222 In two general classifications, interior and exterior components are described.

differentiated and well-defined individuality with specific characteristics and these particularities which turn it to a clinical case should be considered during formulating the interventions solutions; consequently any restoration intervention on this individuality in order to preserve its characteristics, materialistic and figurative values should respect this particularity and should have its own particular and personalized aspects; as the result, a "case by case" approach governs the principles of the proposals of IsMEO for the restoration of the architectural monuments subjected to their interventions.

The Ali Qapu was analyzed in its structural parts and damages in each part are identified and relative solutions are proposed. Before the commencement of the restoration activities, the monument of Ali Qapu was suffering from extremely serious structural damage, mainly due to a seismic shock which had occurred a long time ago and which had been sawing it along two parallel north south lines. Secondary damage subsequently occurred due to mechanical overloading during the rotation and lowering of the pillars. The wooden skeleton was in very poor condition and its structural capacities were greatly diminished; wooden beams had also aged, as the result of exposure to atmospheric conditions, and, in a few instances, had completely rotted. A few wooden beams had even split due to excessive deflection and the existence of parasites had further reduced the actual load-bearing sections by several centimeters.

As much of the damages in the monument had been occurred due to the damages in the structural parts, it was decided that analyzing the cause of the deterioration in the Ali Qapu should be started by the diagnosis of the structural components; an anatomical and analytic approach governs the procedure of diagnosis of the structural parts of Ali Qapu. The diagnosis of the structural components began with analyzing the "Preliminary body of the Ali Qapu facing the Maydan-i Shah and Taalâr above" and the "central core of the monument"; the analyses in the facades of Ali Qapu revealed that the displacement of the bricks from their original positions and wide separating cracks, between the preliminary body of Ali Qapu and the stair case, have caused the loss of vertical connections between the facade facing the Maydan-i Shah, in height between the ground floor, and semi-intermediate level.

In order to suggest proper solutions for resolving the static problems of the foundations, ulterior diagnosis were executed in other structural parts of the central core of Ali Qapu: analyses of

the stability of the foundations[223] and the characteristics of the soil[224]. These analyses confirmed the stability of the foundations and the compactness of the soil and revealed overloads in the pavement of the terrace charged in the supporting arches of the terrace.

After the general diagnosis of the monument in its structural parts, IsMEO classified the causes of damages in two main categories: Earthquake and Static Problems

Earthquake[225]

The preliminary studies of IsMEO reveled in the case of restoration of Safavid monuments in traditional masonry materials, the most important factor which have caused major deteriorations and degrades in these constructions was several earthquakes occurred since their constructions. More profound analyses during 1966-67 demonstrated that the cause of the static movements in structural parts of the monument is due to previous earthquakes as indicated in the report of 1964[226] which also had resulted serious static problems in other architectural monuments in the vicinity of Ali Qapu like the Shah mosque and Sheikh-Lotf allah Mosque and other Safavid monuments.

Static problems

The preliminary study of the monument of Ali Qapu revealed that the other cause of the degrades in traditionally constructed monuments is the static problem(s); in general, static problems in traditional constructions happen as the result of one or more certain factors; improper design or construction[227],

223 These analyses showed that the levels of the foundations were different but the strength of the foundations were satisfactory and no major crack was identified in the stone foundations.

224 These analyses then were continued in other structural parts of the monument like Taalâr plan and intermediate stages, in ground floor plan and semi-intermediate levels and in terrace and square tower.

225 A review of the seismic history of Iran shows that this country is in a high seismic region. In fact, Iran is located on Alpine-Himaliyan earthquake belt which extends from west Portugal eastward along southern Europe, southern east Asia, and then encircling the Pacific Ocean.

226 E. Galdieri, *Chronology and the causes of the structural damages in the palace of Ali Qapu* in *Travaux de Restauration de Monuments Historiques en Iran*, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1980, pp. 259-267.

227 In fact there are some building materials, per se resistant or able to offer considerable resistance, which are badly used, or that are not treated properly or that are poorly dimensioned: in practice these materials prove to be

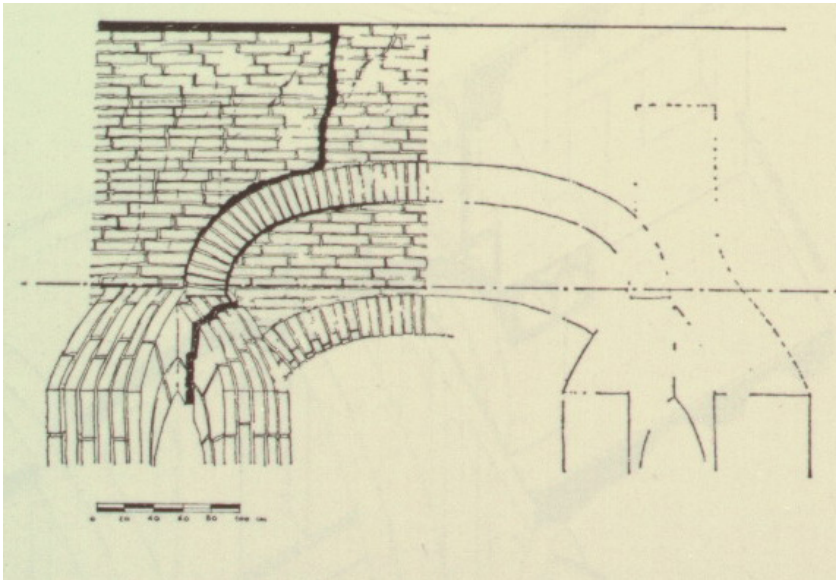


Figure 5.19 & 5.20.
E. Galdieri, *Chronology and the causes of the structural damages in the palace of Ali Qapu* in *Travaux de Restauration de Monuments Historiques en Iran*, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1980, pp. 259-267.
Diagnosis of the IsMEO revealed that the most important cause of the damages in the structural parts of Ali Qapu is due to the earthquake. during these diagnosis all damaged parts of the edifice were identified, documented and reveaaled in the carefully preparted designs.

insufficient foundations, weak or inadequate materials[228], or the effects of external forces such as wind, water, snow, or earthquakes all cause static problems which reveal itself in certain grades of deteriorations in traditional building constructions.

Laboratory analyses of IsMEO in the case of Ali Qapu have demonstrated that natural decay of the primitive material of adobe constructions[229] accelerate reduces the stability of the structural parts and static problems in monument; so, parallel to the execution of necessary conservative intervention for resolving the static problems in a certain monument, a great care should be given to conserve its primitive material.

During the preliminary phases of the restoration works in Ali Qpau, the identification of the executed traditional interventions in Safavid monument of Ali Qapu provided IsMEO the idea that, without any specific technical knowledge, good results have been achieved through the application of the traditional restoration techniques and traditional interventions on mud-brick constructions proved to be effective and helped historical monuments to survive thorough the time and face several earthquakes. Although many practical examples giving clues to traditional intervention attitudes can be found in numerous historic monuments of the country that had gone through the process of protection and ordinary maintenance, but, little efforts has been made to evaluate the historical development of conservation of adobe constructions in Iranian traditional context and yet very little efforts had been taken to study the possibility of adapting them to the modern principles of restoration.

IsMEO hypothetized that the combination of traditional interventions that has been done in the past to prolong the life of adobe constructions and proved to be efficient and modern

weaker and dangerous, for the structural stability of the organism., E. Galdieri, *I metodi avanzati nel consolidamento di alcune strutture antiche* in *Studi e restauri di architettura Italia-Iran* in *studi e restauri*, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1980, pp. 19-23.

228 The term “material” includes both not visible and invisible materials, especially those used for structures, almost always hidden from view; weak material used in monuments are: the pressed clay, dried in sun clay bricks, easily flake-able or containing high levels of soluble salts stones, poor mortars and plasters. All other materials work almost exclusively in compression and therefore should be used with devices which correct the negative static conditions and to ensure the necessary balance.,E. Galdieri, *op.cit*, p.19

229 There are also other factors that could be considered as negative factors in the life of a mud-brick construction like climatic conditions, consistent and appropriate use, neglect, fire, flood,etc.,E. Galdieri, *op.cit*, pp.19-23.

techniques for restoration might be a respondent solution for resolving the problems of the adobe traditional constructions; in practical levels IsMEO, tried to adopt this pattern in the case of other Safavid architectural monuments.

The heterogeneity of adobe materials and construction systems and the necessity of categorizing and characterizing complex of decay processes, so as to formulate long-term solutions for resolving the problems of adobe constructions made IsMEO to commence specific studies on the constructive characteristics of the adobe[230] (mud and mud-brick) constructions[231]; this idea was supported by the idea that successful treatment relies fundamentally on characterizing and thoroughly understanding the processes that generate active deterioration and structural deformation. moreover, IsMEO supported the idea that by identifying the general characteristics of the constructive system of traditional adobe constructions and solutions for resolving its problems it could be possible to arrive to formulating efficient solutions of for consolidating the damaged structural components and furthermore, after being approved as respondent, executing these solutions in other adobe architectural monuments.

Despite its diffusion[232] in great parts of the Asia and middle-east, the adobe constructions had been unexplored in academic context for many years and very little had done regarding its disciplinary related fields and less regarding its conservative problems; the studies of IsMEO then were finalized to the identification of the main characteristics of adobe constructions, its advantages/ disadvantages, its conservative problems and traditional solutions in order to formulate the most adoptable solutions for resolving the problems of adobe architecture.

From the 60s on first series of scholar studies on the conservation of the adobe construction began which gave birth to the rise of systematic studies in this field. The scholar studies in adobe constructions then accelerated from 70s on which are identified by a remarkable increase in the academic researches; seven

230 Generally all constructions by clay, raw, mud-brick, sun dried unfired clay bricks are called as adobe constructions.

231 Furthermore, the particularity of the characteristics of the Iranian adobe architecture led IsMEO to execute specific materialistic studies regarding the characteristics of adobe construction in Iranian context.

232 It is estimated that one third of the world's population live in mud brick structures. They are common in countries such as Latin America, Africa, Indian subcontinent, other parts of Asia, Middle East and Southern Europe. Mud brick structures are also becoming increasingly more popular in Western countries due to their green credentials and chic design.

international conferences on the history and conservation of the mud-brick architecture were held between 1972 and 1987 in Yazd, Ankara, Cuzco, Lyon, Rome and Trivandrum (Kerala State, India) is just a little part of the increase of the international attentions to the adobe constructions.

The importance of executing necessary works regarding the conservation of mud-brick walls had been emphasized in the scholar studies prior to the official commencement of conservation works of ISMEO in 1964. In this regard, the report of Luigi Crema, entitled as the "Preliminary Report on Conservation of Historic Monuments of Iran" (UNESCO, 1962) is of great importance and constitutes a valuable resource for the ulterior researches in the field of adobe constructions; although this report was not prepared specifically for the adobe architectures of Iran and was prepared by the scientific committee of UNESCO on the request of Iranian authorities in order to valorize the historical patrimony of the country which Iran intended to register as the World Cultural Heritage; in this report, Luigi Crema emphasizes the importance of the adobe constructions, the diffusion of the adobe construction within the historical patrimony of the country, the necessity of conserving the mud-brick structures and the traditional methods executed in the traditional adobe constructions for resolving the problems of the adobe constructions are briefly explained in this report and the necessity of finding new and up to date solutions for resolving their problems and the possibility of combining these solutions with the traditional techniques, which proved to be efficient, is discussed; he supports the idea of using traditional intervention methods, confirming the efficiency of the traditional techniques regarding the protection of the traditionally built adobe constructions, parallel to searching for modern treatments; he states that "The traditional technique could be substituted or incorporated by most modern treatments, which can consolidate old structures in a more satisfactory way." Luigi Crema describes the traditional habit of using of a coating kahgil (cob), a protective cover bricks or cement slabs, and a layer clay and straw; despite the fact that he supports that this technique proved to be efficient, however, some improvements are needed and Luigi Crema gives some practical recommendations like completing and consolidating the visible surfaces of mud-brick rests with a plaster of clay mixed with straw (Kahgil) the old rustic plastering. The new parts should be marked in order to distinguish ancient parts either by the accentuation of their joint recess, or slight superficial differentiations. In order to improve

the aesthetic appearance, prof.Luigi Crema suggests superior protections by baked brick and clay, or by other means.

Preliminary studies of IsMEO for the restoration of Safavid monument of Ali Qapu as the first survey of its kind which particularly studies the characteristics of the traditional constructions in Iran revealed the main characteristics of the adobe constructions and hypnotized modern proposals for resolving their problems. Especially, the studies of IsMEO revealed that traditional mud-brick constructions need constant maintenance attentions otherwise are in the rapid danger of deterioration.

The studies of IsMEO in the case of Ali Qapu were constituted of a historical study of the monument with particular attentions to its different constructive phases; the materials applied and the historical interventions. Moreover, a detailed study specifically related to the traditional masonry materials and the traditional constructive techniques was done parallel to the commencement of the restoration activities.

5.4. IsMEO and Archaeological Conservation

Archaeological conservation in Iran; a brief history

In archaeological sites, conservation of the excavated materials, architectural structural components and the finally the site itself[233], is of great importance; theoretically, any excavation that results in the recovery of a masonry material from an archaeological site could and should be considered as the subject of special archaeological conservative attentions; the archaeological remains, left to decay after excavations, show low resistance to the unfavorable natural conditions: frequent cycles of wetting and drying, changes of temperature, thawing and freezing, raising damp, salt attack and wind erosion are some identified symptoms of the natural impacts on archaeological rests.

Therefore, in archaeological sites, parallel to the necessity of properly treating, stabilizing and preserving the recovered movable objects or artifacts[234], great care should be given to the conservation of post excavation uncovered immovable parts which usually need special conservative attentions and archaeological excavations based on just digging fail to meet the minimum standards of architectural recovery and stratification.

Archaeological sites can be divided into three broad groups, which are often found in combination at a single location: unexcavated, above ground, and excavated.

At unexcavated earthen sites, the architecture may be a constructed or natural mound formed by the accumulation of soil over the structure, or it may be buried below grade. These sites have generally reached equilibrium and stasis, although the balance may be upset by any change in the environment or simply by the ongoing processes of deterioration, particularly in the case of constructed mounds. As the result, while in the ground the archaeological materials are supported by the surrounding soil and during the recovery process they experience some form of alteration which physically weakens them, in some cases to a level that makes them unable to support their own weight; The transition from burial to exposure can wreak major destruction in a very short time if the transition is not carefully controlled. as the result, from the moment of their removal from the earth,

233 Conservation of excavated site is also important for future archaeologists, who may wish to reexamine the material and the archaeological site.

234 In fact, artifact preservation is one of the most important considerations when planning or implementing any action that will result in the recovery of material from an archaeological site.

excavated and unearthed structural/architectural components are in danger of rapid deterioration unless they are subjected to preservation treatments.

In contrast, above-ground ruins and excavated sites are much more vulnerable to deterioration. They are subject to the long-term impacts of temperature, wind, and moisture (in the form of humidity, precipitation, and groundwater) and to the less foreseeable but often more catastrophic impacts of vibration and seismic activity, vandalism, lightning or extreme weather, animal activity, plant growth, and so forth.

In international context, the necessity of releasing a uniting approach regarding all aspects of the archaeological conservations has became more evident since 1950 on. Some of the motivating factors of releasing unique standards and recommendations were:

- The increase of the archaeological sites in the danger of des truction;
- The increase of the excavation programs in archaeological zones;
- The increase of the excavators in fields;
- The interchange of technical and field staff, through specialization in different geographical and chronological areas.

As a result, archaeological conservation in archaeological sites is turned to be an integral part of the archaeological process and as international recommendations clearly state that the whole process of excavations should be executed in total conformity and respect to the conservative necessities of the archaeological site; in the first paragraph of the 15th article of the "Venice Restoration Charter"[235], it is clearly stated that the excavations in archaeological sites should meet the necessary required standards. It is recommended to preserve the site as is, with the entire site exposed, without removing site components; for guarantying a satisfying conservative level of archaeological sites, as much as possible, conservation should be started in field[236] and conservative exigencies should be programmed at the moment of the commencement of the excavations; the conservative attentions then should be updated and continued for the whole process of excavating parallel to the excavation activities[237] in the

235 Excavations should be carried out in accordance with scientific standards and the recommendation defining international principles to be applied in the case of archaeological excavation adopted by UNESCO in 1956.

236 ICCROM, citation should be completed.

237 Immediate conservation work can save a notable percentage of plaster, floor, decorative elements and even structural remains that are very often already lost during excavation.

archaeological site itself.

The necessity of the commencement of the conservative attentions parallel to the commencement of the archaeological excavations is due to the fact that in the preliminary phases of the excavation, the excavators have the maximum liberty of documenting the information as well as the possibility of damaging the archaeological site, considering the fact that the excavated material could not be returned to its original conditions and the excavating in nature is a destructive process as the ambition of archaeologists is to excavate in order to discover[238] and not to preserve. Considering sufficient preventive conservative instruments before and during the excavations could help to save post-excavation conservative interventions and the presence of a conservator in the team of excavators during the excavations could guaranty the existence of appropriate conservative attentions of the structures and excavation findings.

The archaeological sites demand a regular maintenance and the monitoring of the behavior of the original and conservation materials, followed by a critical evaluation of the effectiveness of measures undertaken, and by the continuous revision, perfection and improvement of conservation techniques and methodologies.

In Iran, efforts to move the maximum amount of earth in archaeological sites with the funds and time available in the search of antiquities, especially movable to museums, characterized the nature of interventions in archaeological sites till the first years of 1900's excavations in Iran. Massive earthmovings in archaeological sites during excavations made by French archaeologists and, from the other side, the lack of conservative attentions to the archaeological rests[239] left these sites in very bad state of conservations and necessitated urgent activities to prevent them from ulterior deteriorations; the way French archaeologist of "Délégation Archéologique Française en Iran" treated the excavated sites clearly confirm that they never had thought to conserve the sites they excavated and interests for discovering antiquities was the determining factor which determined the way they treated archaeological sites. Irreversible damages were

238 In fact, an excavation does not limit itself simply to discover but tries to contribute into reconstruct the multiple aspects of life in the past through close observation and interpretation of every detail.

239 The emphasis on objects of museum quality dictates for the most part that only intact or virtually intact pieces are recovered and recorded, while the architectural components of the site, except for very important sites, were simply negated.

caused by French excavators in the name of archaeology: removing all of the original plaster of the Achaemenid palaces of Susa in order to study the different stages of the masonry construction underneath which could easily be avoided by restricting the area of explorations to narrow channels in carefully selected spots.

Due to the lack of qualified local expert and the lack of controlling measures, till the years 30s and the approval of the law of antiquity, the interventions in archaeological sites continued to be limited to excavate the site and lacked necessary attentions and instruments for conserving and sustaining it as a resource for the use and reinterpretation by future generations.

The establishment of the department of archaeology in 1928 changed the archaeological activities trend from just treasure hunting to search for antiquities and tried to evolve the archaeological excavations to the academic levels, but still the necessity of executing conservative attentions in the archaeological sites is not considered as important as the necessity of excavating archaeological sites for academic purposes; despite the increase in the number of archaeological excavations of the 30s in different parts of Iran, the evidences of executing conservative attentions in excavated sites during and after excavations are very rare and scarce.

In the late 20s, Ernst Herzfeld planned to carry out excavations in Persepolis with a view to preserve and organize the site post-excavation conservative interventions; the program Herzfeld proposed for generating activities in monumental complex of Persepolis becomes the emblematic example of executing archaeological and conservative activities till the 60s and the beginning of the activities of IsMEO.

In the 60s, in the total conformity with the recommendations of the Venice “Charter of Restoration”, defined as the reference of all activities of IsMEO, the experts of IsMEO proposed their restoration program for the stone structures in the terrace of the archaeological complex of Persepolis; this program exemplifies the method IsMEO adopts to confront the conservative problems of the archaeological monuments subjected to conservative interventions.

In archaeological sites, IsMEO supported the idea that an ideal restoration is what that leaves the possibility of a direct interpretation, documented in a durable and visible way on the body of the monument; the application and the use of modern materials according to specific needs, is justified in order to facilitate the understanding of the archaeological ruin for the

viewer and guarantying the durability of its technical and aesthetic aspects through time; the methodology of interventions of IsMEO in the terrace of Persepolis is based on the results of elaborate in-situ analyses and documentations and in the total conformity with the Venice "Charter of Restoration". IsMEO adopted three different type of intervention:

1. Consolidation: includes the series of tests, analyzes, researches related to diseases of old buildings, from diagnosis to practical interventions with the aid of new techniques and the modern materials in the primary intention of reviving damaged structures;
2. Liberation: is based on the demolition of all that is superfluous or inorganic and un-authentic additions in order to leave the possibility of a direct interpretation in the viewer;
3. Re-integration: or re-composition, the operation of relocating the scattered elements of a monument, rather than being demolished or destroyed considered dismantled and needs to be reconstructed in its entirety, in their original places.

Program for the restoration of the structures of Persepolis

Suggested preliminary program for resolving the problems of the monuments of Persepolis[240] is entitled «*programme et critères se rattachant a' l'œuvre de restauration. Commencement, coordination, développement des travaux.*»presented by Giuseppe Zander in the first chapter of «Travaux de restauration de monuments historiques en Iran».

This preliminary program, in theoretical levels[241], discusses the governing principles in formulating the program of interventions in the stone structures[242] of the terrace, their applicability in the different architectural components, recommendations in practical levels, practical solutions for resolving the problems of the brick structures and necessary arrangements and solutions for confronting unpredicted problems.

240 Despite the primary accumulation of the project in one volume monograph, however, the different situations and characteristics of these projects necessitate different strategies which further happen to publish in different publications. The detailed program of interventions, however, is published thorough specific publications prepared for each project of IsMEO.

241 In practice however, some of these suggestions were never applied, others have had to be modified to be respondent to particular cases and new solutions were formulated for new problems.

242 Such proposals have been submitted by Dr D. Faccenna, after being discussed and defined at a meeting held at Persepolis, in the autumn of 1964.

While in the Safavid architectural monuments of Isfahan, integrity and maintaining the unity of style of the monument is the most important and the dominant aspect of their intervention, the IsMEO's priority which orients strategy of interventions in Persepolis, as well as in other archaeological sties, is protecting the consistency of the authentic monuments and ensuring their durability by prevailing historical over aesthetic interests; thus the preliminary program of interventions is formulated to fulfill this scope by orienting and directing major parts of interventions versus conserving, as much as possible, what that is left and replacing and restoring the scattered parts in the original place. The suggested solution of IsMEO for resolving the problems of stone structures of Persepolis provided the utilization of contemporary instruments and techniques which were in the center of attentions and discussions in the Venice Charter of Restoration; the application of reinforced cement and chemical consolidants for restoring the monuments.

The adopted methodology of IsMEO in the project of restoration of the archaeological site of Persepolis presented innovative characteristics into Iranian context; unlike precedent executed restorations in Iran, here the project of IsMEO was well articulated and formulated in observations and documentations[243], formultation and application of the solutions, presentation of the project or after restoration management program.

Observations and documentations

The accelerating deterioration of the exposed stone sculptures and structures of the terrace of Persepolis necessitated executing preliminary analyses to define the stone decay responsible mechanisms prior to develop the eventual stone protection proposals.

Referring to the methodology of documentation adopted by IsMEOand in order to fulfill conservative purposes, an important part of IsMEO's documentation was concentrated in in-situ investigations[244], rather than archival nature investigations, as the experts of IsMEO believed that the data acquired thorough in-situ

243 Specially in archaeological sites, investigating the material and structure of unearthed artifacts and remains yields important information in determining the archaeological nature of the site for formulating adherent conservative programs.

244 In archaeological sites In-situ investigations constitute an important part of the documentation procedure and help restorers to gather,record and document(by sketching and/or photographing) important information from accurate direct observations of the monuments in their material characteristics.

investigations would help them to verify, analyze and interpret the chemical, physical, structural, specifications of the stone used in the structures; thus, in-situ investigations were executed to identify, collect and register the stone types in the structures of Persepolis and relative origin(s) of decays; in-situ investigations of the stone structures of the terrace of Persepolis were composed of three main stages:

- Acquiring quantitative information of the stones used in the structures of Persepolis;
- Identifying different ways of working stone in the stone structures of Pasargadae and Persepolis;
- Identifying ancient refinements and restoring methods on stone parts.

In Persepolis, the particular characteristics of the site as an archaeological complex par excellence, and the archaeological remains[245], excavated or recovered during precedent surveys/ excavations during the 30s and later, in 50s, provided IsMEO with important and essential information which facilitated making preliminary hypotheses of the interventions to execute[246].

Acquiring quantitative information of the stones used in the structures of Persepolis

In-situ investigations in the terrace of Persepolis provided IsMEO with quantitative information of the stones of the structures and helped them to identify the different types of stone used in the structures by examining and gathering excavated/recovered material remains[247] during precedent surveys/excavation and their associated (prepared or assembled) records, damage levels.

The stone structures of Persepolis subjected to the examinations

245 In archaeological sites, IsMEO managed to send the samples taken in Persepolis to perform elaborate analyses on the primitive materials of the monument, a visual microanalysis and subsequent laboratory analyses of the material samples used in the different component of the monument; these laboratory analyses helped IsMEO to understand and reveal the chemical, physical characteristics and performances of the materials.

246 Constant citations to the precedent interventions executed by Oriental Institute of Chicago and the Persepolis Foundation state that IsMEO prior to the commencement of the interventions has a clear idea of the eventual interventions.

247 In archaeological sites, IsMEO managed to send the samples taken in Persepolis to perform elaborate analyses on the primitive materials of the monument, a visual microanalysis and subsequent laboratory analyses of the material samples used in the different component of the monument; these laboratory analyses helped IsMEO to understand and reveal the chemical, physical characteristics and performances of the materials.

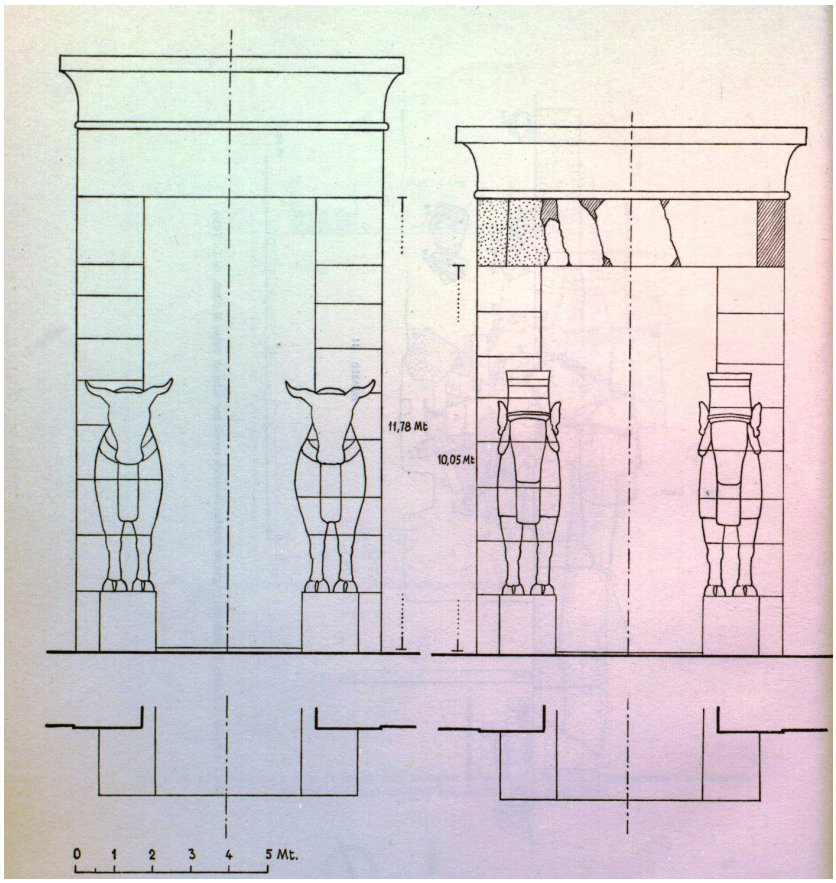


Figure 5.21.
Figure n.8 in *programme et critères se rattachant a' l'œuvre de restauration. Commencement, coordination, développement des travaux.*
G. Zander, Travaux de Restauration de Monuments Historiques en Iran, Rapports et etudes préliminaires, 1968,Rome.
Prior to the commencement of the restoration activities, all scattered monuments and sparse fragments of the architectural components of the terrace of Persepolis were documented and collected; these investigation in many case revealed that the reliefs made by Oriental Institute of Chicago did not correspond the reality. All phases of the project were documented; in the figure, a graphic reconstruction of one the portals of Darious Palace is showed after the consolidation. In the left is the graphic reconstruction of the Gate of all lands by the archaeologists of the Oriental Institute of Chicago and in the right is actual dimension of the portal after the consolidation of the experts of IsMEO.

and investigations, were composed of individual monuments or an assembly of monuments and decorative stone parts of these structures, constructed with different dimension stones; during in-situ investigations, the scattered fragments, the fragments in falling position or removed from the site, were measured, mapped and sampled and these samples were then sent to laboratory for elaborate analyses of the mineralogical compositions, stone textures, mechanical and thermal properties.

The data collected thorough these investigations successively for specific laboratory analyses were sent to Rome; Moreover, IsMEO managed to execute ulterior analyses to gather supplemental data which could contribute in the development of the project of restoration. [248]

The laboratory analyses of IsMEO revealed the nature of the degrades in the stone structures; the preliminary hypothesis, before the execution of specific analyses, was that the combination of intrinsic and extrinsic/environmental deteriorating factors cause different levels of degrade in the stone structures and necessitate specific conservative attentions. The laboratory analysis of IsMEO[249], directed by Paolo Mora in the Central Institute of Restoration in Rome for paints and chemical-specific technological problems, helped IsMEO to get quantitative information of the stones used in the structures of Persepolis and their intrinsic properties and revealed that all stone monuments of Persepolis were affected by various stages of stone decay[250]. During laboratory analyses mineralogical composition, stone texture and structure, porosity (absolute value, type and pore size distribution), mechanical and thermal properties of the stones used in the structures of the terrace were analyzed.

IsMEO revealed that the general causes of decays in stone structures of Persepolis are physical, chemical[251] and biological causes; the expert of IsMEO believed that despite the similarities

248 During in-situ investigations, the data derived from direct observation of the architectural work, which then were analyzed and elaborated in specific thematic surveys, highly contributed in the development of the restoration program and furthermore in the concrete implementation of the protective interventions in stone structures.

249 An environmental investigation was also executed to find out the geographical conditions of the site as well as the state of preservation of the remains.

250 Decay here is meant as any chemical or physical modification of the intrinsic stone properties leading to a loss of value or to the impairment of use.

251 In the case of Persepolis chemical alterations caused by atmospheric pollutions were excluded.

in causing factors, decays in similar stones, may appear in different ways and the type, extent and rate of decay largely depends on the intrinsic properties of the concerned stone.

The analyses of IsMEO, after elaborating specific analyses on the collected samples,revealed that other than the fire at the time of Alexander which caused the destruction of major parts of stone structures of the terrace of Persepolis, physical causes are the most important causes of stone decays in the stone parts of the structures of Persepolis.

Low resistance quality of the stone parts, temperature[252] variations and humidity[253] were important physical causes which led to stone decays in the stone structures; identified and documented stone decays evidences were superficial disintegrations and internal fissures due to internal deterioration[254] in the stone parts. Passing from macro to micro scale, each of these two identified groups of problems were then accurately studied in details and relative proposals were suggested to resolve the problems of each of these two groups.

The low resistance quality of stone parts thorough time had resulted that the stone structures in the terrace of Persepolis had lost their cohesion to such a degree that their physical survival was imperiled and a treatment was necessary to restore their integrity. Great variations between day and night temperature had caused constant expansions and contractions in surface level and reduced their stability and compactness.

Humidity was identified as one of important factors of decays in the stone structures of Persepolis; the analyses revealed that water had dissolved and transported soluble salts within the stone causing efflorescence on the surface and salt-induced spalling; moreover, water has caused the growth of microorganisms in the stone structures of Persepolis. In the case of disintegrations caused by humidity[255], experimental ventilation was tested and

252 The altitude of the Iranian Plateau is very high at that place (1500 m. above sea level). Temperatures are very high in summer, very cold in winter, with high total variation between the warmest and coldest month.

253 Water is the most aggressive agent which acts as a vehicle for weathering processes. Water is responsible for frost damage in climates where freezing temperatures can occur.

254 Deterioration is meant as the “process of making or becoming worse or lower in quality, value, character, etc.”

255 After examining a very disturbing underbody of the Apadana, the staircase, Eastern bas-reliefs and inscriptions, after numbered, identified and photographed the terracotta tiles of the floor, and after removing to replace then we dug a small trench in the embankment that was back.

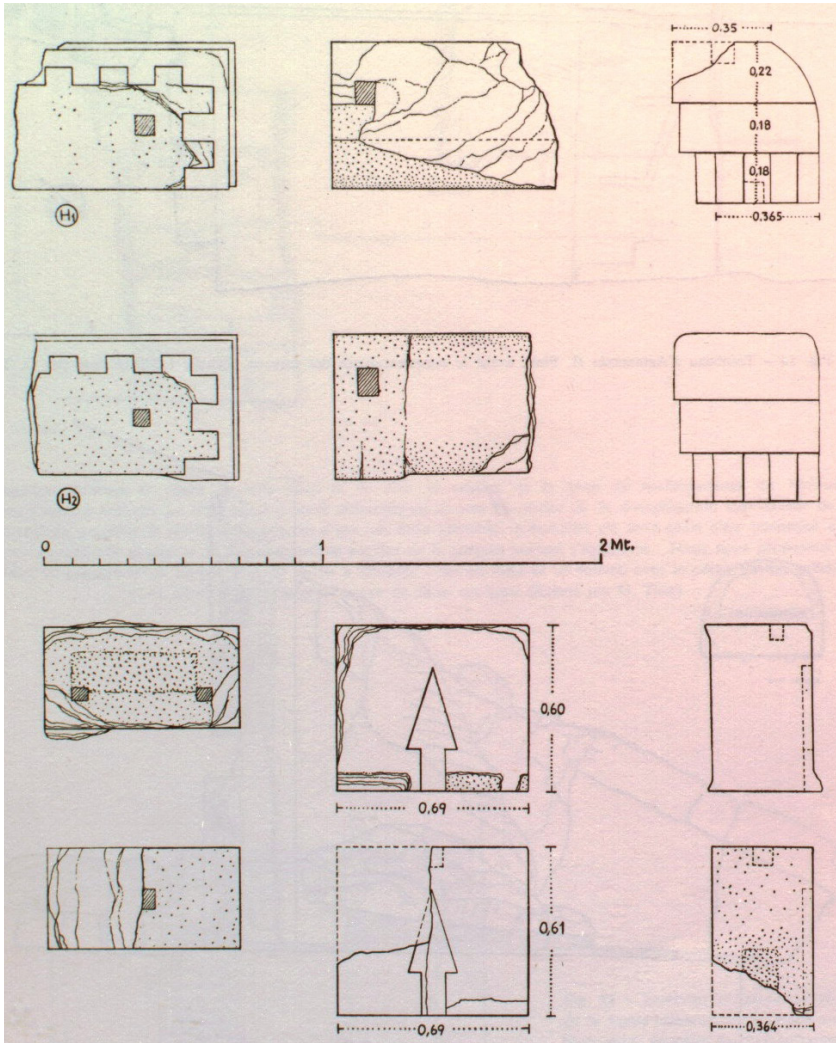


Figure 5.22.
Architectural fragments found during the excavations at Palace of Darius.figure n.16 in *programme et critères se rattachant a' l'œuvre de restauration. Commencement, coordination, développement des travaux.*
G. Zander, Travaux de Restauration de Monuments Historiques en Iran, Rapports et etudes préliminaires, 1968,Rome.

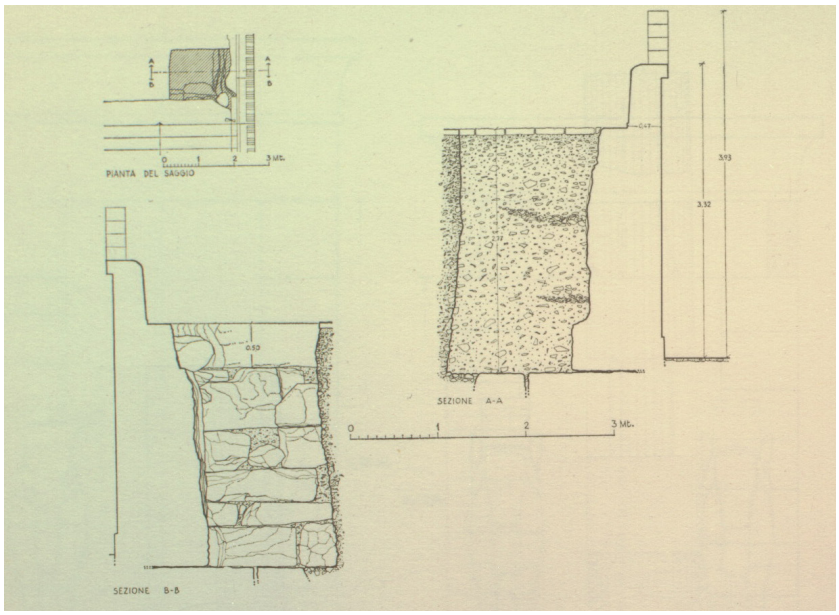


Figure 5.23.
Soundings in the foundations of the Palace of Darius for analyzing the stability of the stone parts.figure n.12 in *programme et critères se rattachant a' l'œuvre de restauration. Commencement, coordination, développement des travaux.*
G. Zander, Travaux de Restauration de Monuments Historiques en Iran, Rapports et etudes préliminaires, 1968,Rome.

after its success the suggested solution was the installation of an air cushion under the floor.
Moreover, during in-situ investigations engraved signs above the horizontal plane and mason-marks on the drums, inserted by Achaemenian masons, were revealed that helped IsMEO during recomposing and restoring on the ground,the scattered and fallen elements and to determine the walls of the axes and the axes of the column bas, as in the case of three recomposed drums in the northern portico of Apadana.

Study of different ways of working stone in Achaemenian period

During in-situ investigations different ways of working, constructing and restoring the stone structures of Achaemenian architecture were documented and a specific study of working on stone structures in Achaemenian period began; this study was executed in order to help IsMEO, during the actual interventions, to find new ways of treating stone, for restoring the stone parts of monuments with integrations of new stone.
In order to document different ways of working on stone structures in Achaemenian period, different types of stone structures of Persepolis and Pasargadae were examined during this study which can be classified in separate categories:

- The remains, which were still in their original position;
- The scattered blocks and fragments on the site;
- The blocks and fragments, which proved to belong to the monument or to part of the monument to be restored;
- The unfinished parts which help understanding the peculiarities in the constructions.

The results of this study then promoted a complex interpretative database during different phases of interventions in integrations, consolidations and re-compositions. This study of classified different phases of working of stone on stone structures of Persepolis in separate categories:

1. The cutting stage;
2. The preliminary works carried out in the quarry;
3. The in-situ works before setting and connecting in place;
4. Ancient refinements and restoring methods.

Moreover, identifying and the study of the ancient ways of working the stone, of marking the blocks and erecting the buildings, helped restorers to find the right position for blocks and fragments during anastylosis , and to understand certain constructive peculiarities of Persepolis monuments like the way stone blocks were set into position, raised and attached.

Study of ancient refinements and restoring methods on stone parts

The study of ancient restoration methods on the stone parts of the structures constituted the integral part of preliminary documentation and revealed two main type of ancient restoration made on stone parts of the Persepolis monuments by Achaemenian masons:

1. The restorations made by iron clamps fixed with lead to repair natural fissures caused by cracks during transport or putting the stone blocks into position;
2. The restorations made by stone patches to fill holes and cracks and to substitute ruined parts of the stone, or chips broken off cutting.

Formulation and application of the solutions

Based on the in-situ documentations and laboratory analyses, IsMEO managed to adopt separate solutions in order to resolve the problems of the structures of the terrace of Persepolis; the proposed solutions were all well studied and were in total conformity with the Venice Charter of Restoration; in fact unlike previous restoration works executed either in Persepolis and elsewhere in archaeological site of the country, here the reccomendations of the Charter of Venice turned to be the governing principles of the formulation of the intervention methodology; moreover, due to the critical conditions of the stone structures of Persepolis, revealed in the in-situ and laboratory observations, the interventions had to have as much as possible effects in the shortest time possible; this priority led IsMEO to utilize and apply the new and innovative technologies and material to fulfil the scope. The adopted solutions of intervention in the stone strcutres of Persepolis were:

1. Consolidating parts of the structures, which are in danger of collapse;
- Attaching broken parts to the main body of the structure;
- Filling up internal cracks and fissures inside and in the stone surface.
2. Replace and restore blocks, parts of blocks and fragments, which have been moved out of position, preserved in the Museum or removed to other places far from Persepolis, or have fallen down, scattered on the Terrace or found near the monument they belong to;
3. Protection of the mud-brick walls, which are still uncovered and finding a more aesthetic solution for the protections

already made for these walls.

Consolidation of Stone Structures

Consolidation of stone structures of Persepolis constitutes an important part of the conservations program of IsMEO for protecting the stone structures; Consolidation as intended by IsMEO was the treatment of stone with a substance that restores the mechanical properties after they have been degraded; as almost all of the stone structures in the terrace of Persepolis were suffering from various stages of superficial disintegrations; in order to prevent ulterior deterioration in the stone structures, IsMEO managed to use more advanced techniques for the purpose of completing a good quality work of restoration in the shortest possible time. The analyses of IsMEO helped them to choose ethe most appropriate consolidation method based on the diversification of the typologies of the stone parts of the structures, their modes of ageing and deterioration.

Following solutions were proposed for consolidating the stone structures of Persepolis:

1. Attaching broken parts to the main body of the structure;
2. Filling up internal cracks and fissures inside and in the stone surface;
3. The use of chemical consolidators in the consolidation of the stone structures.

Attaching Broken Parts to the Main Body of the Structure

To record the state of the stone structures of the terrace of Persepolis before the commencement of the restoration activities, photographs and precise drawings were made from the scattered components of the monuments, and respective plans were drawn up of the zone around them; all the blocks and fragments in the area belonging to the monuments under restoration were indicated on different plans with their respective numbers.

For attaching the broken pieces of the blocks, first small fragments[256] were fastened with mastic and steel bars[257]to guarantee a stronger attachment and to form bigger pieces, capable to present a perfect

256 Before small fragments are joined together, they must always be thoroughly cleaned, by means of steel brushes, in order to fit well together.

257 In the case of architectural fragments under restoration, intended to be placed in its original place, which should work as structural parts, the bar is inserted through the entire length of the element and pulled from either end by means of a nut turned on a spiral ridge around both ends of the bar; In other cases, when the stress will be very slight, the bar is only inserted to a certain length on each side of the rupture.

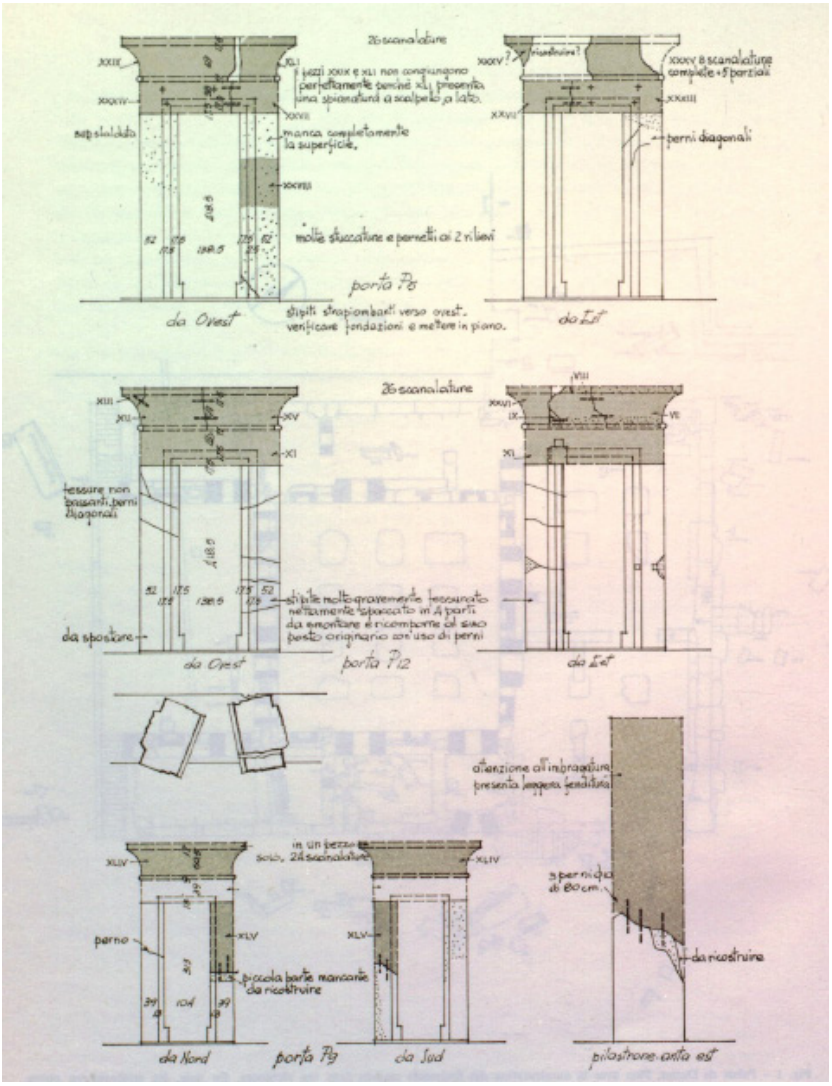


Figure 5.24.
The precise and detailed reliefs of the architectural components of the palaces of Persepolis served to prepare a graphic reconstruction of the architectural components prior to the commencement of the restoration project.
Figure n.2 in *programme et critères se rattachant a' l'œuvre de restauration. Commencement, coordination, développement des travaux.*
G. Zander, Travaux de Restauration de Monuments Historiques en Iran, Rapports et etudes préliminaires, 1968,Rome.

Figure 5.25.
Persepolis: A cornice element in the Hundred Columns' Hall has been restored of many fragments, which have been attached with cement and held together by inserted steel bars, pulled from both ends by means of nuts turned on a spiral ridge, in A. Tilia, *Studies and Restorations at Persepolis and Other Sites of Fars*, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1972.

Figure 5.26.
Persepolis: Consolidation of the stone parts in the Hall of a Hundred Columns
in A. Tilia, *Studies and Restorations at Persepolis and Other Sites of Fars*, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1972.

adhesion. Then, vertical perforations were made in the capitals or column bases[258] for inserting iron, bronze or steel bars as well as injecting the liquid cement[259]; finally, fragments and components were connected together with the means of the bars installed in the vertical perforations of column bases and disintegrating parts of the stone structures; in internal or less visible of the structures or the pilasters, blocks of reinforced concrete, with installed bars of steel or bonze were used.
In the case of larger components as in the case of the architrave of the eastern doorway of the "Gate of All Lands" larger iron beams, covered by an antirust paint, of double T-forms were joined to the ends of the installed bars, and the hollows between the reinforcement and the stone were filled in with cement; the result was that fragments were cast together and could form one single block.

Filling up cracks and fissures inside the stone parts

To identify the causes of disintegration in the stone parts of the structures in the terrace of Persepolis, IsMEO conducted specific analyses to propose the most adherent solutions[260].
The analyses of IsMEO revealed that superficial disintegrations in the stone structures begin with disintegrations or decompositions of internal stone parts as different sized fissures,including deep/superficial and large/middle and small sized cracks, in internal parts of the aged stone parts; these fissures then continue to affect bigger components and finally affect external surfaces of isolated blocks as well entire stone structure.
IsMEO hypothesized that in order to resolve the problems of the existing fissures in internal parts of the stone parts of the structures in Persepolis the first step was enclosing and limiting the existing cracks and fissures from the outside. For enclosing large and deep cracks and fissures, the adopted method was making various dimensions perforations on the pieces, intended to be

258 the perforations were made by means of special boring-machines.
259 These perforations were made to help cement to penetrate between the surfaces and fill up eventual hollows, cracks and fissures in the stone.
260 "Although specialists from several countries are studying the problem for several decades, no definitive solution has yet been found. Indeed, all the experts are more or less agree on the lack, so far, of an effective and sustainable system for protection stones, a group of scientists was commissioned by ICOM to deepen the studies and search systems and substances that can stop the decay in stones." P. Mora, in *Travaux de Restauration de Monuments Historiques en Iran*, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1980

joined together, inserting steel, bronze bars or iron beams[261], of double T-form shape, into these perforations, and finally injecting cement, mixed with grit of the same stone as the element under repair, with low pressure, into the hollows and around them to fill and enclose the cracks and fissures inside the stone[262]; during the restoration works, injections of fluid cement were practiced to fill up wider cracks and fissures in the stone surface to penetrate into the hollows inside the block and turn them into compact and solid parts.

In the case of middle sized cracks the suggested solution was plastering the surface cracks with clay and then injecting the fluid cement, at two centimeters from the monument surface level, with moderate pressure; after that the clay surface should be removed and dissolved by water and cleaned by cloth; in order to permanently seal the cracks, a mixture of colored cement with granules or powder of stone of the same stone of the monument was used.

Less superficial and important fissures in the stone surface were filled up with a colorless mastic (Monomer) mixed with powder of the same stone as the block under repair, in order to obtain the right gray color of the stones and make the repair less visible as possible.

The use of chemical consolidators in the consolidation of the stone structures

In the case of small and quasi invisible cracks, as the conditions of some parts were so severe and necessitated urgent attentions in order to prevent them to be collapsed, the suggested solution was a provisional and limited duration (5 to 10 years) intervention in order to fix detaching surfaces as deepest as possible with the application of a chemical fixative[263].

The suggested solution of IsMEO was the application of acrylic resins[264] épossidique, Monomer or Sintolit resins, which previously

261 In cases that stronger means of consolidation or attachment are required.

262 Moreover, by using this method, the cement penetrates even into the capillary fissures.

263 Stone chemical consolidants can be classified into four main groups: inorganic materials, alkoxysilanes, synthetic organic polymers, and waxes. Epoxies, acrylics, and alkoxysilanes are the most commonly used consolidants.]

264 We notify the other hand those who will work on the restoration of stone, they should be wary of substances or systems, which may well not lack supporters, especially among the companies that produce them, but also

had shown their efficiency in the restoration of restorations in Rome[265] and Athens as temporary solutions for resolving the problems of disintegration in stone parts by re-establishing the cohesion between particles of deteriorated stones.

The main problem regarding the use of chemical consolidants is that generally modern cements, plasters, paints and plastics which are suggested to be applied during the interventions on historic monuments, do not have the integrity or genuineness[266] of the original building and because of the fact that the modern materials, resistant to weathering, the building does not gain a more authentic appearance with age, it weathers in a different way, not becoming softer but retaining always its edge of hardness. In the case of stone structures of Persepolis the utilization of chemical consolidants, as liquids intended to penetrate deeply into the stone and deposit additional binding agents which will reinstate the stone's cohesion, was justified because of the lack of cohesion in the exposed surfaces down to a certain depth and there was the risk that the loss of the superficial layer of the stone brought about the loss of historical or artistic value of the monuments; moreover, the material erosion of monuments, was jeopardizing the overall structural stability of each individual monuments.

however, the application of the chemical consolidants in order to substitute alternative materials and to modify the original authentic materials of the stone structures by the introduction of new chemical consolidants, the effects of the application of these chemical materials and the their eventual reaction with the original materials were considered; important considerations of IsMEO before choosing the stone chemical consolidants were:

- The fixative must keep a certain level of elasticity even after complete drying and aging ;
- The fixative should not alter the color of the stone, or form glossy film;
- The fixative should not have any chemical reaction with the stone;
- The fixative should be reversible and removeable in the case of introduction of a new treatment system of stone[267];

among those who the commonly used with satisfactory results in appearance, but in the long run, can exacerbate the damage.

265 In the entablature of the pronaos of the Pantheon, the Antonine Column, in the Lateran obelisk of Montecitorio and at the Coliseum.

266 For example, cement is very alkaline and reacts with acids in rainwater or rising damp to cause efflorescence, corrosion and disintegration.

267 In fact, the principle behind the application of any new and modern technique of consolidation was the reversibility; any applied material and tech-

- The solubility of fixative should provide its renewability.

Replacing and restoring the blocks which have been moved out of their positions

Integrations of new stone were used to restore broken parts and replacing the missing ones, for instance, missing wall blocks or other architectural elements, and the ones which have been moved out of their original position; important considerations and the principles of IsMEO in the case of replacing and restoring the missing blocks and applying the integrations of new stone were:

- New stone is used in integrations for consolidating specific parts of the stone structures for structural reasons only;
- Integrations could be executed only when the exact position of the original parts to be re-attached was known;
- The identical stone with the antique material in color and composition should be used for the integrations;
- Missing Relief-decorated or inscribed blocks may also be replaced with new stone, when this is necessary for the recomposition of parts of a stairway façade in order to prevent water from penetrating and causing damage to the bas-reliefs[268].

The missing blocks were cut to approximate dimensions before being laid in position and were shaped before being joined to the remaining parts of the element under restoration; then they were worked down with gradually finer tools to the same level as the antique surface; the same method was applied for the replacing of the missing sculptured elements only without any attempt at working out the details[269]. Integrating parts were replaced in the same levels with the background of the reliefs and inscribed panels. Cement was used for integrating the decorated elements, bas-reliefs and inscription panels, while for integrating bigger blocks, a surface was made of a conglomerate of gravel mixed

nique, should let, in time, on the same monument, any subsequent application of more advanced techniques, which could be developed and tested in the future.

268 In other cases, when the missing part of a block is to be placed in a position not visible to the spectator, as for instance the back side of a cornice element or of an architrave on top of a doorway, stone was not used and the hollow space was filled up with a conglomerate of cement, sand and splinters of the same stone as the element under repair.

269 Only the flutes of the column-drums are hollowed out on the integrated parts, so that they shall not cause any interruption of the vertical lines.

with a certain amount of cement at a lower level than the missing parts, then the integrations were attached with cement on the top of this surface.

Figure 5.27.
Persepolis: The Gate of All Lands after the completion of the restoration works, in A. Tilia, Studies and Restorations at Persepolis and Other Sites of Fars, Roma, Istituto Italiano per il Medio ed Estremo Oriente, 1972.
The missing blocks were cut to approximate dimensions before being laid in position and were shaped before being joined to the remaining parts of the element under restoration; the identical stone with the antique material in color and composition should be used for the integrations and integrating parts were replaced in the same levels with the background of the reliefs and inscribed panels. Due to the principles of restoration and the recommendations of the Venice Charter of Restoration, the integrated parts are identifiable.

Protection of the adobe structures in archaeological sites

As one of the important parts of the program of restoration of the archaeological complex of Persepolis, was executing necessary instruments for the protection of mud-brick walls and generally for the all adobe structures of the terrace.

Unearthed archaeological adobe structures[270] sites are completely exposed and subject of the long-term impacts of temperature, wind, moisture (in the form of humidity, precipitation, and groundwater)[271], catastrophic impacts of vibration and seismic activity, vandalism, lightning or extreme weather, animal activity[272], plant growth, and so forth. In a general consideration, it is the inhabitability of adobe archaeological structures that makes them particularly more vulnerable to deterioration than architectural monuments and other adobe structures.

As documented in the in-situ investigations of the IsMEO, roofs of some structures of the terrace were missing or only partially in place, foundations and drainage systems were partially destroyed and in other parts were in very bad conditions, walls were badly damages, and much of the original structure uncovered during previous expeditions of the 30s and 50s needed protection against humidity and heavy rain falls; therefore, the most important cause of the deterioration of the adobe structures of the terrace of Persepolis was humidity.

Although during previous expeditions, there had been executed some repairs in the adobe structures of the terrace, but these repairs and maintenances strategies resulted inappropriate and unable to protect them in an effective way. The studies of IsMEO confirmed that some of the techniques for stopping the destructive damages of the humidity on adobe constructions like plant removal, regarding, or trenching may be potentially destructive to archaeological remains associated with historic adobe building sites.

For the conservation of mud-brick constructions of Persepolis and other edifices in same state of conservation, in the preliminary report of the conservation works in Persepolis, IsMEO managed to use the principles of based on the successfully adopted method in Afghanistan, especially in Ghazni during the archaeological excavations. The similarities of the archaeological excavations of IsMEO in Afghanistan with those in Sistan and also geographical

270 Urban adobe structures are less vulnerable thanks to the existence of foundations and roofs, functioning drainage systems, and the maintenance or reapplication of protective renders.

271 Rapid drying of earthen materials is particularly problematic, as the component clays shrink, the earthen materials crack, and the weak chemical and mechanical bonds are broken.

272 Animals, birds, and insects often live in adobe structures, burrowing and nesting in walls or in foundations. These pests undermine and destroy the structural soundness of the adobe building.

vicinity of the two areas, was another convincing factor; the adopted interventions of IsMEO could be listed as below:

- Injections with a syringe of casein in water and slaked lime aged were made in lesions to make a whitish efflorescence effect.
- Major repairs on the walls were made by baked bricks, at the same level of original bricks and all the integrations were coated by kahgil and margins of integrations were settled and distinguished by different colors.
- Heads of the walls that continued to prevent the landslide were finished and wall slopes were executed in bricks to distinguish them from the older parts and were covered with a thin coating of mud and stick or kâhgil.
- The Summits of walls were conserved as found during the excavations and minor alterations were executed to make the implementation of the protective kâhgil cover[273] easier.
- Small windows made of a single glass and mounted tile on fixed wooden frame were installed to reveal some features of the original structure in thought.

Due to the vulnerability of the adobe structures, the governing principle of executing the protective measures in the deteriorated adobe structures was that any disturbance of the ground should be undertaken with prudence and careful planning and the execution of these protective measures should be after the reduction of the problems of rising ground water in adobe structure.

After restoration management program

The project of restoration of the archaeological site of Persepolis and its stone structures was terminated by the presentation of the project. In order to ensure to the monument, the most suitable accommodation for its artistic aspects after finishing the restoration activities, IsMEO proposed an After Restoration Management Program to Iranian authorities. The after restoration management program was another innovative and unprecedented aspect of a project of restoration whic hwas all new into Iranian context; unlike the previous works of the Oriental

273 A great care was given to find good and durable quality plaster which easily does not turn into powder. In order to make a durable plaster, the suggested solution of the IsMEO was using the same method which for many years was used in Iranian traditional buildings: digging a hole, throwing clay and chopping straw in interspersed layers, combining them together, and removing all the air inside and mixing the combination carefully.

Institute of Chicago and further the Iranian archaeologists, here , the restoration team of IsMEO presented a specific program which was formulated in order to complete the primary scope of the project of restoration which was protecting the consistency of the authentic monuments and ensuring their durability by prevailing historical over aesthetic interests by minimum necessary intervention; thus, the after restoration management program was composed of;

- Clearing and management works of the archaeological site: putting in order and classifying the excessive number of scattered architectural fragments in the column bases to prevent confusion in the viewer; making an inventory from existing fragments and indicating which fragments had been removed and transferred to the Museum; cleaning the whole are and removing the alluvial mud until reaching the original level of the ground;
- Managing pathways, paving and drainage systems: repair pathways includes pieces of asphalt road; creation of parking areas where needed; regularizing the drainage system by controlling certain slope to the natural flow of rainwater, digging in the ground or in the rock small canals to drain or divert water;
- Cement bush hammering of all parts integrated cement which made bad impressions and were not in conformity with new integrations of IsMEO by the means of necessary instruments;
- Engineering the lighting system: avoid theatrical effects and the multiplicity of colors and bright colors, preferably the tone and the effects of moonlight; orienting light beams oriented in the direction of the circulation of visitors; providing direct interpretability for the sculptures, portals and wall masses and "grazing" effects for the bas-reliefs of stairs, gates and jambs interior

5. Conclusion

The scope of the thesis was to study the formation and the evolution of the culture of restoration in Iran and identifying its influencing/characterizing factors ; due to the nature of the thesis, complexity of the argument and the fact that the thesis tended to give an un-precedented history of the restoration in Iran, just from its very first origins, for the first time, in the first phase it was decided to define a certain time period: from the end of 19th century, the commencement of the systematic archaeological excavations in Iran by French scholars and the introduction of the new derivations of the archaeology into Iranian traditional context, supported by the idea that it is with the development and the maturation of the archaeology that the first derivations of restoration in modern senses are born, to the year 1979, the year of the Islamic revolution in Iran, the year of radical ideological changes in the Iranian visions, approaches and visions regarding the policies of the preservation and conservation of the cultural heritage of the country.

The most remarkable particularities of the argument are the cultural diversities and the multiplicity of intervening factors that unlike Occidental cultures not necessarily have origins in the technical/academic context; in fact, as revealed and discussed in the thesis, the influencing factors on the formation of the concept of restoration have different origins, not technical but religious, cultural and political, deriving from theological, anthropological, and socio-morphological particularities of the Iranian context. The thesis revealed that it is impossible to talk, in abstract way, about the formation and the evolution of the culture of restoration in a different cultural background, separating it from the influences of the surrounding context; in fact, when talking about the thematic of “restoration” and “conservation” and their interrelated disciplinary arguments in a different cultural context, beyond the universal values, easily recognizable by the international community, there are always specific environments and factors, specific semantic charges, and traditional derivations that only those who are of the place, even if are not trained as historian, archaeologist or art criticism, can identify and valorize. In order to best formulate and understanding the passages and the developments of the derivations of the restoration in Iranian context, from traditional to modern ones, the thesis tended to maintain a flexible structure: in order to give a complete and

articulated context, the the chronological study of the defined general period, divided into two main sub-period: marked by the period of the development of the archaeology as well as the concept of restoration in Iran and the period of the introduction of the modern principles of restoration marked by the presence and involvement of the Italian experts of restoration of IsMEO in restoration projects of the Iranian historical monuments, and the philological study of the identifying/ characterizing factors of the formation of the culture of restoration in the country: the political,cultural,religious factors, should set and studied together in the details.

The concept of passage, evolution and development necessitated analyzing and characterizing the derivations of the restoration in the Iranian traditional context; the study and identification of the traditional derivations of restoration in Iranian society helped to acquire a general understanding of the cultural background of the country and revealed the impressibility, flexibility and adaptability of the cultural context of Iranian traditional society in front of the modern principles of restoration especially during the period of the activities of IsMEO, when modern principles and innovative aspects of restoration were introduced to the Iranian traditional context.

Parallel to the revealing the characteristics of the traditional Iranian restorations, the period of the activity of the restoration experts of IsMEO , called as the period of the introduction of the modern principles of restoration into Iranian context, was studied in details: from 1964, the year in which IsMEO, on the request of the Iranian authorities, was invited to visit the architectural Safavid monuments of Iran and prepare solutions for their restoration and out of this invitation resulted the commencement of a 15-year program of restoration and static consolidation of the selected monuments, to1979 when due to radical changes in Iranian political regime, IsMEO's expert left the country. During this period, the contributions of IsMEO in the formation of the modern culture of restoration, in evolving and promoting the general understanding of the Iranian society of the concept of restoration of historic monuments were revealed and studied.

It was hypothesized that the concept of restoration in Iranian modern society could have found its origin from the development of the archaeology, when the old derivations of archaeology were evolved and oriented to the necessity of preserving archaeological material as historic evidences for future generation interpretations; the thesis proved to demonstrate that

the modern concept of restoration in Iran is a legitimate result of evolution and development of the archaeology: in derivations, considerations and institutionalizations. therefore, the study of the influencing and characterizing factors of the formation of the concept of restoration in Iran was preceded and conditioned by the study of the development of archaeology in the country and Iranian archaeology from the late years of the 19th century; a brief history of the development of archaeology in Iran demonstrated how archaeology evolved from treasure-hunting and digging for recovering/removing collectible items to excavate for scientific/research scopes; in this regard, the period of French domination, the commencement of French activities in the ancient site of Susa and French monopoly on the archaeological matters of the country were studied and from conservative point of view, the destructing and careless effects of the French excavations in the archaeological sites and the irreparable results due to the lack of post-excavation conservative attentions of French archaeologists, were criticized; the establishment of the specialized organizations and specifically the "Department of Archaeology" and the development of legal initiatives, specifically the Law of Antiquity as other remarkable phases of the development and the evolution of the archaeology of Iran were defined and studied, all finalized to reveal and extract their contribution in the formation of the concept of restoration.

In the study of the development of the archaeology in Iran, the political factor was called as the factor that decisively influenced the development of the archaeology; in a general way, it was stated that the government of Pahlavi took the absolute control over the cultural matters and all the newly established institutions and organizations in the camp of historical/cultural activities were founded as state-sponsored organizations and all activities conducted by these institutions were finalized to satisfy the political scopes of the government; different examples were cited to show how architecture and archaeology were abused and got together in the form of monumental architecture and for the search of reconstructing a new national identity and in this regard, the efforts of the government in Achaemenedization of the country in architectural scales were mentioned and hybrid architectural style of the 20s characterized by pre-Islamic motifs and element as the official style for designing state structures was mentioned; it was stated that in the 20-30s, archaeology was transformed to an strong instrument which government tried to get the advantage to get the control over public and it was criticised that archaeology

like architecture was considered as an instrument capable of providing a communicative materialized model born from certain ideologies, able to directly influence and balance the relationship between human and context.

The supporting idea of the study of the political influences on the development of the archaeology was to reveal and highlight the influences of the political factor in the formation of the concept of restoration in the country; despite highlighting and criticizing the misuses of the historical patrimonies as communicative instruments for public instructions, for propagandistic purposes, as the main policy of the government regarding the cultural heritage of the country, it was tried to prove that even new emerging derivations of the concept of restoration were conditioned and influenced by the political orientations of the years 20-30s. Under the political orientations of the new emerging government of Pahlavi in the 20s, the nationalistic movements influenced, changed and formed a new national derivation from the concept of archaeology as a communicative instrument for representing a national identity to future generations; the concept that led to the formation of the very first derivations from the concept of restoration; in this context, specifically, the role of National Monument Council of Iran as the first influencing state-sponsored organization born from nationalistic sentiments of the 20s Iranian intellectuals, on the development of archaeology was studied and its contributions in the formation of the concept of preservation of historic monuments as national patrimonies was revealed with analyzing and studying the remarkable case studies of the20s in Iran: the project of reconstruction of the mausoleum of Ferdowsi in the early years of the Pahlavi government and the systematic excavation of the Oriental Institute of Chicago at Persepolis headed by Ernst Herzfeld, the councilor of the Iranian government in archaeological matters.

Within these case studies, it was stated that the first serious restoration activities in the country had their origins in the propagandistic efforts of the nationalist government of Pahlavi in representing crystallized examples of the pre-Islamic civilization for nation-making purposes and remarkable case studies were introduced and analyzed as proofs of this statement; in this regard, the interventions of the Oriental Institute of Chicago in Persepolis which got together excavations and partial restoration of the archaeological terrace of Persepolis for representing it to the world as the archaeological complex par-excellence were presented and described. It was discussed that how modernization

and conservation as parts of the political program of the Pahlavi government, appeared in contradictory ways and what were the destructive impacts of the 20s modernization in the historical centers of old cities; the trend of isolating historic monuments from their surrounding context for protection purposes was criticized and in was discussed that, the monument should not be isolated from its surrounding context but should be preserved as a part of intangible matrixes, specifically in Iranian cities which due to the articulation of the old cities, usually the major part of the historic monuments is extended along the traditional Bazaars. For framing the evolution of the concept of restoration in legal aspects, it was referred to the evolutions of the legal aspect of archaeology and particular attentions were given to remarkable activities like the preparation of the index of national monuments and, more importantly, the release of the "Law of Antiquity" for their contribution to the future of the restoration in Iranian context; it was highlighted and argued that while in international context, in the same period, international efforts in uniting different approaches in the field restoration of historic monuments, resulted the release of the Athens charter of restoration, the Iranian "Law of antiquity" in major parts remained limited to define borders and limit for different archaeological excavations; it was argued that almost anywhere in this Law there could be found citations or recommendations regarding restoration of the archaeological remains.

The discriminatory approaches of the government in legal and practical aspects in regard to the Islamic constructive patrimonies were marked with solid proofs and it was stated that while authorities had concentrated all their conservative attentions on crystallizing and representing a selected number of archaeological/ architectural monuments in a discriminative way, there formed a parallel social awareness of the necessity of conserving the historic monuments which partly arose from religious beliefs of the Iranian traditional society; there are cultural and religious factors influence and form a specific form of public participation in traditional Iranian society that help urban historic edifices to resist thorough the time; the cultural articulation of the Iranian traditional society was cited that has influenced the formation of traditional derivations of the restoration different from state-nationalistic based derivations.

It was stated that, apart from the specific technical characteristics, there are cultural particularities of the Iranian society and specially the religious factor which developed the traditional restoration in

the course of time. The different religious derivations regarding the concept of restoration were cited and direct references in Qur'an and in Islamic culture where Muslims are invited to take care of their shelter and their living ambient, were mentioned. However, it should be mentioned that the religious factor, if fully implemented, would lead directly to excluding any operation of restoration, understood naturally as preservation of historical evidence. Based on the Islamic thoughts and the references in Qur'an, everything exists and created by the divine will and who is the true believer is characterized by its total dedication to the divine value, it is certainly unfair to oppose it even more if with acts intended to subvert this will; as the mankind can not oppose in front of aging and death and this is true for men as well as for material things, more than ever for buildings.

The period of formation of the modern culture of restoration in Iran begins in 1964, when the experts of IsMEO started the very first steps of their 15years program for the restoration of the most important urban/extra urban architectural/archaeological sites of the country and the archaeology has reached its complete maturation; moreover, the importance of this year is emphasized by the release of the first technical recommendations regarding the preservation of the historic monuments, in national scale, and the release of the famous Charter of Venice; Despite highlighting, the influences of the articulated and complex context of the country, which in some extents were trouble-making for the experts of IsMEO, however, the thesis tended to show that it was with the IsMEO the abstract concept of restoration in Iran developed and turned to the be the restoration in its modern and updated derivations; it was with the IsMEO that the concept of the restoration passed from being limited to its contradictory traditional derivations to well-structured and stabilized modern derivations.

Important challenges of the restoration experts of IsMEO, which complicated the formulation and the execution of the projects of restoration in the monuments subjected to their interventions, were: getting informed about the art history, the support of historians and art critics and the performance of the traditional techniques in use in different cultural backgrounds and understanding the attitude of the population towards their own cultural heritage and nature of their relationship with their cultural heritage. It was stated that despite these complexities, the programs of IsMEO highly influenced the development of the culture of restoration in the country and evolved it from traditional to modern derivation:

the utilized methods of restoration, the preliminary programs and researches, the way the proposed programs were transformed to practical measures, the way these practical measures were adopted, monitored and managed, etc., all were analyzed and studied in details. It was tried to prove that the activities of IsMEO were not limited just to formulate restoration solutions for the architectural monuments and the archaeological complexes and providing these with technical solutions, but were extended to the designation of a protected historical zone, in the publication of major new studies of Safavid architecture, the training of Iranian restoration experts, and more importantly the foundation of the modern culture of restoration in Iranian traditional context.

Analyzing the study of the programs and the executed programs of IsMEO in the architectural and archaeological monuments, in order to reveal the innovative aspects and the contributions in the formation of the modern culture of restoration in the country, revealed that unlike the traditional restorations executed in the historic monuments, the experts of restoration just from the very first phases of the formulation of the intervention programs, had considered restoration as a process and not as a means to an end; this study confirmed that, despite the intrinsic diversities of the monuments subjected to the interventions of IsMEO, their proposals for the restoration of historic monument, architectural and archaeological, were composed of quasi similar factors within a precise systematic method articulated in certain precise interrelated consecutive phases; observation, decision making, verification, adoption.

The expert of IsMEO believed that restoration program must find its guide in the results of accurate, comprehensive and precise investigation and documentation, and unlike the generality of the existing documentations prepared for historic monument of Iran by the department of archaeology and its director, Andre Godard, IsMEO sustained the idea that an effective documentation which could help the formulation of efficient restoration solution, should follow a precise methodology which includes certain characteristics like compilation, registration, processing, evaluation, storage and distribution of comprehensive information.

Contrary to the previous executed experiences of restoration in Iran, IsMEO just from the very first steps of the preparation of the preliminary programs of interventions to present to Iranian authorities, adopted all eventual solutions and proposals of the interventions in the total conformity with the international recommendations, specifically the Venice Charter of Restoration;

and furthermore, during the practical phase of the works, continued to maintain these recommendations as the basic governing framework of the actual interventions; constant references to this charter and the presence of the protagonist of the restoration of the 60s in Italy, as the supreme councilor of these programs, clearly reveal the complexity of the structure of the proposed programs, benefited from well-structured theoretical and technical European matrix of the 60s in the field of restoration and conservation of the historic monuments; preparatory phases of the proposals of IsMEO were:

- The study phase: specific studies, always accompanied by accurate in-situ documentations, to acquire essential information for the formulation of preliminary hypotheses;
- Analysis of the documented materials, feasibility and adaptability, to relative norms and regulations, verifications of the hypotheses;
- The elaboration of the confirmed hypotheses as practical program ready to be adopted as actual interventions.

Regarding the choosing of the appropriate methodology of intervention and practicing the restoration solutions, IsMEO's expert of restoration believed that a case-by-case approach should be adopted in order to gain most respondent results; in other words, they believed that each monument, architectural or archaeological indifferently, presents a unique set of challenges in terms of the complexity of deterioration factors that impact the architecture, the philosophy of restoration driving decisions, and the physical interventions that may be implemented.

In the process of documentation, IsMEO used the architectural relief of the monument as an instrument of analytic and anatomical understanding and the perception of the monument in its articulation, irregularities, discontinuities, transformations and the states of decay; the restoration team of IsMEO taught Iranian technicians that accurately prepared drawings, help restoration team to perform a secure articulation and localization of the operations to be performed in the complete perception of the real participating entities; the early experiences of the preparation of architectural relief for conservative purposes dates back to the 20s, and during the expedition of the Oriental Institute of Chicago when Ernst Herzfeld and their team had prepared extensive drawings from the archaeological complex of Persepolis for their excavations and furthermore, the architectural drawings of historic monuments of the country, a pictorial representation in "chiaro-scuro" based on the theory of the shadows, prepared under the supervisions of Andre Godard after the establishment

of the department of archaeology; a comparative analysis of these two series of drawing revealed that neither of them has the complexity, articulation and the effectiveness of the drawing prepared by IsMEO for specific restoration purposes.

Although in the archaeological sites, due to the particularity and the intrinsic characteristics of them, the selection of the techniques and materials is in some extents, can be more flexible regarding to use of more recent techniques and materials, which proved to be efficient in resolving the problems of the historic monuments and helped them to resist in time; while instead, particularity of the architectural monuments of Iran resulted that from the very first phases of formulating the restoration program of the Safavid monuments of Isfahan, the experts of the restoration of IsMEO believed that rigid thinking on architectural restoration is unfavorable whilst a living, flexible and dynamic approach, with careful observance to the continuity of tradition, is more likely to be in conformity with the spirit of Iranian traditional architecture; moreover, they discussed that little efforts has been made to evaluate the historical development of restoration of adobe constructions in Iranian traditional context and yet very little efforts were taken to study the possibility of adapting them to the modern principles of restoration.

Regarding the architectural monuments, and due to the results of the specific studies which they conducted on the characteristics of the adobe constructions and the materials used in traditional architecture of Iran, Eugenio Galdieri, who directed of the restoration project of Ali Qapu and Masjed-e Jom'e in Isfahan, believed that "...to reinforcement and, where necessary, restoration of structures, it can, in my opinion, using the traditional technique of mud brick, which dates back to the highest antique dealing and is still in use in Iran." and "… in many cases, in fact, instead of the use of advanced techniques, only the shrewd use of materials that we have defined as traditional, can guarantee a long term permanency and success for an architectural structure which is in a very bad state of preservation or in danger of collapse…"

In order to reveal the effectiveness of the contributions of IsMEO in introducing and implementing the modern principles of restoration in Iran, in the thesis it was discussed that there are some particularities which prevent the complete absorption of the Occidental theories of restoration and conservation by Iranian context; it is true that the principles which contributed to form the foundation of involvement of the Occidental countries in the field of restoration of the historic monuments and their

thematic evolution over time, are based on the primacy of thought, philosophical speculation, the purge systematic and the habit of critical analysis, and these factors have helped to the formation of a complex and technical approach accompanied always by a sophisticated cerebral theorization, however, the occidental mentality can hardly confront different positions in different cultural backgrounds and contexts that have their special sensibility on the thematic of restoration, in general, and ethical and aesthetic evaluation of a work of art, as well as formulating efficient programs and applying the experienced occidental principles and methods of restoration, especially when dealing with sacred/religious type monuments which are strongly influenced by religious ideologies.

Although international efforts in uniting different approaches in the field restoration of historic monuments, reflected in the charters of restoration, the Athens and Venice Charters of restoration particularly, have resulted and participated in the initiation of contemporary awareness and have generated a unique international concern on the subject of cultural heritage, they are in fact, the materialization of the occidental European mentality and hence hardly acceptable as a truly global idea regarding the restoration and conservation of the historic patrimony in non-European countries. In fact, considering the charters of restoration as praiseworthy attempts to give ideological, cultural and social force to a policy of restoration and at the same time to stabilize philological and methodological order in the material interventions turns them to a very useful reference and instrument in practicing and formulating the projects of restoration; the fact that within the 23 members of the commission for releasing the Venice Charter of Restoration only there were three non-European emphasizes the fact that its contents is more adapted to the European mentality and respondent to the problematic of the European historical patrimony than to the problems of the historical monuments of other countries specifically in middle-east where an important part of the existing historical patrimony which needs specific attentions and practical programs are made of adobe material.

Regarding the particularity of the Iranian historic monuments and specifically regarding the religious edifices, it was stated that during the formulation of the restoration program in a certain historic monument, there should be considered that the monument should not be “negatively preserved” as fossils but should be kept as integrated elements in a living continuum and

the monument should not be taken out of public use in the name of preservation or archaeology. In the case of archaeological excavations of Masjed-e Jom'e at Isfahan it was criticized that the monument should not be sacrificed for scientific purposes and it was discussed that in the case of religious monuments and mosque, considering it just as a monument, negating its values and functionalities, separating it from its context, crystallizing and keeping it empty or transforming it to just architectural/ archaeological monument results to its death. In this regard, the experiences of the 20s, when important parts of historic were destroyed during the urban development programs and certain monuments were isolated from their surrounding context, are another proof of the bad policies of conservation of the historic monuments which scarified historic monuments for conservation or archaeological purposes and put in danger the continuity of their presence as active components of the old cities morphology and finally resulted the abandon of the monument by public.

Considering restoration as altering an edifice, or a part of it, which is decayed, lost or damaged, or is thought to be inappropriately repaired or altered in the past, finalized to make it conform again to its design or to its appearance at a previous date, which in some cases need a reconstruction procedure, contrasts the traditional derivations of restoration in Iranian culture, highly influenced by Islamic beliefs. In an abstract derivation, it is the "value of use" that governed the principles and strategies of restoration in the Islamic countries as well as in Iranian traditional context not the Occidental restoration derivations based on the value of "history" and "the act of replacing in a former state; to give back what, value, that has been lost or taken away. This is in fact the reason, why traditional restorations were all finalized to take back the monument to the ordinary use and to guaranty its permanency in traditional context; the object is what that exists, it should be remained intact as long as it can be used, after that any modification, adaption or any permitted form of transformations and maintenance could be done in order to take it back to ordinary use.

The traditional derivations of restoration in Iranian culture in fact lacked the historicist vision of the Occidental culture and this is the reason why a religious monument can never completely assume that value of testimony that the Occidental culture attributes and wants to be preserved; the substantial historicity of Islam, which also derived from the rejection of the concept of "monument", the refusal of the critical analysis of an event or a

fact of art; therefore lacks the critical position that is at the basis of all Occidental theories of the restoration:

However, despite this ideological contrast, contrary to the common believe of the occidental scholars, the underlying Islamic principles of conservation have the potentiality to become the foundation to the attitude in architectural conservation of Islamic historical monuments. As the concept of conservation deals directly with a physical historical existence, it is important to understand the importance of the history in Islamic culture, which Iran is a part of it, and the look of Islam to the necessity of conserving the history; in this regard, there are numerous citations in Persian literal documents from the Qur'an verses where it is emphasized the necessity of looking at history "past" from which lessons can be learned. In fact the famous Qur'an verse "do they not learn a lesson from the chronicles of history" urges believers and non-believers to observe the events of history and suggests indirectly that the traces of history should also be preserved so that man could continuously, from one generation to another, witness past events and learn from them. Considering historic monuments as the most evident examples of "human messages", the ancestral footprints, it can be deduced from the Qur'an verses that the contemporary man is invited to reflect and to learn lessons from their moral, ethics and values.

Appendix.

Constructive phases of Persepolis

Construction of the site of Persepolis started with the leveling and terracing of the promontory. Depressions in the rocky base were filled with earth, rubble, and huge rough stone blocks. Part of the faÇade of the platform was cut from the natural rock and the rest was built with enormous stone slabs cut in polygonal shapes and joined without mortar but by means of metal clamps. A platform was prepared that roughly resembled a rectangle measuring some 300 x 455 m, and provided with a system of water conduits and drains extracted from the rock. The retaining walls of the northern and western sides of platform were built of huge smoothed stone slabs which arose 12m above the ground. The external fortification of Persepolis,in the form of a curtain wall of 7m hight and extended along the top of the Royal Hill, were mainly made of mud-brick. A street 320 m long and 7.5-10 m wide was created to separate the buildings on the Terrace from the eastern fortification, and the two royal tombs carved in the "Royal Hill" ; the tomb of Artaxerxes III faced the Hundred Column Hall, and that of Artaxerxes II faced the southeastern corner of the Terrace.

The archaeological complex of Persepolis is composed of important architectural monuments; Entrance and the monumental staircase, Gate of All Lands, The Audience Palace of Darius, The Palace of Darius, The Palace of Xerxes, The harem of Xerxes, The Central Palace, The Treasury, The Hundred Column Hall and other monuments.

Entrance to the terrace and the monumental staircase

The original gate to the site was from the south, through a staircase some 14 m long, which later, perhaps in the last days of the Achaemenid period, was crudely blocked with irregular slabs of reused stone; as works on the platform proceeded, a new and grander entrance was constructed towards the northwestern corner of the platform. It is a monumental double-reversed staircase, "...perhaps the most perfect flight of stairs ever built." , constructed with huge and irregular limestone blocks (often four or five steps are hewn from a single piece), dry joined with

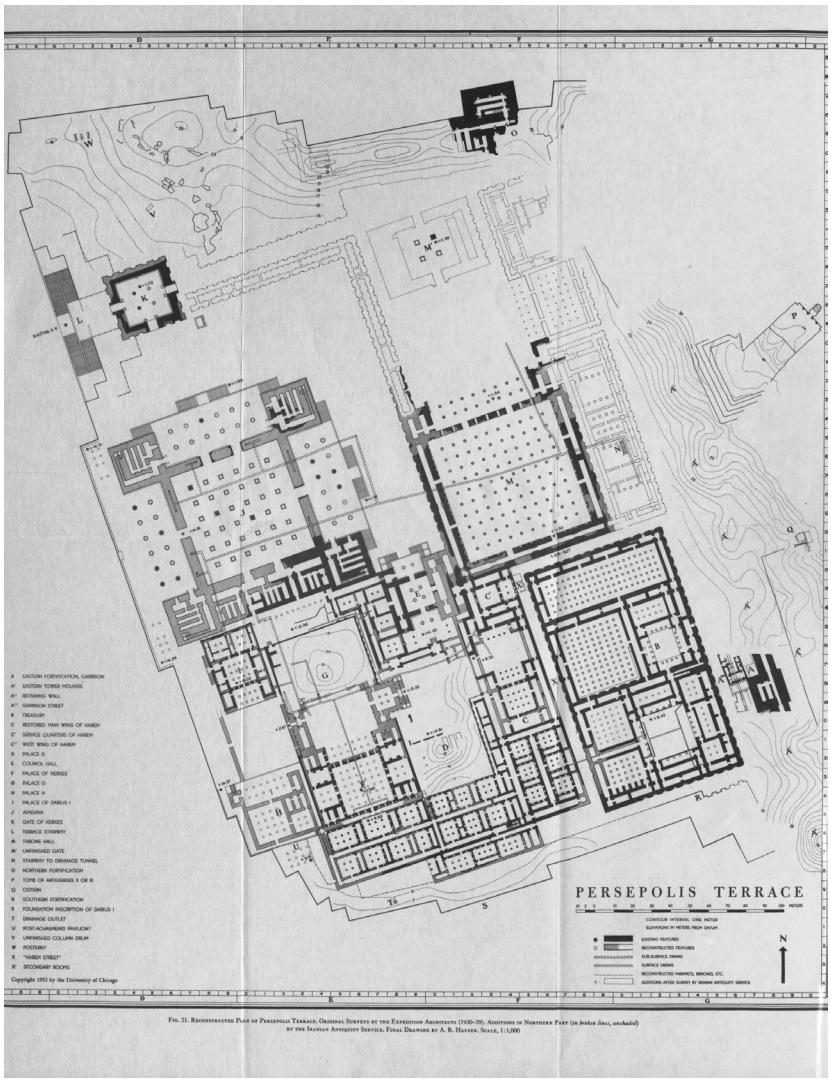


Fig. 21. Reconstructed Plan of Persepolis Terrace. Original Surveys by the Expedition Architects (1930-39). Additions in Northern Part (*in broken lines, unshaded*) by the Iranian Antiquity Service. Final Drawing by A. R. Hauser. Scale, 1:1,000

roughly rectangular-shaped metal clamps used during the reign of Xerxes; each staircase is made of sixty-three steps, each one 6.70 m long, 10 cm high , and 38 cm width; each flight starts at one end of a pavement of huge well-polished gray limestone, ascends for sixty-three steps, reaches a landing place, turns 90 degrees into an open space, again turns 90 degrees and ascends for another forty-eight steps until it converges with the other at a second landing place 12 m above the ground in front of a building called the "Gate of All Lands."

Gate of All Lands

The "Gate of all Lands" was a four-columned square hall with three stone doorways, a western entrance, and one eastern and one southern exits. It is also called the "Gate of Xerxes", because it was completed by Xerxes; "Gate of all Lands" is situated in 22m on the inside of the terrace edge above the Entrance stairways; the Each of these 4 columns, almost 16.5m high, was composed of five elements: a bell-shaped and vertically fluted base, a discoid torus, a cylindrical shaft vertically fluted and adorned in the upper section with volutes, palmettes, rosettes, and lotus decorations, and, finally, a capital shaped as two addorsed kneeling bulls, decorated with rosette patterns. Cedar beams resting on the back of the double-headed bulls supported the roof.

The jambs of the eastern doorway of the "Gate of All Lands", ornamented with human-headed bulls, faced toward a passageway 92m long and 9.70m wide which was called "Army Street" and led to the "Unfinished Gate" in front of the forecourt of the Hundred Column Hall. The southern doorway opened into the forecourt of the Apadana.

The Apadana or the Audience Palace of Darius

The largest and most imposing palace of Persepolis was the audience palace, or Apadana which is situated in the centre of the terrace on the western side. Apadana was a main square hall of 60 x 60m, stood on a podium 3 m higher than the level of a spacious open court extending to its north and east. The height of Apadana was almost 22m. More than the main hall Apadana had thirty-six columns with 19.50m of height which assisted in supporting the roof , three porticos (each with twelve columns) on the north, west and east sides, four four-story corner towers, and a series of storage and guardrooms on the south. Of the columns once supporting the roof of the palace, only thirteen were still standing in 1977.

The access to the Apadana was thorough a two double-reversed staircases on the north and east; each one 81.67 m long, divided into three parts of equal length, and surmounted by four-stepped crenelations. The facades of both staircases are exquisitely ornamented with almost identical friezes, and bear inscriptions of Xerxes. The north stairway has been exposed since antiquity to natural elements and stone pilferers, but the eastern was discovered in 1933 during the excavations of Ernst Herzfeld.

The Palace of Darius (the Tačara)

Tačara is the oldest palace of Persepolis which was built by Darius in the south of the Apadana on a platform 2.20-3.00 m. higher than the level of the Apadana. The Tačara has a rectangular plan which measures 40x30 m, and faces a southern courtyard, connected to the Tačara by a double reversed stairway. It consisted of a main hall with twelve columns, two smaller columned rooms on the north, a columned portico on the south, and several chambers and guard-rooms on either side. The entire building was paved with red-surfaced flooring like that used in the Treasury, which was a characteristic feature of Darius' constructions.

The Palace of Xerxes (the Hadiš)

Xerxes' private residence (called hadiš in one of its inscriptions) was twice the size of the Tačara and stood on a platform hewn from the natural bedrock 18m higher than the level of the plain. It had a thirty-six columned square hall connected by a doorway to a long balcony on the south which gave a panoramic view of the plain from behind four-stepped crenelations, by another pair to a twelve-columned portico on the north, and by two more to flanking apartments each consisting of a four-columned hall, storage and guardrooms, and a tower .

The harem of Xerxes

The harem of Xerxes is a structure built to the west of the Treasury; a two winged building consisted of the : a "service quarter," a rectangular courtyard, a portico with eight columns (2x4 rows), a main hall with twelve columns (3x4 rows) and several adjoining chambers, and a number of identical units, each forming an apartment with a four-columned hall and one or two side-rooms and storerooms, on either side of a long corridor. The entire floor of the building rests on the natural bedrock. The walls were of mud brick, the columns had wooden cores covered with highly colored and decorated gypsum plaster, square (not bell-shaped, as those of the restored building), bases, and double-headed bull

capitals. The entrance to the main hall was from the south.

The "Tripylon" or Central Palace

The "Tripylon" or Central Palace" is located in the center of the terrace on a platform 2.60 m higher than the level of the Apadana courtyard. Its main hall (measuring 15.46x15.46 m) had three entrances, four columns, and walls of sun-dried bricks faced with glazed tiles or coated with colored gypsum plaster. The eastern entrance of the Tripylon was through a corridor flanked by a guardroom on the south and an anti-room on the north and linked by a narrow staircase to the Harem and to the Hundred Column Hall.

Another entrances opened into a north portico and a third into a south portico and through it into a small courtyard linked by means of a small stairway to the area east of the Hadiš.

The Treasury

Darius built the treasury along a west-east long axis (120 x 60 m) on the southeastern corner of the Terrace and then enlarged it northwards and later Xerxes extended the building northward and gave it its final shape, a fortress-like structure surrounded by a thick mud brick wall pierced with a single entrance at the northeastern corner. The columns of its various halls rested on square double plinths or discoid slabs mounted on square plinths, and had wooden shafts covered with ornate and brilliantly colored gypsum plaster.

The Hundred Column Hall and other monuments

The Hundred Column Hall is the second largest palace of Persepolis and is located to the north of the Treasury and east of the Apadana courtyard. The main feature of The Hundred Column Hall was a square hall measuring 68.50x68.50 m, provided with ten rows of ten columns, each nearly 14 m high and composed of a bell-shaped base, a discoid torus, a fluted cylindrical shaft with elaborate floral elements, and a double-headed bull capital.

Two monumental doorways opened into a north portico with sixteen similarly composed columns (but surmounted by double-headed man-bull capitals) and flanking pillars that were ornamented in high relief with the foreparts of a bull projecting north-wards, facing the visitors of the portico.

Another pair of monumental doorways opened into long narrow vestibules on the south, and two smaller pairs opened into a

narrow vestibule on the west and a series of guardrooms and storage chambers on the east. There were also five windows and two niches in the north wall and two windows and three niches in each of the other three walls. Thus the hall received limited but adequate light.

[illegible]	WORLD HERITAGE LIST N° 114
[illegible]	A) IDENTIFICATION
[illegible]: Persépolis	Nomination: Persepolis
[illegible]: Province de Fars	Location: Fars
[illegible]: Iran	State party: Iran
[illegible]: 9 Mai 1979	Date: May 9, 1979
[illegible] DE L'ICOMOS	B) ICOMOS RECOMMENDATION
Que le bien culturel proposé soit inscrit sur la Liste du Patrimoine Mondial.	That the cultural property proposed be included on the World Heritage List.
[illegible]	C) JUSTIFICATION

Persépolis, fondée par le roi Darius Ier en 518 av.J.C., était la ville dynastique par excellence, le symbole de la monarchie achéménide, ce qui lui valut d'être incendiée par les Grecs d'Alexandre en 330 av. J.C.. Ce qu'il en reste aujourd'hui, c'est l'immense terrasse en pierre (530x330 m.) mi-naturelle, mi-artificielle, qui, adossée à la montagne, dominait la ville. Là, comme sur un piédestal, les rois achéménides Darius (522-486 av.J.C.), son fils Xerxès (486-465 av.J.C.) et son petit-fils Artaxerxès (465-424 av.J.C.) avaient édifié un splendide complexe palatial : propylées, salles d'apparat et appartements privés donnant sur des cours reliées par des couloirs à chicane, suivant les modèles mésopotamiens. Comme en Mésopotamie, le matériau principal était la brique crue, mais la pierre de taille, largement utilisée pour les éléments porteurs (jambages et linteaux de portes, chambranles, allèges, bases,

Persepolis, founded by the king Darius I in 518 B.C., was the example par excellence of the dynastic city, the symbol of the Achaemid dynasty, which is why it was burned by the Greeks of Alexandra in 330 B.C. What remains today, dominating the city, is the immense stone terrace (530 meters by 330 meters), half natural, half artificial, backed against the mountains. There, as if on a pedestal, the Achaemid kings, Darius (522-486 B.C.), his son Xerxes (486-465 B.C.) and his grand-son Artaxerxes (465-424 B.C.) built a splendid palatial complex : propylaea, formal halls, private appartments opening into courts linked by staggered corridors, based on Mesopotamian forerunners. As in Mesopotamia, the principal building material was dried brick; yet, the ashlar, mainly used for supporting elements (jambs and lintels of doorways, casings, window-breastings, bases and capitals, etc.), for monumental doorways

- 2 -

chapiteaux etc...), pour les portes monumentales, pour les vastes surfaces sculptées, a heureusement survécu aux atteintes du temps.

L'ICOMOS recommande l'inscription sur la Liste du Patrimoine Mondial au titre des critères 1, III et VI.

I) La terrasse de Persépolis offre le spectacle d'une grandiose création architecturale avec son escalier d'accès à rampe double, ses murailles recouvertes de frises sculptées sur plusieurs registres, ses propylées cantonnées, à la mode assyrienne, de gigantesques taureaux ailés, les vestiges de ses salles immenses. L'allègement concerté des toitures et l'emploi de linteaux de bois permirent aux architectes des Achéménides le recours, dans des espaces dégagés, à un nombre restreint de colonnes, étonnament élancées (1,60 m. de diamètre pour 20 m. de haut environ) sur leur base campaniforme et coiffées de chapiteaux typiques où, au-dessus de volutes doubles, deux avant-trains de taureaux agenouillés, dos à dos, tendent leurs nuques accolées et leurs têtes jumelles à l'entrecroisement des poutres du plafond.

III) Cet ensemble d'accès solennels, de rampes monumentales, de salles du trône (Apadana), de salles de réception et de bâtiments annexes se classe parmi les très grands sites archéologiques du monde, de ceux qui n'ont point d'équivalents et délivrent un témoignage d'une qualité unique sur une très ancienne civilisation.

VI) La terrasse de Persépolis reste, comme l'avait voulu son fondateur Darius Ier, l'image même de la monarchie achéménide, le haut lieu où réapparaissent inlassablement les effigies semblables du roi, ici vainqueur d'un monstre, là porté sur son trône par ses ennemis défaits, où s'allongent sans fin les longues cohortes sculptées de guerriers et de gardes du corps, de dignitaires, de porteurs de tributs.

and for vast sculpted surfaces, has happily survived the vicissitudes of time.

ICOMOS recommends that this cultural property be inscribed on the World Heritage List on the basis of criteria I, III and VI

I) The terrace of Persepolis, with its double flight of access stairs, its walls covered by sculpted friezes at various leve contingent Assyrianesque propylaea , the gigantic winged bulls, and the remains of large halls, is still a grandiose architectural creation. The studied lightening of the roofing and the use of wooden lintels allowed the Achaemid architects to use, in open areas, a minimal number of astonishhingly slender columns (1,60 meters in diameter vis à vis a height of about 20 meters They are surmounted by typical capitals where, resting on double volutes, the forequarters of two kneeling bulls, placed back-to-back, extend their coupled necks and their twin heads, directly under the intersections of the beams of the ceiling.

III) This ensemble of majectic approaches, monumental stairways, throne rooms (Apadana reception rooms and annex buildings is classified among the world's greatest archaeological sites, among those which have no equivalent and which bear witness of a unique quality to a most ancient civilization.

VI) The terrace of Persepolis continues to be, as its founder Darius Would have wished the image of the Achaemid monarchy itself, the summit where likenesses of the king reappears unceasingly, here as the conquero of a monster, there carried on his throne by the downtrodden enemy, and where lengthy cohorts of sculpted warriors and lifeguards dignitaries and tribute bearers parade endlessly.

ICOMOS, Paris.

Registration of Persepolis in the index of World Heritage in 1979 by ICOMOS
Digital archive of ICOMOS.

Index of abbreviations

DAFI Délégation Archéologique Française en Iran

FDA French Délégation Archéologique

IsMEO Istituto Italiano per Medio ed Estremo Oriente

MAI Mission Archéologique en Iran

MAP Mission Archéologique de Perse

NMC National Monuments Council

NOCHMI National Organization for the Conservation of Historical Monuments of Iran

Bibliography per chapter

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