

POLITECNICO DI MILANO
SCUOLA DI ARCHITETTURA URBANISTICA INGEGNERIA DELLE COSTRUZIONI



Return or Change
Syria Post War Urban & Cultural Reconstruction Strategy
The case of Palmyra

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“Every human being has two homelands: his homeland and Syria.”

“Chaque être humain a deux patries: son pays natal et la Syrie.”

(Gourmellet, 2015) l'archéologue André Parrot

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Chapter I Introduction

1.1 Defined the research problem

In wartime, cities suffer from damage and destruction. This is the case of Syria in the last years due to the ongoing war. Some of Syria's most important cultural Heritage have been damaged or destroyed, leaving many outstanding heritages in ruins. Even though many sites can be recovered and restored in the post-war reconstruction phase, other sites have reached a damaged that are difficult to be recovered because its losses had a devastating effect on the society. The cultural heritage and the society are linked together. The cultural heritage represents the identity of the society however the cultural heritage nor the society can exist without one another.

Currently, people have already started to give proposals for the post-war reconstruction, and when those given proposals were evaluated, we found that there is the risk of losing the authenticity of the cultural heritage and being a victim of propaganda. In order not to fall into the propaganda trap there is the need to understand the meaning of the cultural heritage for eastern. Moreover, there is the need to have and to collect the sufficient knowledge about each heritage before giving any proposal, so we understand its authenticity and to differentiate the authentic parts from the ones that are not. Moreover, there is a need to understand what we need to preserve. Is it the authenticity? The symbols? Or the country's identity?

Cities over time can be destroyed for many reasons and when we need to start to reconstruct there is a need to study, to conduct research to understand each of these cities as a separated because case because each city has its own identity and moreover if the reason behind the destruction is war then it really considered them as unique case because there is no specific templet to know how are we going to reconstruct. In addition, the question to ask is what is the lesson to learn? And is it an opportunity to return or to change?

I.II Object of the research & Methodology

The study will concern the outstanding Syrian heritage, and the cities affected by war. With a debate to understand what is paradoxes and what is a reality. Taking the case of Palmyra, deliberating the technical issues of the choices of post-war reconstruction by debating the 3D copying and anastylosis. Moreover, understanding that the problem is not related only to technical implication, but it is a choice of multiple implication on the destiny of post-war Syria. The study will also concern the importance of the taking the choice of involving people in the recovery of their cities. Taking as a lesson to be learnt the understanding of the cultural identity and the opportunities that an archaeological site will give to a living city, so we arrive to a sustainable management of the site and to turn the destruction into a place for development.

As a methodology, I will go through the meaning of the heritage for western and for eastern, so we have a better understanding for the meaning of the cultural heritage within different societies, and understanding the implication of the societies, in addition, to understand the cultural identity.

Moving to the case of the war in Syria, where the propaganda has embodied the truth, which will emphasise why a scientific study is a must to poof the “real” truth behind the destruction.

After choosing Palmyra as a case study, I have felt the need to go to Syria to get some documentation and information and with the aim to go to Palmyra for a field trip. As well, to interview people who are involved with the post-war reconstruction. Then I have worked with the Politecnico di Milano, that is currently working in collaboration with the AKTC for the post-war reconstruction of the city of Aleppo, on the documentation of the current situation of Aleppo. After I have worked on Aleppo, I have understood the importance of emphasising the type of damages that happened to different cities where the media speaks about specific cities. However, there is the need to look into a wider dimension in order to not lose the reality, and there is a need to understand that there are multiple types of destructions where each of them are affecting the cities and the society. As well, we need to understand rich complexity of the cultural heritage that is full of diversity. For these reasons, I have taken the example of Aleppo, Apema, Bosra, Dura Europos, and Palmyra; where all of them were on the ancient trade road and had a notable historical importance.

Taking Palmyra as a case study to understand the loss of the cultural heritage. And by raising the question of how much did we lose the authenticity of the place? Did we lose the valuable monument? Or did we lose the reconstruction? Is it the loss of a symbol or is it the loss of an authentic? Therefore, I have done a timeline showing all the historical developments and the recent past when Palmyra has been discovered and preserved. Studying in detail all the phases of the Triumphal Arch/Monumental Arch of Palmyra, in order to understand its authenticity and afterwards taking the 3D replica of the Palmyrene triumphal Arch that has been reproduced lately in Italy and debating how the choice of approaching the technology in such a way could lead to a loss of identity and authenticity of a place by debating the 3D totalitarianism and authenticity. Moreover, I emphasised the difference between using the same technology in another situation could make the difference, taking as an example Serial/portable classic exhibition. Arriving to the argument of how we can preserve the authenticity of the destroyed cultural heritage, and why reviving a lost identity is needed. Finally discussing the socio-economic problem and the eco-tourism in Syria, in order to arrive to sustainable development and turn the destruction into an opportunity. With having an open finish of possible choices to be made in order to return or change.

Chapter II Heritage concept

II.1 Defined heritage concept

There is really no such thing as heritage. The heritage is a multi-layered performance; it is a social and cultural process and it is a political one (Smith, 2006). Heritage Studies involve a multi-disciplinary approach that has developed over time and has been already discussed in various regional and universal perspectives in social sciences or disciplines of arts. A lot of theories deliberate the meaning of the heritage. George Orwell's stated that: "who controls the present controls the past", where it is clear in his quote in which way the heritage used with a perspective for the future (Harvey). Larkham argues the concept of heritage is "all things to all people" (Larkham, 1995). While Johnson & Thomas noted that the heritage is "virtually anything by which some kind of link, however tenuous or false, may be forged with the past" (Harvey, 2001). Generally speaking it is difficult to give heritage a specific meaning. A meaning that could be acceptable in all over the world (Larkham, 1995), (Harvey, 2001). Harvey also deliberate the idea when the heritage was heritage? Noting that it is part of the human condition to construct concepts of identity for individual and group; it is the use of the past (Harvey, 2001). However, we always transform the past to respond our needs in the present, moreover our hope in the future. We use the past, and we misuse it. Where every memory and every conflict make the past a foreign country, Lowenthal said "The past in the Internet age has become more intimate yet more remote, readily found but rapidly forgotten" (Lowenthal, 2015). The history of heritage is a history of the present, because it is as well a historical narrative of an infinite succession of the present, a heritage of heritage that can have no terminal point (Harvey, *The History of Heritage*). Thus, the studies of the Cultural Heritage are associated with the past of the human being, which is ensured or suspected to exist in the present for future material and immaterial forms. It is necessary to define and verify the notion of Heritage values and the various parameters for assessment of Cultural Heritage, the testimony of Authenticity that is also significant many ICOMOS charters (Smith, 2006). As Riegler deliberates about the value of a monument, he understood the value of a monument, in the oldest way to say it. The monument is the work of a man who created it for a specific purpose, and it is still present with the realisation of the new generation. What we call historical is all the thing that once were and are no longer. Thus, it has an age value, which in our time it is a fundamental aesthetic principle. In a narrow sense, the age value is different from the historical value. The age value is more attached to a group of people as it is accessible to the emotions because of its significant value. Instead, the historical value is an individual stage that the monument

represents responding to the human creation, and for this value, all the original document should be preserved (Riegl, 1903). Fundamentally, two different conceptual recognitions differentiate heritage theories and encourage to considering Heritage as a subject matter and object of the human society. The tangible heritage can be transformed into intangible heritage, in other words, through understanding, experiencing and imagining by using the human senses. Such a transformation becomes an indicator and parameter to justify and evaluate the contemporary scenario. Senses are also constructed about tangible heritage by adopting the intangible sources of inspiration and knowledge. It is acceptable that heritage is the place where individual/collective memories are joined as identities of the heritage. The idea of memories of a place exists with the same possibilities that it can be forgettable (Smith, 2006). Memory is not trustworthy as history that is composed of facts within an authorised narrative. However, the authorised theory is constructed by collecting the data for assessing the level of memories of the people toward heritage. Moreover, memory can be understood as an absolute existence, and an active cultural process of remembering and of forgetting that is fundamental to our ability to visualise the world (Miształ, 2003). Memories depend on the history as acknowledged with the following words: “The past can never be understood solely within its terms, the present constantly rewrites the meaning of the past, and the memories and histories we construct about it within the context of the present”. Relationship of collective memory and history also has some difference, for instance, collective memory reflects the committed perspectives and belongs to one specific group, rather than other people. On the other hand, history has separated the past from the present. As stated by Smith in 2006: “The ability to equate tradition and memory to material items provides powerful authenticating ‘common sense’ legitimacy” (Smith, 2006).

II.II Defined the nature of the heritage

II.II.I Heritage of experience

The Heritage is linked through an experienced mental association of a human with their past and their attitude, crossing through their history. According to Smith, the stories and histories that have been told about a place that is considered a heritage, they persevere in the memory of the humans as much as the site itself. The heritage must be experienced by people to become a heritage. In another way, the use of these sites is what has made them heritage. It is not the existence of a site, but rather it is the act of passing the knowledge in the correct cultural context. Heritage also involved an

importance value of remembering. With the act of experience, meanings have been created, and new meaning was created while experiencing. It is creating the identity, the memory, the place. It is creating the meaning of the heritage (Smith, 2006). A historical object that contains the specific memories and history can be imagined and experienced. According to Harrison "Objects of Heritage are embedded in an experience created by various kinds of users and the people who attempt to manage this experience." (Harrison, 2010). The level of the experience depends not only on its intangibility but also on the understanding of information. Therefore, Jordanova says that "We understand the past, not by spuriously re-experiencing it, but by turning over many kinds of evidence relating to it and by generating from this understanding which inevitably has a strong intellectual, that is, abstract component (Jordanova, 1989). Thus, the level of understanding lies on the several factors to create the experience of the past which are authentic or less authentic depending on the individual or collective perceptions of the past. Perception and expectation from the history generate the sense of the experience of the past in the present. Thus, one past and many histories are the cause of various interpretation of the past of one place is discriminated and distinct the actuality and truth of the past in present society (Jenkins, 2003). Furthermore, Harrison argues that: "Heritage is an effective process which includes competition over whose version of the past, and the associated moral and legal rights which flow from this version of the past, will find official representation in the present".

II.II.II Heritage of identity

Identity, as Lowenthal argues, Like history, it enhances feelings of belonging and continuity. The literature heritage concept of identity is different than the one that appears now; identity is being constructed, reconstructed and contested. In another way of saying, as Corsane argue, a group or individuals, have layered identities and may belong to any number of communities. Further, any community may within itself have layers or range of sub-community identities. The indigenous identity has been transformed into ownership, who owns, and who controls the past, in another word who control the meaning and a value of heritage, having the power to control and give meaning to the past with raising a statement of identity and authority. It has become the political identity of heritage. the power identity of the nation, of nationalising uses of heritage. The identity of heritage has become a tool. As Nancy Fraser describe, recognition or misrecognition of identity and cultural

value is politically powerful and harmful. Certainly, it is well known the value of the heritage, what is representing which is giving his identity. But the way the heritage is used has articulated regarding national identity (Smith, 2006). Even a modern building which has participated in the construction of memory/history its become part of our identity that in another sense of belonging to cultural heritage (Canziani).

II.II.III Heritage of memory

We normally think about a heritage by itself, an item, by its fabric, by its site, but heritage it is not a site, it is not a thing. Rather it is the activities that are happening around the site, and inside it, it is the engagement of the act itself, it is a cultural process that engages with the memory of that work, which created this space. It is the past that is engaging or reacting in the future (Smith, 2006).

There are as many memories as there are groups, that memory is by nature multiple and yet specific; collective, plural, and yet individual. History, on the other hand, belongs to everyone and to no one, whence its claim to universal authority. Memory takes root in the concrete, in spaces, gestures, images, and objects; history binds itself strictly to temporal continuities, to progressions and to relations between things. Memory is absolute, while history can only conceive the relative (Nora, 1989).

History and memories are different; history is composed of facts that have happened and told in an authorised narrative. That differentiate between the past and the present. While memories are subjective and not always trustworthy, memories are not an object; they are a cultural process of forgetting and remembering. Where the past is continually rewritten in the present using our own terms. Thus, Urry, debate," in the context of which the past is being continually re-created, there is no past out there or back there". There is only the present, However, there is not only one kind of memory (Smith, 2006) , the observation that "all memory is a memory for something" (Harvey, The History of Heritage) Memory is a combination of emotions that could be seen differently, and the memory connected to heritage is a collective one, a social one. A memory in a sense it is a collective memory that a group of people will create to have an identity to them self through a shared memory. That provides belonging; it is an identity formation. And it rarely considers the historical continuity. However, argue the memory of the site, that is oppositional to a collective memory that a ignores the national form of remembering. The sites memory defines the inner character of race and nation.

While also the nation could be imagined as Anderson's argue. This does not make any kind of memory false. But it is only highlighting that memory is forgetting the cultural process. Therefore, heritage has become both a cultural heritage moreover, part of a memory process of creating and recreating meaning through remembering (Smith, 2006). However, Petzet argue, If "everything which reminds us of something" can be a "monument" according to the definition in a late classical commentary on Cicero (*omnia monumenta sunt quae faciunt alicuius rei recordationem*) the public interest in protection and conservation of "objects of remembrance" can be very comprehensive and range from the authentic spirit of a holy place, possibly only tangible in weak traces, to witnesses of the past made of a seemingly indestructible material (Petzet, 2004). Furthermore, explains that ignoring many aspects of the social nature of memory is the difficulty of remembering. While these ideas have its way to understand the uses of heritage (Urry, 1996). However Paul Connerton said moments of memory are recalled, the human body remembers through the ability of performance, he notes " we may not remember how we learnt swimming, but the memory of swimming lies on the act of swimming"(Connerton, 1991). In conclusion, the idea of collective memory is engaged with the performance of remembering (Smith, 2006) Also, the sense of purpose with which people 'remember' the past serves to underline the importance of understanding how people situate themselves concerning the future. In this respect, heritage may be understood regarding prospective memory, as tokens that represent the desired future reflecting both future pasts and past future (Harvey, *The History of Heritage*).

II.III Heritage meaning for Eastern



Maison Bonfils, Palmyra, Sculpture of a Capitol, Syria. c. 1867-1899, LOC 04381

In the 19th century, a local photographer from Beirut had taken a shoot to a local boy sleeping on the ruins of Palmyra; the picture is showing how the people owned the site, through the fact of living there; the picture reveals the relationship between the site and how locals experienced it through their daily life (Wendy, 2015). Heritage, as it has been explained before, is a perception by communities, so it is very important to understand which is the approach to heritage in eastern culture and especially in Syria. My investigation on Palmyra started back in April 2017. I have conducted a trip to Syria where I carried out a series of interviews. Speaking with a range of people some of them they were able to answer me in an objective way, others were subjective as memories and emotions controlled them. Moreover, when I visited the national museum of Damascus, where there is this small café where you can sit in the courtyard of the museum, meeting Khaled Al-Asaad youngest son Tarek and his brother in Law Khalil al Hariri. Multiple hours passed speaking about

Palmyra and how people lived there. At one point Al Hariri said: "the columns now seem pale, they miss the people around them... it is normal for a local to go to the Archaeological site and have there a cup of tea at night or in the morning. In another metaphor, breakfast in the ruins". As well Al-Najati; the General Manager of Tourism and Technical Training Authority said: "the Tadmorians (people of Palmyra) considered this heritage not only as their source of living, but they consider it as their home. Even that they live just next to the archaeological site, they were always going for a walk at night between the ruins". Carrying on with the Syrian the journalist Maher Al-Mounes, that has gone to Palmyra multiples time during this period. Al-Mounes describes the heritages as the symbols of Syria; it is a world heritage that is located in our land. No matter if it is Palmyra, Aleppo, or Damascus all of them represent the identity of Syria, no one can ignore that this war is a cultural war as well, and the easiest way to destroy an identity is by destroying its symbols. However, people will always want to go back to their homeland. Also, Alrifai, the President of the Central Heritage Committee of the Syrian Engineers Syndicate; emphasised this point by saying: "I want to point out the difference between the meaning of a monument and the meaning of heritage, I consider Palmyra not only a monument, but it is our cultural heritage. The difference between both is that the monument has an ancient cultural value, it like when you go to visit another city to see the monument in this city but when those monuments are located in patriotic then they will be called heritage because they express the cultural roots of the land followed by its name Syria. Moreover, a discussion with Maher, about his visits to Palmyra; asking if did he notice that the meaning of the heritage has changed for the local after what has happened. He told me in March the 27th 2016; it was the first time he went to Palmyra. The city was a city of ghost and what has stuck in his mind that an old man was going directly to the archaeological site and Maher asked him you do not want to see what happened to your home? He told him: Son; this heritage is the reason why I exist, if they are still here I will build my house again if it is gone there is no reason for me to stay. On the other hand, he met another man who has lost his two children, he went to his home which has also been destroyed, he said what is precious for me is gone, now I do not care about anything. In another way of saying the meaning of the heritage has changed for the people after the war. A lot of people would say, a stone is not more important than a human. I would say no; today for these stones thousands of people have died. Human represents themselves while a single rock is representing the humankind and a history. In wartime, you would see families refusing to leave their houses until the last breath, where they have lived in this house

for twenty years. So, what can you think about a whole history? In Syria, you will see that the oral heritage has been preserved maybe even more than the cultural heritage itself. And the heritage has become what it is bypassing the knowledge into a cultural context. Heritage has been felt, has been experienced, has become an identity. Regardless if people were still living in Syria, or they have left. The Heritage is linked with their cities, with their life, with their belonging. In an article, in the Guardian with Amr al-Azm, former head of Syria's conservation laboratories he said: "I always say that people without their heritage and history are not people. Preserving heritage is as much about preserving Syria as preserving its people." Wishing that one day he will be able to take his children, to see their heritage not experience it through images (Shaheen, 2015). These meaning is clear when you see, that a group of Syrian refugees, in Al Zaatari camp in Jordan, has been gathered to educate children in the camp about their homeland. Explaining that their identity it is important to them, and they do not want it to be erased. Ahmad Hariri a former art teacher working on the model of Palmyra, used any materials that could help him to finish his model including food wooden sticks. He said that the aim is to preserve the history of our ancestors and it is our right, moreover is to introduce the Syrian's civilization and history to the next generation of children (Segal, 2016) (Dunmore, 2016).



The model of Palmyra created by the Syrian artist Mahmoud Hariri, using clay and wooden kebab skewers.
Photograph Christopher Herwig UNHCR



Umayyad Mosque of Damascus. © UNHCR
Christopher Herwig



The Citadel of Aleppo. © UNHCR Christopher Herwig

Thinking about Damascus, another example is the two Damascenes sisters currently living in Paris described Damascus as a deep cultural heritage rooted in every corner of the city. Heritage and history are not only in the soul and atmosphere of the city, but it also lives in the memory of the citizens. “Everywhere you go, you are living with history”. Memories are in each stone. While every stone may have its history, some intangible aspects of cultural heritage are used in everyday life in Damascus (UNESCO, 2017).

Me as a Syrian woman, I would say from a personal point of view; the way we think about heritage is different from the way that the western does. Maybe it is a matter of management of heritage site. But Syrians lives their heritage every day. We perform our life within the heritage site. It might be weird, but rarely in Syria, you will see a historic area that you will need to pay to enter. Each place will have its own tells to tell, Rather than to seek the meaning of the place; the meaning will be created by the remembrance and the performance of each local within site. We care about heritage, not only because of it is history, We care about it because it creates a continues history of each new day. We care because it means to us personally before its means nationally. When you are Syrian, you will always feel that you are just engaged to the place. You will experience it, live it, remember it, moreover taking care of it. In another way of saying an ancient architecture as part of everyday life. We live out our heritage. We gather memories. “heritage is in our culture” As Amayri said in his interview, “ eastern and western are opposite. We are never going to be the same way as western; we have a different language, a different way of thinking about freedom, a different way of thinking about the meaning of the things, a different way of thinking about a lot of issues as referred by Samuel.P. Humtigon said The West Unique, Not Universal.

Chapter III Syria Cultural Heritage in Wartime

III.I Introduction Paradoxes or Reality

The propaganda during times of war has a long history. Not long time ago, it was not easy to distribute propaganda across people as there was a need to have someone physically producing propaganda, bringing the necessary tools to film and to project (Susan Herring, 2015). Nowadays creating propaganda became easier and the Syrian war propaganda is a living example of it. Plenty of publicity has been produced during the conflicts in Syria. The news of the war was transmitted live and published in real time into the media through Facebook, YouTube, and Twitter. Propaganda has benefited from the ease of access to the Internet where every side played a role in the Syrian war propaganda. Thus, this has made it difficult for people to understand and to differentiate what is authentic and what is not. However, at first, what we need to understand is where propaganda comes from.

The term propaganda came out of the promulgation of religious doctrine rather than the advocacy of scientific reason. And this term has developed pejorative connotations through its political usage, especially through a time of wars. In 2004 Johnson-Cartee defined the two kinds of propaganda, he argued the disintegrative propaganda and the facilitative propaganda. The first one is designed to destroy solidarity, while the second one is intended to encourage receptivity among viewers. In another word and as stated by Jowett and O'Donnell in 1989 propaganda is: "the deliberate, systematic attempt to shape perceptions, manipulate cognitions, and direct behaviour to achieve a response that furthers the desired intent of the propagandist." (Mason, 2017). Thus, propaganda aims to demonise the enemy, by the use of repeated atrocity claims, and so mobilise popular support behind the war. However, if one needs to understand the truth of what is happening, there is a need to have reasoning and principles, especially in war circumstances (Anderson, 2015). As stated by Susan Herring in 2015: "Media is more than half the battle" (Susan Herring, 2015).

Syrians nowadays wherever they travel they are exposed to a repeated question: Is it true what we see on Television?. Answering this is tricky, and one tends to be skeptical Because even if the person lives in a country where conflicts and war are present, there is no clear answer because propaganda has generated a lot of confusion and the only answer would be, it is complicated. In order to get closer to the truth, there are many aspects to take into consideration, and those aspects will be explained better in the following chapters. The truth is a must in order to achieve the reconstruction

of Syria. However, at this early stage and what really matters for the reconstruction phase is the “HOW” to do it. While I was working with Politecnico di Milano, in a documentation on a work done on Aleppo for PhD Program (Politecnico di Milano , 2017). Professor Claudio Chesi that worked on the technique of how to reconstruct the Minaret of the Umayyad mosque in Aleppo; in collaboration with the AKTC. The question addressed to me was how the minaret did fall? According to the Professor Chesi, the next stage in order to get closer to the truth is done by adapting the scientific approach and studies that will help to understand the current situation of the affected element, the old and current physical condition, and the reason behind its destruction. This study is far from any propaganda. With such a work process we will be able to arrive at a strategy to reconstruct (Chesi, 2017).

How was the minaret destroyed ?

“... I would like to apologize for my direct answer that the minaret was destroyed by the conflicts between the two sides, as this is what I knew. But after reading multiple news about it, [the real reason it is unknown, where it depends on which side of the story you are reading.](#)”

SANA: said that al NUSRA Front has put a bomb inside the minaret.

AL MARASAD AL SOURI: said that it could have been fallen by itself because of the fighting around it.

The opposite side: said it has been destroyed as a cause of multiple tank shell during the fight.

That information is written in SANA - BBC - and Discover Syria official website - ALARABIA.

It is also said that all the videos were after the minaret destruction not during the action [so there is nothing to prove.](#) “

Lilas Abdulmawla

Source: (Chesi, 2017)

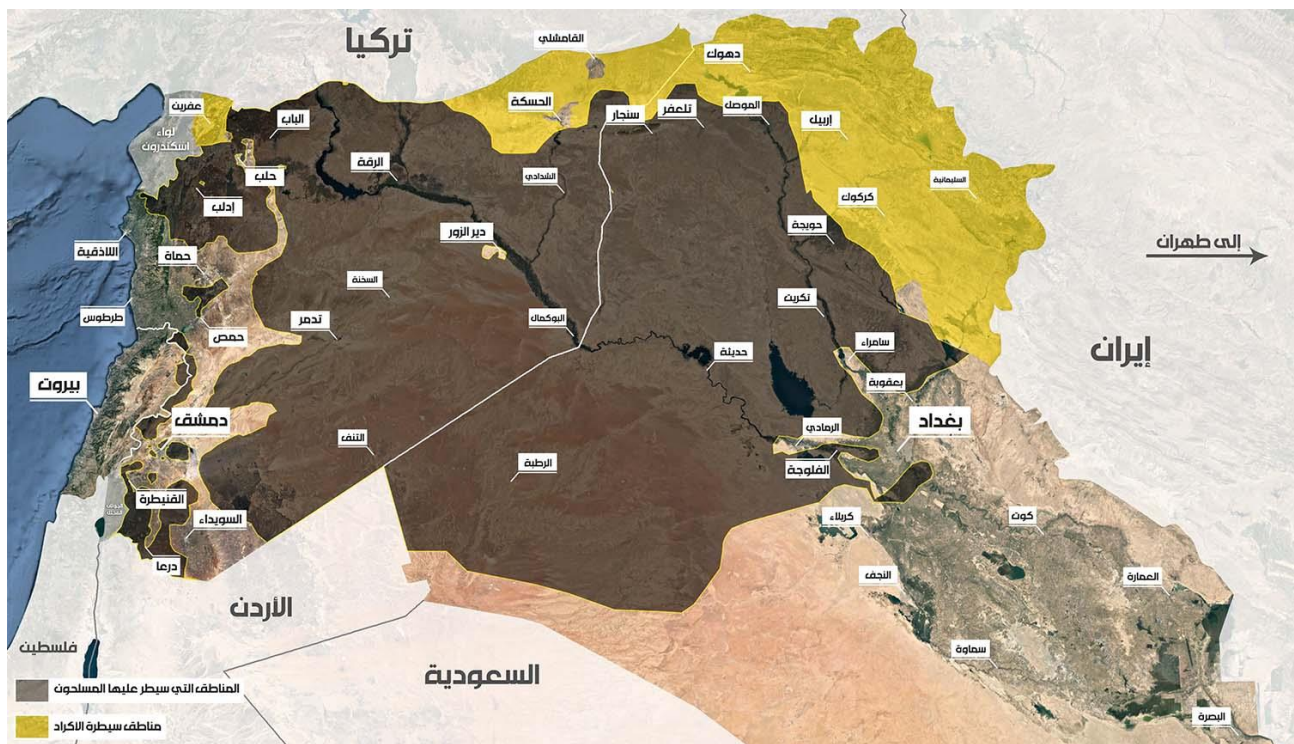
The problem of propaganda is not only that it is impacting the countries on the political aspect, but it is affecting the countries national heritage and universal heritage, and it is causing the loss of it. Palmyra is a living example of a universal heritage that has been affected firstly through the war propaganda. In an interview with Maamoun Abdulkarim, director of the museum and antiquity of Damascus, with the Guardian, he said that: “We have lost all hope. This is a cultural war, everyone should unite, whether they support the government or the opposition. This is the beginning of the complete loss of Palmyra.” (Shaheen, September 2015). Coming back to Aleppo’s case, the

outstanding world heritage has become a complete propaganda where each part is blaming the other part for destroying the Minaret of Aleppo mosque (Syria clashes destroy ancient Aleppo minaret, 2013). In the Islamic State's - well known as ISIS - propaganda network almost every case of destruction of a world heritage, it was meant to be spectacular, attracting a lot of attention, in the way of filming and the act (WATENPAUGH, 2016). But if we look at the problem in a wider dimension, we will see that the damage done on these world heritage sites only represents the most visible face of a bigger problem (Cunliffe, 2016). During the Syrian conflicts illegal excavation was widely sold to locals and to foreign dealers, and there were lots of important sites that are considered as heritage were damaged because of that. The illegal excavation regardless by whom it is done creates damages and the illegal excavation of the sites of Deir Zor, Mari, Dura Europos, Bosra, tell Sheikh Hamad, Ebla, and tell Es-Sin are a living example of destruction happened to the heritage there (DGAM, 2013). Another living example is Apamea that it is considered as one of the most affected sites as a result of the ongoing illegal excavations (UNESCO), where looting was a regularly performed during this period (Deodato Tapete, 2016). The propaganda of the media has been focusing on specific sites, where the truth is that we need to look in wider dimension to be able to realise what is happening.

III.II The current situation

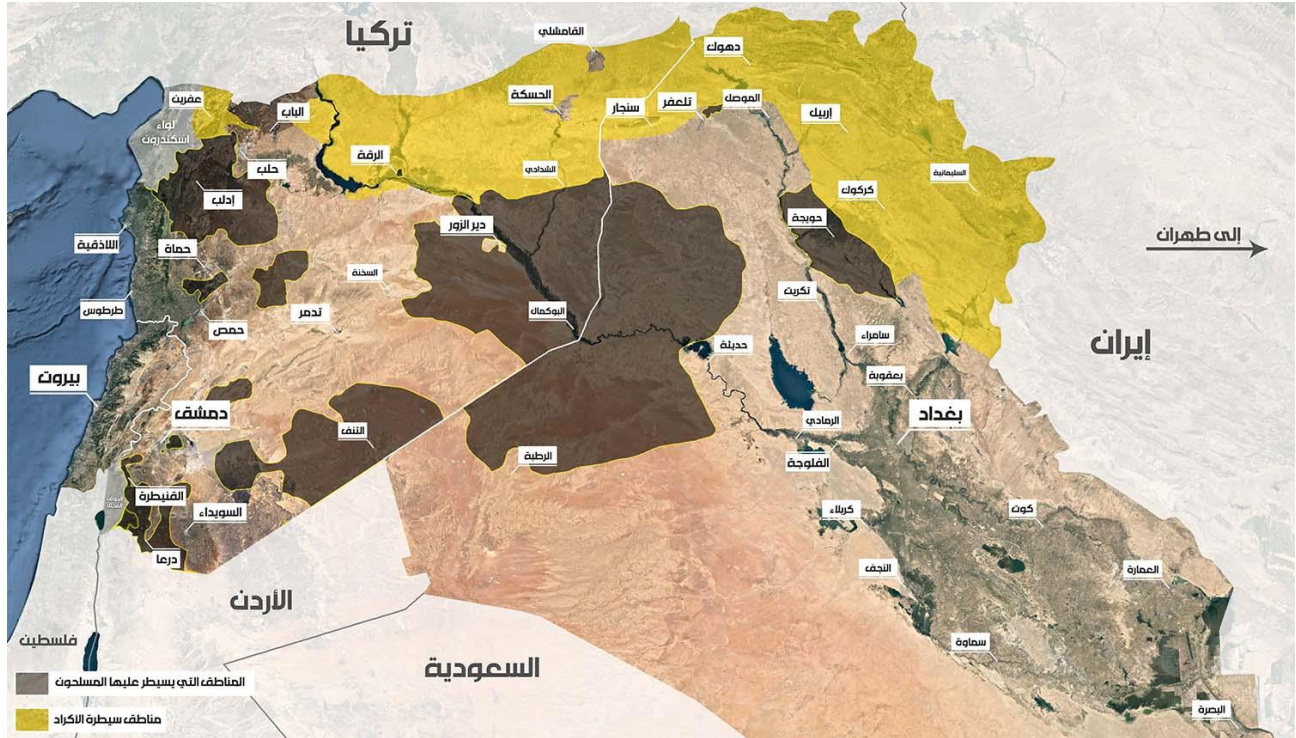
The situation in Syria where continually changing during the last six years. In 2012 the conflict turned to an armed one, which led to the fall of the state in several cities of the Syrian Arab Republic, linked with the collapse of many essential traditional services. Which has facilitated the damage to the Syrian cultural heritage (Azm, 2015).

Both sides have severed the damages on a lot of archaeological sites, some of them considered as universal value. Moreover, the satellite images taken on different sites prove the looting of lots of archaeological sites all over the country, and many of these looting where led by the local population. However, one of the most crucial aspects is the acts caused by the extremist group ISIS. When ISIS control an area, it has a clear approach for looting and destruction of the sites and its antiques (Azm, 2015).



Map1: In black, the approximate distribution of the control of the armed factions at the height of their spread within Lebanon, Syria and Iraq (during varying periods of time) (designed by Sinan Issa) (2017, الأمين)

When I interviewed Faisal Najati, he argued that ISIS_ know the important monuments of the site before they destroy it. They did not destroy the columns of the colonnade street, where they know that there are many similar ones in the world, they rather destroyed the important symbols, they were destroying the uniqueness of the site” (NAJATI, 2017). ISIS recognises the potential of looting. In 2014 they had expanded their looting, to the illicit antiquities trade, establishing the Manbij Archaeological Administration (MAA), an organisation that organises all the sale, transfer, digging operations. Stopping the highly lucrative illicit trade in antiquities is imperative not only because it is a major source of income for terrorist organisations like ISIS, but also because it causes irreparable damages to heritage just like what happened to the Syria’s cultural heritage (Azm, 2015). This beside all the destruction and explosions done “inside” the areas controlled by them, and these explosions were conducted in particular if the area has a cultural value. In the last period, ISIS controlled area has been reduced a lot. As we can see in Map 1 of 2017 in black, we see the approximate distribution of the control of the armed factions at the height of their spread within Lebanon, Syria and Iraq (during varying periods of time) and in Map 2 of August 2017 in black, we can notice how the distribution is reduced. With the hope that in the close period they will disappear. Sadly, the damages on the sites have been already done.



Map2: The approximate control of the armed factions within Syria and Iraq (design by Sinan Issa) – August 2017 (الأمين, 2017)

However, during the last period damages needed to be assessed. With the lake of possibility to have a physical survey, assessments were done based on the media that has been published online, from all the sources. Also, Reports has been submitted from the property state to UNESCO. Lately, some surveys led by the Director-General Antiquity and Museum - DGAM has been done on sites such as Palmyra, and Aleppo. In a report by UNESCO Director-General Irina Bokova she has divided the type of damages in multiples forms " Shell Damage, Gunfire Damage, Army occupation, Direct Damage with Terrorism, Looting and uncontrolled/ illegal construction and Demolition (Irina Bokova, 2012). Beside the case study of Palmyra, I will discuss the type of damages on different cities, such as Aleppo, Bosra, Apamea the city named after Seleucus I Nicator wife, Dura Europos which was named after where he has been born (joudallah, 1999). Map 3 shows the location of the studied cities and their link with each other.

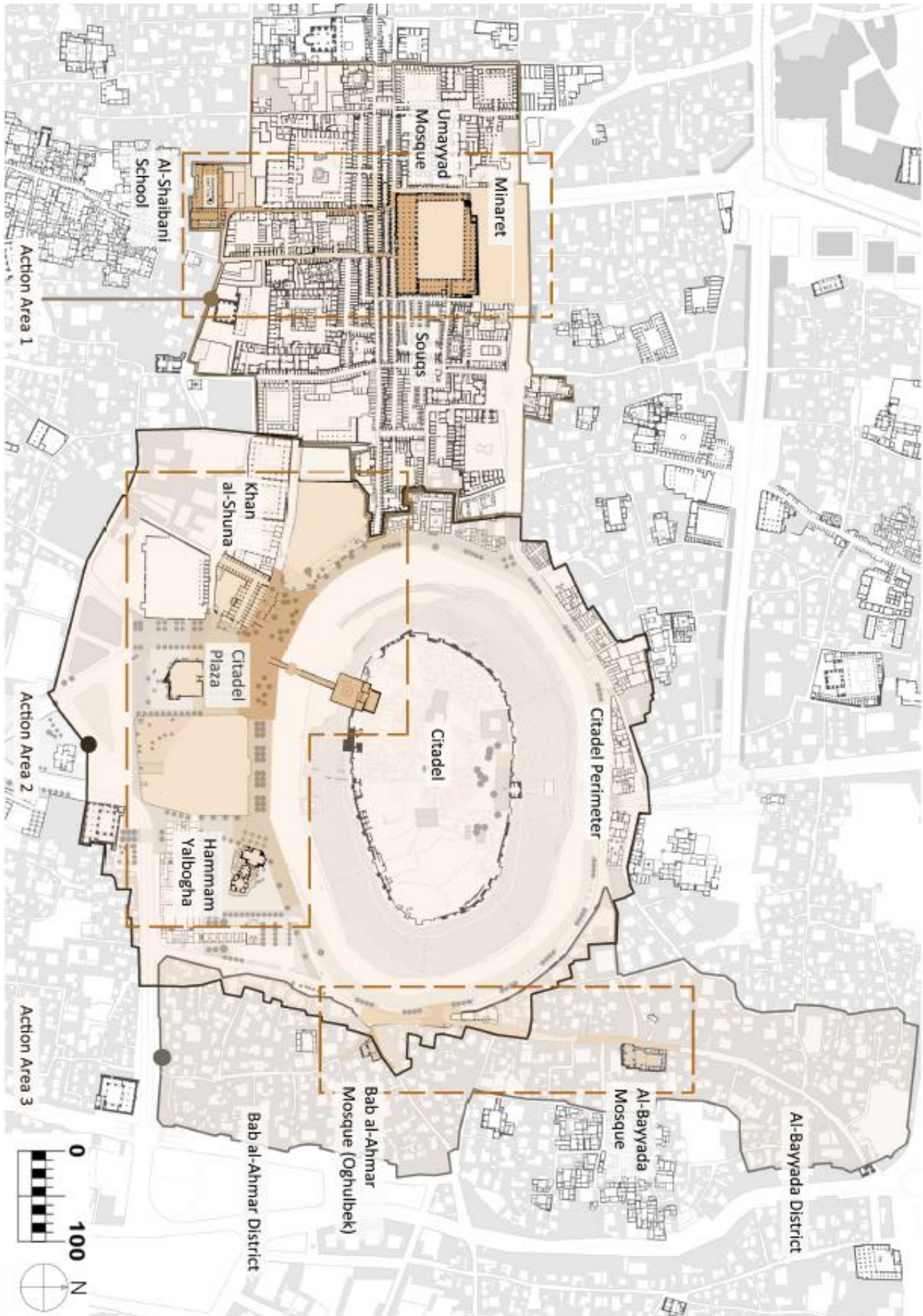
Map 3: Shows the location of the studied cities, and their link with each other, Source: Lilas Abdulmawla



III.II.I Aleppo

The Ancient City of Aleppo, a World Heritage Property, that has been inscribed in 1986 and added by UNESCO in 2013 to the list of World Heritage in Danger (UNESCO W. H., 37 COM 8C.1, 2013). It inscribed on the UNESCO World Heritage Property List due to its prominent location at the crossroads of several trade routes from the second millennium onwards. Ruled by a succession of major empires" the Hittites, Assyrians, Akkadians, Greeks, Romans, Umayyads, Ayyubids, Mameluks and Ottomans", continuously occupied cities in the world with some 7,000 years of known settlement history. All of that has made a lot of her building with a great historical significance. The city of Aleppo contained multiple outstanding values, within a walled city creating a unique urban fabric. The citadel of Aleppo raising on an acropolis. East of the citadel a traditional Suq with all its commercial activates and its citizen handcraft that sustaining the traditional I urban life of the city and preserving its authenticity; khans in between the suqs and around, moreover madrasas, Hammam, and finally many important mosques, above all the great Umayyad mosque. Before the city inscription in the WHL, many destruction and development of building had happened. Aleppo is protected by the DGAM, since the 1992 many projects of Rehabilitation, thus some conservation management where needed (UNESCO, Ancient City of Aleppo). However, like other cities in Syria, Aleppo has been one of the cities that has suffered a lot of damages, and destruction that has left part of the traditional city into ruins, causing the loss of life quality. Until the last period it was impossible to get precise information about the destruction, thus using the media reports assess the damage with more than 121 historical building were damaged (Museums, 2015). A documentation work is the first stage to understand the importance city historically, the kind of damage/ destruction, and the urban fabric complexity (Politecnico di Milano , 2017). Moreover, a starting of a physical survey has started recently led by the AKTC and the DGAM (AKTC, 30-5-2017).

Areas of special interest, Source AKTC (AKTC, 30-5-2017)



The Great Mosque

The Great Mosque or the Umayyad Mosque, constructed in the heart of the old city, was built in the Umayyad dynasty era, by the Caliph Walid ibn Abdel Malek in 715 A.C. The Mosque was constructed on the site of the Hellenistic Agora; reflecting the antiquity and layered history of Aleppo itself. The mosque had witnessed some renovations and reconstructions between the 12th and the 17th centuries, During the Seljuk Dynasty in Syria, a 45-meter high minaret was constructed for the Umayyad mosque. The minaret shows intricate bands of carved Kufic inscriptions along its length, with bands of stylized ornaments in muqarnas and patterns. These inscriptions record the renovation of the minaret was in the year 1090/483. The highest inscription band shows that the building was complete during (d.1095/488) (Archnet) (UNESCO, Ancient City of Aleppo). A renovation of the mosque took place in 2003, constructing especially on its minaret. The archaeologist Ernst Herzfeld (d. 1948), who noted the stylistic import of the minaret. Writing:

The chronological position of the Minaret of Aleppo and the richness of its forms is the fundamental document for all studies on the relationship between medieval architecture in Europe and the Orient. This is the moment where the Romanesque style transforms into the Gothic, the artistic expression of one of the most decisive steps in the development of the European spirit. The minaret of Aleppo exemplifies the idea that contact with the Muslim world during the Crusades produced the European spirit (Archnet).

Since 2013 and this place has become a place for clashes, and it has been Dramatically damaged. The first damage happened when a fire has swap into the mosque in 2011. On 24 April 2013, the minaret of the Umayyad Mosque was reduced to rubble, moreover causing heavy damage to the façade of the northern entrance. Moreover, The courtyard with its partnered pavement currently have traces of bullets, with 150 meters acquire of removed pavement, the covered prayer hall has one totally destroyed pillar, and had lost its antique minbar that disappears, the ablution kiosks, the sundial and the galleries, were severely damaged. An explosion has damaged the western entrance of the mosque. Also, the western- northern corner of the mosque has been affected. Also suffered significant damages. Due to all of that, some of the structure has been damaged too. Currently, the appearance of the mosque has change, where the minaret was part of the skyline of Aleppo. The used of architectural part of the mosque as defence area has harmed the mosques (AKTC, 30-5-2017).



The Umayyad Mosque, Source: unknown



The current situation of the Umayyad Mosque, Source: unknown



The Northern entrance damaged caused by the destruction of the Minaret, Source: Getty images



The destruction of the Minaret, Source: Getty image



The Umayyad Mosque, Source: unknown



The military defence used inside the Umayyad Mosque, Source: unknown



The damages in the piazza in front of northern entrance of the Umayyad Mosque Source: DGAM

For Aleppo a phase of rebuilding, reconstructing, rehabilitate has started to appear with the action taking by " DGAM, AKTC, UNESCO" (AKTC, Old City of Aleppo, Action Area Plan: Phase 1, 30-5-2017). Starting with based on a phase of series actions and initial surveys and sorting of collapsed stones are key to provide the basis of reconstruction."Pre-Construction Phase".Engineering challenges are multiple, ranging from the evaluation of technical alternatives of reconstruction to the careful selection of traditional materials (stones, mortar) and the availability of strengthening technology if required. For the interest of immediate measures, the focus of the suggested methodology will concern pre-construction works. Considering the Installation of the building site and enabling conditions, the emergency consolidation of adjacent walls/vaults, the archaeological Sorting with cataloguing and selection of debris, A geotechnical boreholes and study of existing minaret's foundations, Stone/Mortar Material tests, Tridimensional analysis of the original stone construction, Structural engineering design and calculations, arriving to the Construction Phase after the finishing of those steps (AKTC, 2017). In the presentation held in Politecnico di Milano, for PhD student (Politecnico di Milano , 2017). Francesco Seravo has shown in his presentation the current work holed of gathering information and Assessment of conditions in Aleppo for the first stage. In practical terms in the Umayyad Mosque minaret in Aleppo, considering the three areas of action. Noting the

identification of an appropriate restoration methods applicable to a major monument for the Umayyad Mosque and its Minaret.”which has started with a Agreement of Collaboration AKTC- Politecnico di Milano for planning and conservation research, with a methodology of Carry out the minaret’s reconstruction in keeping with the original construction plans and in accordance with modern earthquake resistance requirements-Catalogue the extant collapsed stones and reconstruct the collapsed minaret making use to the largest possible extent of its original materials-Ensure that the reconstructed minaret be fully re-integrated both aesthetically and functionally in the future appearance and use of the mosque the other method was interesting is Initiate meaningful stone masonry conservation programme within the Citadel (Siravo, 9November 2017). What is important in this case is the methodology that is respecting the authenticity of the heritage, the use of its own materials, maintaining a memorial value and testify to the history of its destruction in the future too. At the same time.



The remain of the minaret stones, Source: Amer Rashid al Moubaiied- taken 1/04/2017



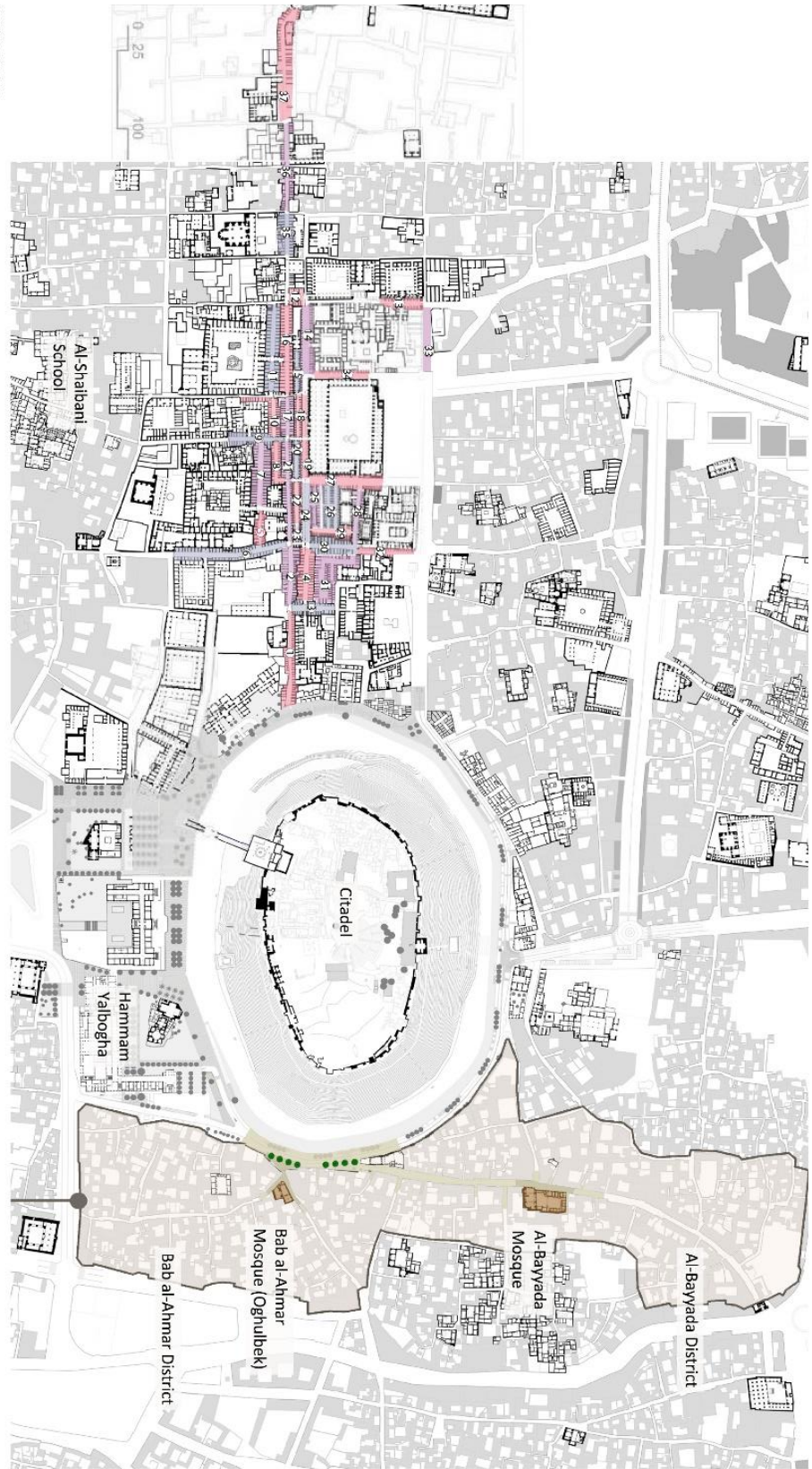
The remain of the minaret stones, Source: Amer Rashid al Moubaiied- taken 1/04/2017

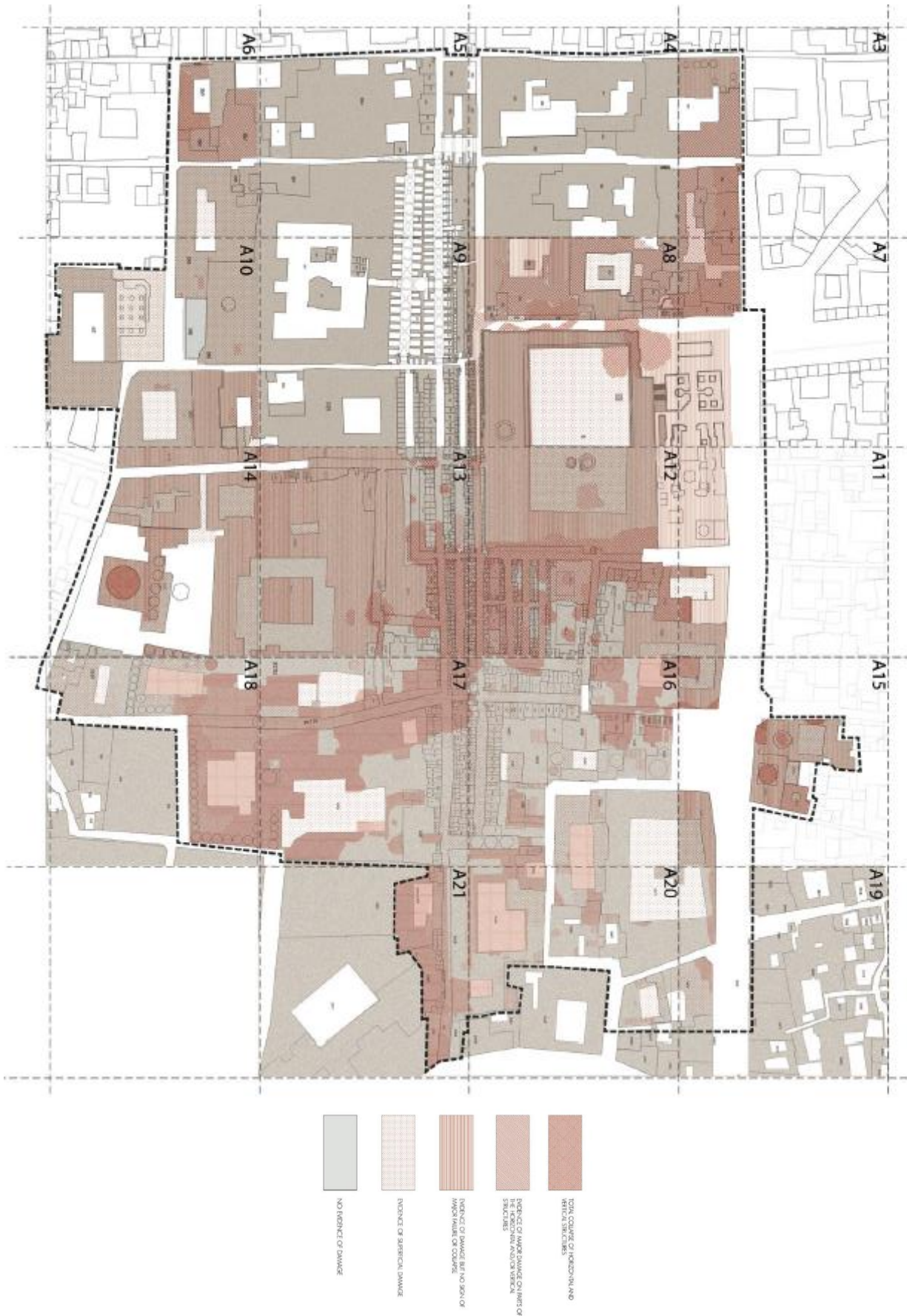
Souqs:

The souq is a series of parallel shops built along the east and the west of al-mostakim street”15 KM”, starting from the citadel ending with Bab Antakya, interrupted by multiple small street to the north and the south, creating a network of shops, covered and uncovered passages, contain other historical buildings. The souq includes 37 different markets containing around 1600 shop, where each market approach the tradition. This traditions are creating the authenticity of the souq. In 2012 a big part of the souq had been swap into the fire and badly damaged. Thus, through the documentation work, it was clear that not all part of the souq has been damaged equally. Some part suffers from destruction, other sustained severe damages, and other sustained minimum damages. However, in the current assessment of damages led by the AKTC, a detailed map of the different levels of damages has been produced (Siravo, 9November 2017).

1-SOUK AL ZARQA 71	2-SOUK AL LEBB	3-SOUK QUR'ET	4-SOUK AL DA'SHI	5-SOUK AL HAMAM	6-SOUK KHAN AL FRYANIN	7-SOUK KHAN AL Ushayn OR SOUK AL JUKH
SHOP	50 SHOP	AL YAKSH	AL YAKSH	AL YAKSH	AL YAKSH	AL YAKSH
8-SOUK ISMAIL AL AIK	8-SOUK KHAN AL NAHASSIN	10-SOUK AL SHAM	11-SOUK KHAN AL JOLANOK	12-SOUK KHAN CA S9AMVA	13-SOUK KHAN AL FARR	14-SOUK AL JNFAS
16-SOUK AL HOUR AL IMANI	16-SOUK AL SIKANTVA	17-SOUK AL ATVA	16-SOUK AL HERAL	18-SOUK AL SHERATI VYA	20-SOUK AL BATEH	21-SOUK AL JATINI
22-SOUK AL AKKADIN	23-SOUK AL ZIFAA	21-SOUK AL FA ROUKSEH	25-SOUK AL BAKH GERI	26-SOUK AL SIAGH	27-SOUK ISMAIL AL JADID	28-SOUK AL MANDIL
29-SOUK AL HARAU	30-SOUK AL SABOUN	31-SOUK KHAN KHIERI BEK	32-SOUK ASLAN DADA	33-SOUK WAFWA AL JAWA	34-SOUK AL HALAMVA	35-SOUK AL BRAWA
36-SOUK BAR AL-TANI	37-SOUK BAR ANZAVA					

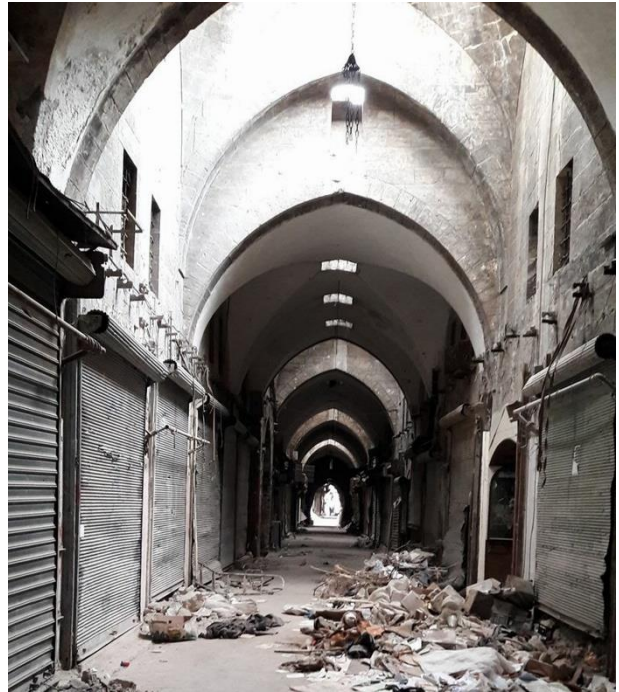
Map Source: Adbulmawla







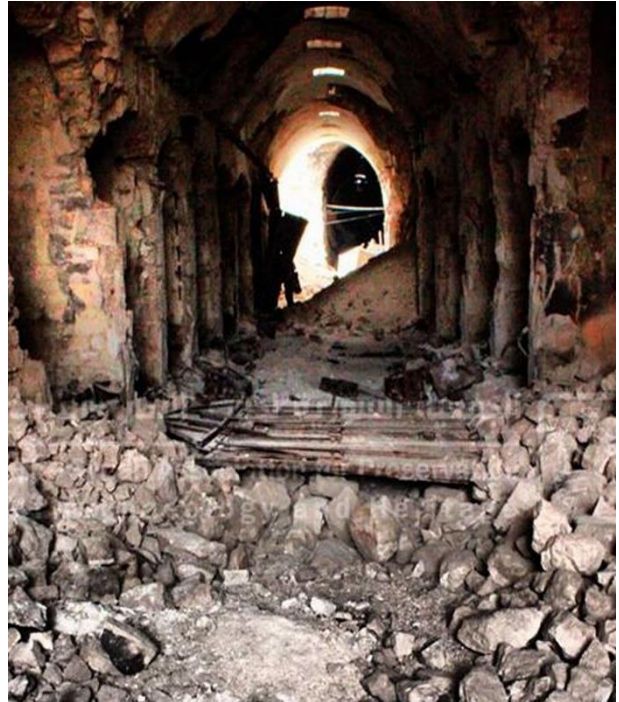
Souk al Saqatiyya prior 2011, Source: DGAM



Souk al Saqatiyya 2016, Source: DGAM



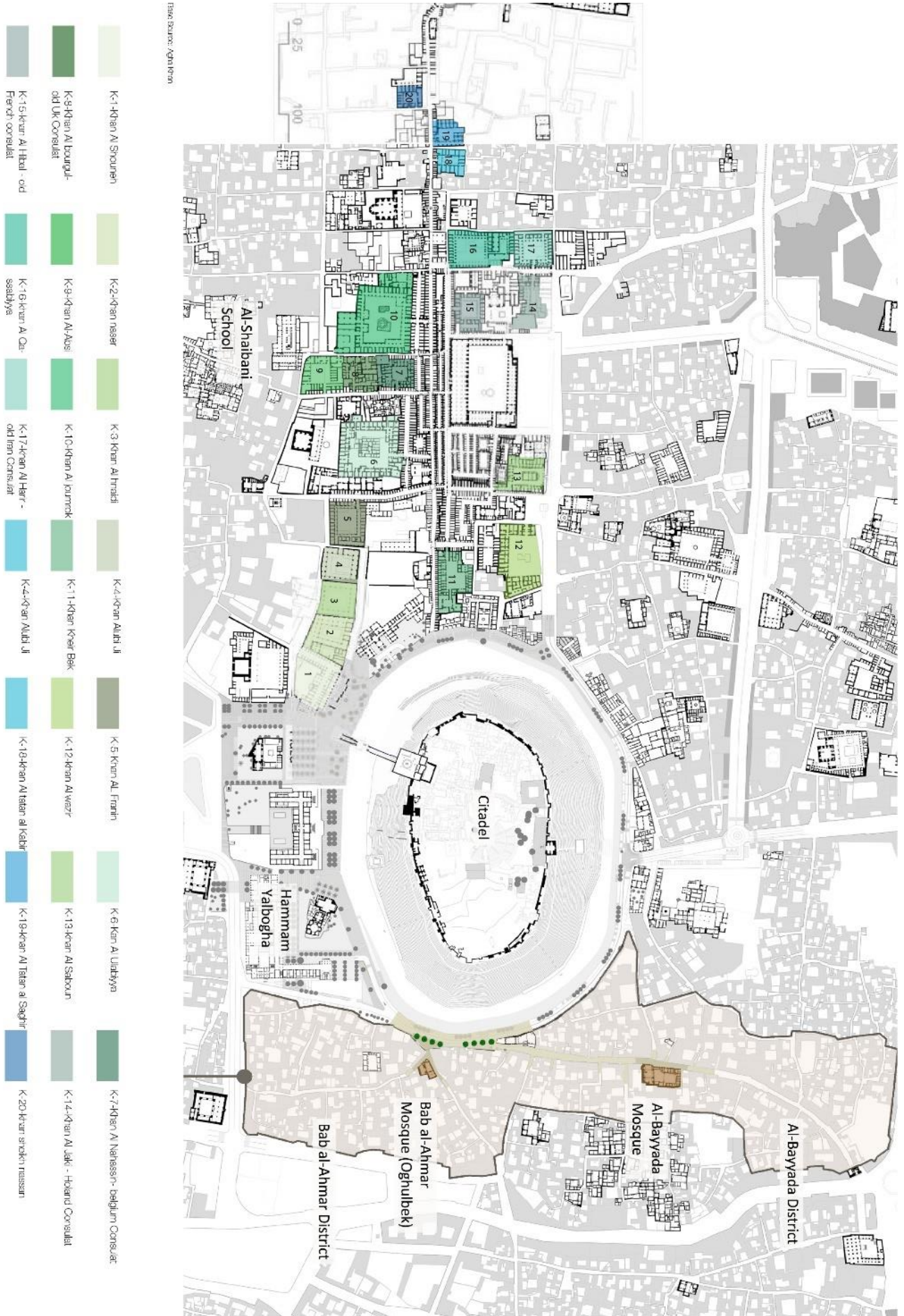
Souk al Attarin prior 2011, Source: DGAM

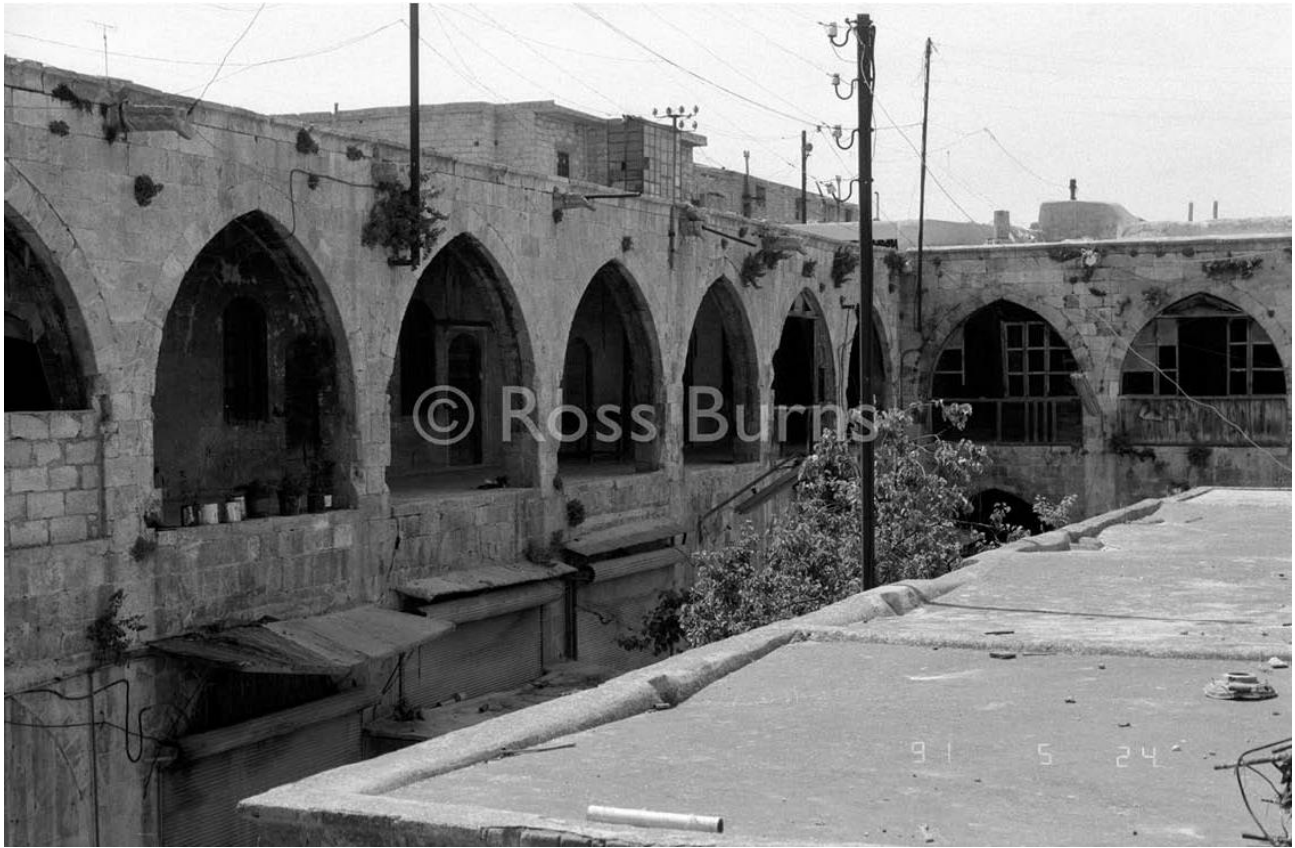


Souk al Attarin 2015, Source: DGAM

Khans:

Khans, more or less have the concept of a hotel in the old period, people that were coming to trade in the market, where resting in those khans, a lot of khans has the same name of the souq that is located next to it, normally the khan is composed of the two-story building, with a courtyard. The ground floor where used for storage, while the first floor was used as a khan. Nowadays the khans sated to be used for trading workshop area, and similar functions. In the last period, the Khans were damaged like other buildings. An example of one khan damages, to understand its important. Khan Al-Sabun" K13 on the map", located in the souq, is a two-story building dating back to the Mamluk period, built in the late 15th century. The khan is unique in its intricate ornamentation, both geometric and organic. It is a preserved example of the detailed craftsmanship of the traditional Aleppine builder. Similar documentation and mapping have been gathered for the Citadel, Hammam, Madrassa, and any other relevant building such as the Carlton hotel, etc. Thus, the destruction in Aleppo is different from the destruction of others city, where Aleppo has a complex urban fabric, dating back to different eras. Moreover, one of the destroyed areas is a living one, where people not only deals with heritage for the touristic purpose, rather they are living their daily life from worshipping to selling and trading. The destruction in such a context it is not only affecting the historical monument. Moreover, it is affecting the people daily acts. Where looking the photos of Khan al Saboun, they clearly show that damages in the courtyard of the khans, more over their part that has been burned or destroyed. While looking to the façade photo, there is a big damage to the details sculptured on the façade, moreover, based it might that it has been used as a place for fights, or defiance, as looking to the windows, they have been filled which is not part of the architecture.

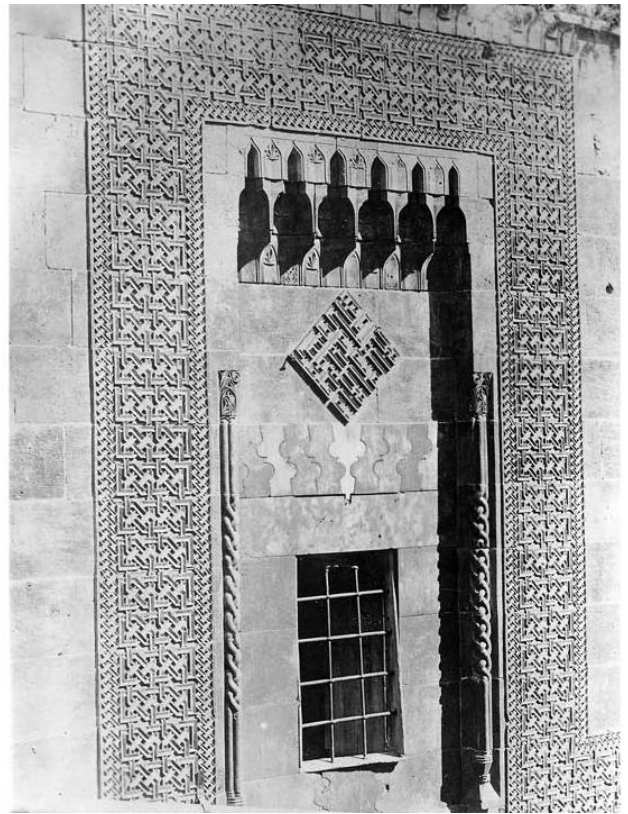




Khan al Saboun, Coutyard, 1991, Source: Ross Burns 1991



The current situation of Khan al Saboun- 2015, Source: DGAM



Detailed of the Window from the mamlouk period, Source: Aga Khan Trust for Culture2



Souk al Attarin prior 2011, Source: DGAM

III.II.II Apamea

Apamea is located in the western part of Syria, 50 km north-west of Hama city. In 1999, Apamea was inscribed in the Tentative World Heritage List (UNESCO, Tentative Lists). Previously known as Pharmake, in Seleucus Nicator's rule in 300 BC, he changed the name of the city to Apamea, fortified and enlarged the city. Apamea's site stretches back to the Hellenistic, Roman, Byzantine and Islamic eras. Also, it contains human remains belonging to the Middle Stone Age and beyond (DGAM, Interactive Map of Conflicted Archaeological sites). The main street of the city "Cardo Maximus" is 1.85 km long, running from the North to the South, with 37.5 m wide; Originally lined with 1,200 columns, of which 400 have been restored and re-erected. East of the monumental road is located many of the ancient city, such as the Agora, the Roman temple of Tycheion. An Eastern Cathedral, backdated to the 6th century, is located next to the ramparts reformed by the emperor Justinian; these 7 km ramparts are the architectural boundary, marking the natural ridge of the relief along the eastern, southern and western sides. Prior to the conflict in Syria, large parts of the site were unexcavated despite almost 70 years of excavation on the east of the main road, including the Roman theatre in the western head towards Qalaat Al-Madiq (Irina Bokova, 2012) (Deodato Tapete, 2016).

This is an outstanding urban and architectural work that speaks more than any other Roman site in the region of the great magnificence of Roman architecture in Syria at its peak (the second century of the Christian era). This well-justified impression of grandeur and beauty is confirmed by the imposing remains of 7 km of ramparts that protect the city (UNITAR, 2014).



Apamea, October 2008, Source: Effi Schweizer

Apamea was one of the first cities to be affected by the situation in Syria, Apamea and its citadel has been upgraded to “Rescue Needed” on the Global Heritage Network due to the damage that Apamea sustained during the conflict. Pictures and videos prove that there were tanks in the city shelling the old main street. Moreover, the shelled of the citadel (Irina Bokova, 2012).



Shelling damage to citadel (15 March 2012) (Irina Bokova, 2012)



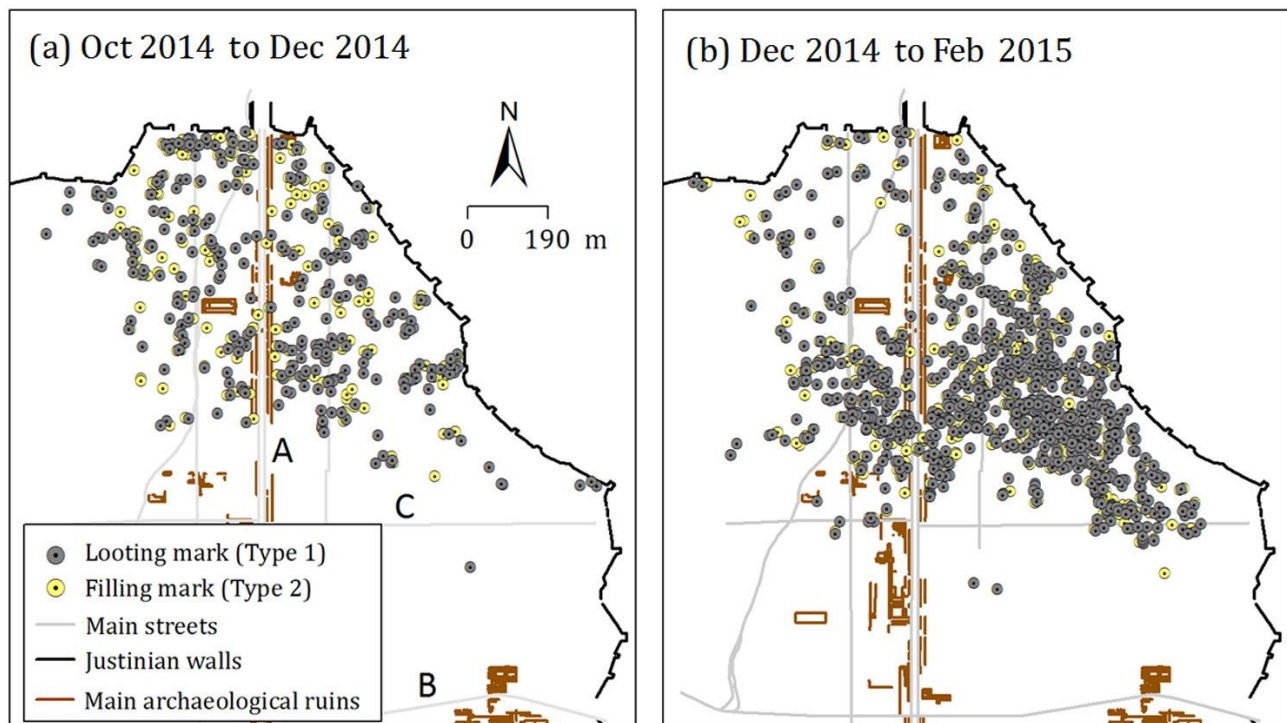
Tanks shelling the colonnade at Apamea (15 March 2012)



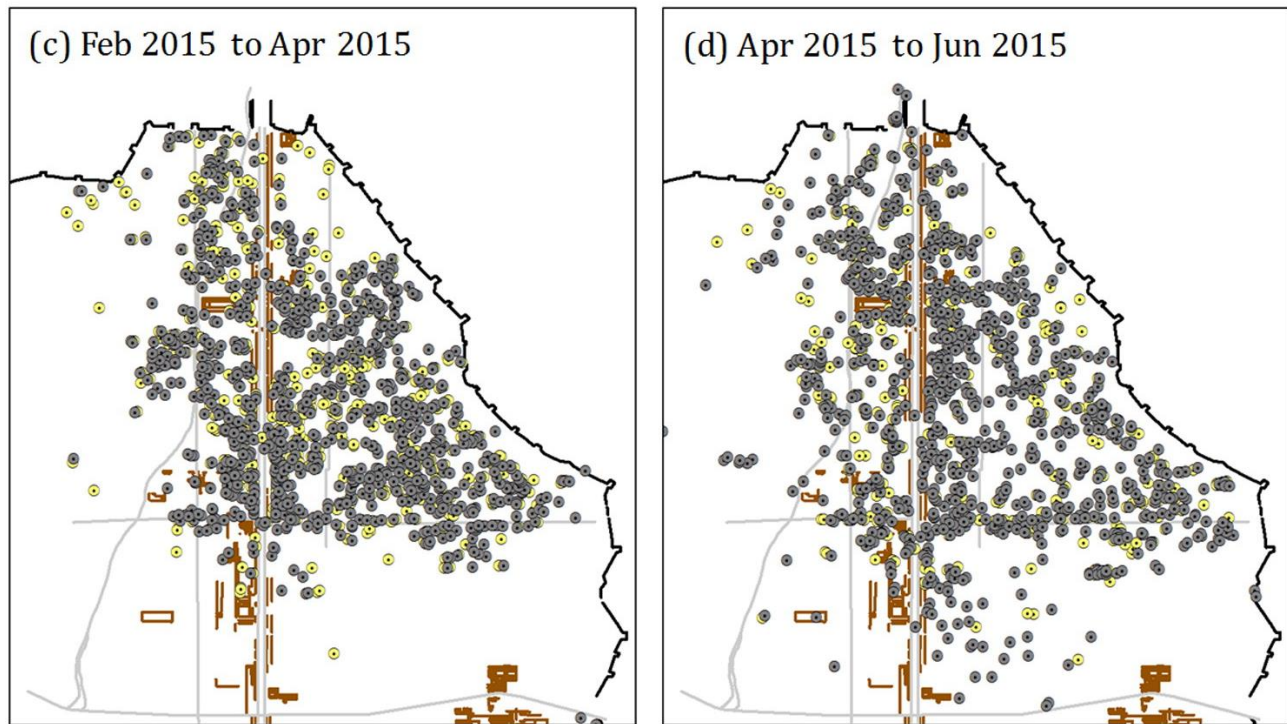
Overview of Apamea and damage of cultural heritage locations, Source: (UNITAR, 2014)

Illegal excavations spread across the archaeological site of Apamea during the Syrian conflict, with looting holes extensively marking the landscape. In archaeological heritage science, the term “looting” refers to unauthorised excavations without any scientific purpose that aims to remove goods of historical or cultural value, frequently used to feed the clandestine market trafficking

antiquities. It's In April 2012 around 38% of the archaeological site was looted. In March 2014, Looting holes were found across more than 44% of the total extent of the site covering the northwestern sector of the formerly cultivated land. Nearly 80% were distributed across the former zones excavated by archaeologists, while the remainder were dug in the unexcavated sectors lying west of the modern road. All that has been mentioned before has been confirmed through Google Earth Very High Resolution (VHR) optical imagery. From October 2014 to June 2015 a regular sampling of one image every two months with TerraSAR-X ST Method "TerraSARX ST images are the only source of VHR data". Hypothesised a major trend of the archaeological looting by observing that the phenomenon was mostly concentrated east of the modern road looting manifests in diverse ways, including holes or pits, footpaths dug to reach the entrance of tombs, removal and accumulation of soil, debris from collapse or vandalism of ruins, trenches and illegal excavations. It is to be acknowledged that looting occurs contribute to determining the degree of destruction of the archaeological context, also causing irreversible damage to the landscape and the anthropogenic environment. Certainly, consistency of acquisition parameters and temporal regularity of ST are advantageous properties that, coupled with very high resolution, enhance the contribution that these SAR data can offer to complement optical imagery towards a quantitative assessment of looting occurrence and rates (Deodato Tapete, 2016).



Dynamic evolution of looting in Apamea from October 2014 to Feb 2015 based on the identification of looting marks in TerraSAR-X ST data and their derived ratios (Deodato Tapete, 2016)



Dynamic evolution of looting in Apamea from Feb 2015 to June 2015 based on the identification of looting marks in TerraSAR-X ST data and their derived ratios (Deodato Tapete, 2016)

III.II.III Bosra

Bosra, The Ancient city of Bosra, is an inhabited archaeological site (UNESCO, Ancient City of Bosra) located in the southern part of Syria part of Daara governorate, near the Lebanese border. Bosra is a World Heritage Property, that has been inscribed in 1986 and added by UNESCO in 2013 to the list of World Heritage in Danger (UNESCO W. H., 37 COM 8C.1, 2013). Bosra where the former capital of the Roman Empire in Arabia province, The Nabataeans, Romans, Byzantines and Umayyad which has made the ancient city best known as a major archaeological site, which boasts remains from the Roman, Byzantine, and Islamic periods. Which is an exceptional example of the urban planning of Near Eastern successive civilisations that includes well-preserved remains, which has made the city an open museum of culture, containing significant marks from history. Its contain a Roman Theatre dated back to the second century, theatre is one of the best-preserved examples from this period, Al-Omari Mosque is one of the oldest surviving mosques in Islamic history built it around AD 720. And many other features (UNESCO, Ancient City of Bosra) (Irina Bokova, 2012).

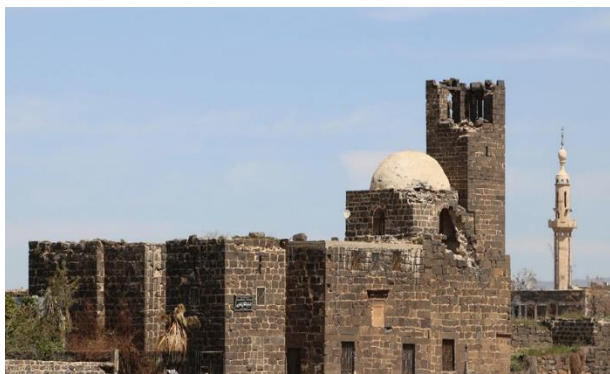
However, Bosra during the last period has suffered and damages like other cities in Syria. The lake of information about the destruction as it has not taken as much propaganda as other cities, despite it

an outstanding value. Thus, some reports show some damages using Stellate images, or some published photos. Irina Bokava, the general director of UNESCO, said about Bosra:

“The destructions sustained by Bosra represents a further escalation in the horror of war and must be stopped at once to allow to preserve the irreplaceable heritage of Bosra” (Henderson, 2016).

The report by the UNITAR, using satellite images, the analysis has shown that many of the cities were damaged due to shelling, or military use, and some cases of excavation (UNITAR, 2014). Some of the reported damages are the eastern wall and part of the roof of the cathedral dated back to 511-12 AD the cathedral of Sts. Sergius/Serge, Leontius and Bacchus, have collapsed, most likely before March 2013, the Roman Central Baths Complex — has been disturbed, and Bosra's Omari Mosque has sustained damage to its roof, and the surrounding buildings have suffered severe structural damage. Satellite imagery also showed the spectacular amphitheatre and citadel had been used for military purposes, but the range of the damage in the site is unknown (Irina Bokova, 2012) (UNITAR, 2014). The DGAM has reported, Looting some Pieces from the museum, Destruction of one house in the old city due to the explosion (DGAM, Interactive Map of Confliceted Archaeological sites). Some internet comment said that the amphitheatre in Bosra was at the centre of a battle in 2015 which cannot prove currently.

However, the Important cultural landmark of Syria has played a battlefield area, leaving a lot of our cultural heritage, and once with outstanding value in ruin. Many of them could have the possibility to be restored; many other phases should be taking into consideration in order to start the next phase of rebuilding.



The Damages of one of the mosques, Abou al Feda mosque, Bosra 2014© Wsam Almokdad Reuters



Severe damage to Kalybe, Cradle of The King's Daughter in Bosra, Source: DGAM 2014



The Roman Theatre, Bosra – Prior conflict- Source: Unknow

III.II.IV Dura Europos

Dura Europos is an ancient city in Eastern Syria, close to Deir Ez-Zor city called " Pompeii of the Syrian Desert". The city is standing on the bank of the Euphrates and is protected on three sides by wadis and cliffs. On the fourth, it looks westwards to the ancient Syrian oasis city of Palmyra (Tadmor), whose fortunes were linked with those of Palmyra. Dura was under the Parthian empire; the city has developed into a Caravanserai (Khan), from which the merchants went to Palmyra (Browning, 1979) In 165 A.D it was seized by the Romans, and it has become a new unit in the Roman army. However, the city like others city was protected by a wall with towers, the main gate entrance it was known as Palmyrene Gate. And the rich mix of culture was growing in this city; Dura contains many essential features, baptistry and many houses, temples, artefacts and documents. Moreover the defence wall of the city, which contains a history on its own, with the fight between the Roman and the Persian. Due to this history the wall sank into the ground but stayed upright; because of its support by its great earth and mudbrick revetments (James, 2005).

Dura Europos represents "...a mixture of influences which has created a unique architecture, culture and townscape, with exceptional buildings, such as Palaces, and public and religious buildings of different faiths, which reflect on urbanism and fine arts, and were based on a prosperous trading economy." (UNITAR, 2014)



The undermined defences Tower19-Source: S.James 2000



Dura's Palmyrene Gate Photo, Source: S.James 2005

Excavation – Discovering the city

Dura-Europos has been destroyed by war and abandoned in the third century AD. The site of Dura-Europos is one of the most significant examples of city planning in the Greco-Roman Near East. Since 1920, Dura has been extensively excavated. Most of the excavation work has been an international effort. After the founding of a painting in 1920 by an Indian troop, the American James Henry Breasted was the first archaeologist to work on the site. Within a couple of years, having the site also under the rule of the French Mandate on Syria, the detailed exploration of the site began in earnest. The Belgian scholar Franze Cumont conducted some essential initial excavations (James, 2005). In 1921 the excavations work were carried out by F. Cumont, and those of the Franco-American led by M. Rostovtzeff (Yale University mission, 1928–1937), research was resumed in 1987 by the Franco-Syrian led by P. Leriche (CNRS) and Y. Shohan (DGAMS). Prior the conflict in Syria we had sufficient archaeological information on the domestic buildings and the main lines of the city plan, in order to understand the value of the city, and helpt to enhanced its preservation. Around a quarter of the site had been excavated. The objective is to understand the particularities of the urban plan as a whole and to study the internal organisation of the different blocks significant achievements in conserving and presenting the site; further developing the knowledge of the history and development of the city

through the survey, renewed excavation, and analysis of finds and chronology. These famous discoveries led to the city being named the 'Pompeii of the Syrian desert' (James, 2005). In 1999, Dura was inscribed on the Tentative World Heritage List (UNESCO, Tentative Lists). Between 2001 - 2003, a magnetic survey campaign was carried out between the main road and the southern (Benech, 2010). In 2005, excavation work on the line of the mud-brick boundary wall of the Roman military base inside the city, with the 'desert wall' in the background (James, 2005). LOOK Map Dura 1

Current Situation

Due to the conflict in Syria, *A big part of the ruins has been removed; some paths of the urban of the city has been excavated with the damage that they are no longer visible. Part of the city wall has collapsed. Due to the material that the city is built of " Mud- Brick" which requires regular conservation to prevent degradation, the city has suffered from a lot of degradation especially with having several vehicles on the site. Moreover, the gate ha been used as a vehicle entrance which may have caused further damage. No area on the site has not been affected (UNITAR, 2014) (CULTURAL HERITAGE CENTER) .Map Dura 3*



Map Dura 1 - Dura-Europos, overlooking the Euphrates (top right), Source: (James, 2005)



Map Dura 2- 28 June 2012- Dura Before looting (illegal excavations), Source: Digital Globe.Inc



Map Dura 3 - 02 April 2014 - Dura After looting (illegal excavations), Source: Digital Globe.Inc

III.III Protection “ Listed in UNESCO WHL”

To be inscribed on the world heritage list, the sites must meet at least one requirement out of ten of being an outstanding universal value. The requirements are divided into four natural value and six cultural one. The world heritage list Consider also the management, the protection, the authenticity and the integrity (UNESCO, The Criteria for Selection). Where the sites inscribed will have to meet the aesthetic, historical, ethnological point of view. Rather a monument will have to meet the history, art science point of view (Article 1), this article has also considered the diversity of culture declaring it as the common heritage of humanity. Whereas a natural heritage will have to meet the scientific or aesthetic point of view (Article2). Based on the Fourth World Heritage Global Strategy (Amsterdam,1988), the outstanding historical value means:

“The requirement of outstanding universal value should be interpreted as an outstanding response to issues of universal nature common to or addressed by all human cultures. In relation to natural heritage, such issues are seen in bio-geographical diversity. In relation to culture in human creativity and resulting cultural processes.” (Jokilehto, 2006)

In Syria, there are six cultural properties have been inscribed in different years. Where the ancient city of Damascus is one of the first cities to be inscribed in 1979 (UNESCO, Syrian Arab Republic), both ancient city of Bosra and Palmyra In 1980, had been listed, with a recommendation that the monument outside the walls should be included in the protected zone, and drawing attention that no further development for the facilities next to the site should be extended (UNESCO, Decision: CONF 016 V.12 , 1980). The Ancient City of Aleppo in 1986, the two castle “Crac des Chevaliers and Qal’at Salah El-Din” in 2006. And the Ancient Villages of Northern Syria in 2011 (UNESCO, Syrian Arab Republic). Thus, under the world heritage convention held in 1972, if a World Heritage Property is threatened because of armed conflict, war, or natural disasters, or any “ascertained” or potential” the committee could have inscribed this world heritage property into the list of World Heritage in Danger. This list is designed to alerts the international community to help to save these sites. Knowing if a site has lost his characteristics that where the reason of being in the world heritage list at first, the committee may delete the heritage form the world heritage list in danger furthermore, the world heritage list (UNESCO, World Heritage in Danger, 2009). However, the World Heritage Convention as an international instrument identifies Cultural and Natural Heritage as interdependent and

complementary elements. It also identifies two independent international organisations, one being UNESCO for Cultural Heritage, and other IUCN for Natural Heritage. In 2013, the UNESCO placed all the six of the World Heritage properties in Syria on the List of World Heritage in Danger; adding Syrian Arab Republic, Ancient City of Damascus, Ancient City of Bosra, Ancient City of Aleppo, Crac des Chevaliers and Qal'at Salah El-Din, the Ancient Villages of Northern Syria, and the Site of Palmyra (UNESCO W. H., 37 COM 8C.1, 2013). In 2009 the site of Palmyra was designated a national monument and is now protected by the National Antiquities law 222 as amended in 1999. A buffer zone was established in 2007 but has not yet submitted to the World Heritage Committee (UNESCO, UNESCO). Also, if the state party considered a property an outstanding universal heritage from a cultural value point of view, and/or natural heritage point of view. The states could submit a tentative list to the World Heritage Center (UNESCO, Tentative Lists). From the Syrian Arab Republic, 12 sites have been submitted to the list of tentative. Which are in 1999, Noréas of Hama, Ugarit (Tell Sharma), Ebla (Tell Mardikh), Mari (Tell Hariri), Dura Europos, Apamée (Afamia), the castle of al-Hayr ach-Charqi in Palmyra, Maaloula, Tartus city, the Abbasid city AlRaqqa-Ràfiqa, Arwad Island, and the sites of Euphrates Valley both Mari & Europos-Dura in the 2011 (UNESCO, Syrian Arab Republic).

III.IV Chapter Conclusion

Satellite images, reports, the universal value, all the images and videos published online, showed the amount of destruction that has inflicted the archaeological heritage sites during the ongoing conflict in Syria. Through the continuous looting of the sites which is destroying irreplaceable evidence of life and society in the ancient world, through all the destruction of World Heritage Sites that remain in ruin. While many sites can be saved and restored in the future, some has been even left by their local due to safety concerns. This ongoing situation made people, and the country suffers. In order to have a continuance history, to preserve heritage authenticity and its traditions to be able to reconstruct and rehabilitate any site, it is very important to understand, and have evidence to the historical developments of the cities, such as the beginnings of agriculture and cities, the rise and fall of empires, and the development and spread of Judaism, Christianity and Islam. and moreover to have an understanding of what happened, and how should we reconstruct. Where Syria rich archaeological corpus includes several ancient settlements on the and many others that help us understand the mosaic of human history (JONES, 2014).

Chapter IV The importance of Palmyra city

IV.1 Historical Timeline

Religions, Architecture, Development, Rising, Wars, Eras

*Rise and go into the world release it from error and word Jinn that I give them leave to build Tadmor
with hewn stones and columns.*

God to King Suliman – Poet Al-Nabigha al-Dhubyain

4.1 - Palmyra Historical Timeline

1st millennium 2nd millennium 3rd millennium

The Seleucid Empire 300 BC - 63 BC

Around 300 BC Tadmor within the huge Hellenistic Seleucid Empire. (Browning, 1979)

Before the Seleucid the Phoenicia lived there, and they have brought with them the worship of the god Baal, which remain until Late 4th Century. (Zenobia queen of Tadmor and the east)

Armenians, they lived in the beginning of the AD the Aramaeans remained at Tadmor, and were still there in 200 B.C. (Browning, 1979)

69 BC



Asia Minor under the Seleucid Empire. From The Historical Atlas by William R. Shepherd, 1923

The Romans start to occupy more of the Laesse Asia (Asia Minor), and they were going to fight with the Persians but with the help of Seneca in Rome the situation was an Amec Peace. (Zenobia queen of Tadmor and the east)

The Roman Empire 64 BC - 330 AD



Roman Province of Syria - Map by Ian M. Stewart

64 BC



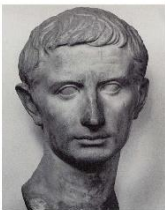
Pompey annexed Antioch, has put an end to the Seleucid Empire, the city was made the capital of the new Roman province of Syria. (Browning, 1979). (Joudalah, 1999, p. 32)

Marble of Pompey the Great. Augustan copy of a 70-60 BC original. British Museum. (source: Alamy.com/Share/Ag)

35 BC

Anzakya the capital of the Syran Kingdom. (Joudalah, 1999, p. 32)

31BC - 14 AD



The Emperor of Augustus: his desire was peace in the middle east. (Browning, 1979)

source: The Power of an Emperor: The Augustus in Appendix & Imagery Art Propaganda by G. S. - https://books.washington.edu

23 BC

An agreement signed with the Persian that defined the borders between the two empires, where the FURAT river create the borders. (Zenobia queen of Tadmor and the east)

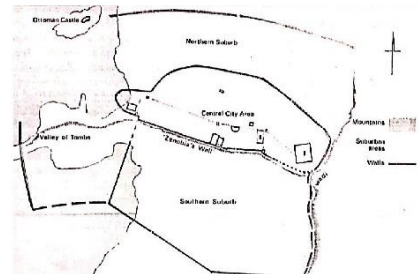
50 BC



The building of the latte temple. The lion of Al latte is the protector of the temple has been discovered by Po and 1975. (Zenobia queen of Tadmor and the east)

The lion and paws of Al-Latte from Palmyra Al-Latte. (source: Varsity Online)

1st Century



Jourdaines et al. City of the Tulkat. (source: (Browning, 1979)

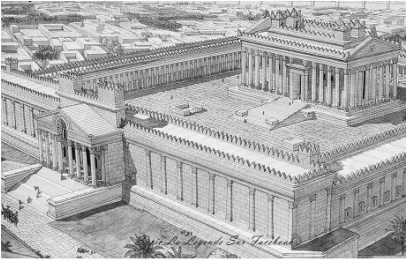
The earliest of the 1st century the Tadmorian start to build the Southern Wall of the city. (Zenobia queen of Tadmor and the east)

11 AD - 17 AD

Legatus became the governor of Syria - REGIO PALMYRENE founded written on a stone, (Until the Euphrat river which was the border with the Parthian based on an agreement signed in 23 BC. (Zenobia queen of Tadmor and the east))



Southwest Exterior Corner of the Temple of Bel - Louis Massignon, Paul Claudel Trust



View of Temple of Bel - source unknown

The Temple of Bel, was built on an artificial mound. The temple was created above the ruins of a previous temple dating back to the Hellenistic times, probably some 300 years earlier. When these photos were taken, the temple was the walled village of Tadmor. (Howard, n.d.)



source: SCAM - 1997

South West the theater exists the ruins of Palmyra's Agora, with a structure " 71-84-meter", entailing the Tariff Court and the Triclinium, within which stand two hundred columnar bases that once served as foundations of sculptures of prominent citizens: "the northern side for Palmyrene officials, the southern side for caravan chiefs" ("Palmyra"), the eastern side was reserved for senators and the western side for soldiers.

23 AD

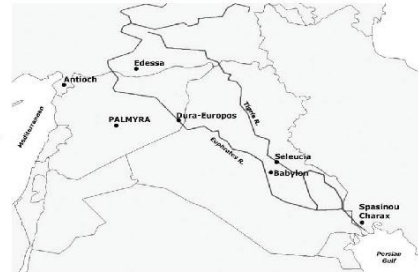


Temple of the Nabataean - source: Vigliani, Paul Getty Trust

Temple of Baalshamin, it is the only temple that still has his shape the same as it was built. In 131 AD the Tadmorian Tribes Maazen has renovated it. (Zenobia, queen of Tadmor and the east)

63 AD

Building the Temple of Arsu (Zenobia queen of Tadmor and the east)



Source Palmyra as a Crown City - Albert L. Klein - Stanford University

73 AD - 79 AD

With an agreement between the Tadmorian and the Roman ruler of Syria Ulpus Trajanus, the father of Emperor Trajan, built the frontier road from Palmyra to Sura along the Euphrates. (Stoneman - 1992, p. 87)

106 AD



The occupation of Petra the capital of the Nabataeans by Rome. The emperor Trajan and name it the Arabia Petraea, with having the Bosra as a capital, which was a positive point for Palmyra traces. (Gudslah, * 999, p. 32)

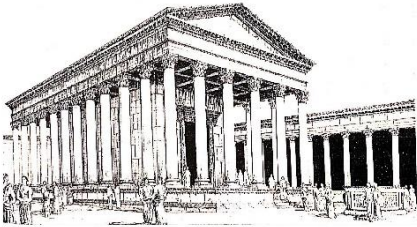
Trajanus - Munich - Source: Attribution:Shazla, cc 0.0 Unported 600 263A 3 03

117 BC



Source: Roman Empire 117 AD Original: Andrei nacu/ Color editing: Lilias Aboumawa

Syria has become a Roman province. (Joudalah, 1999, p. 32)
Hadrian became the 14th Emperor of the Roman Empire. (Dryes, 2014, pp. 308-9'2)



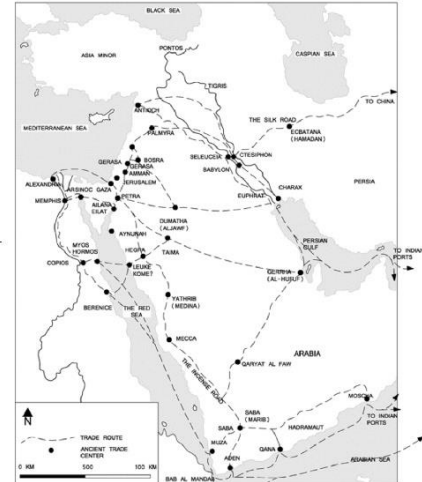
Temple of Nabat. Source: Palmyra by Bill Browning

Hadrian has visited Palmyra and he changes her name to a "Free city" " civitas libera" it has become a self-governed city, free economically, and does not pay taxes to Rome. For that reason, the Tadmorian called there city Hadriane Palmyra and was also called the capital of the Nabataeans under the name of HADRIAN PETRA. (Dryes, 2014, pp. 308-9'2)

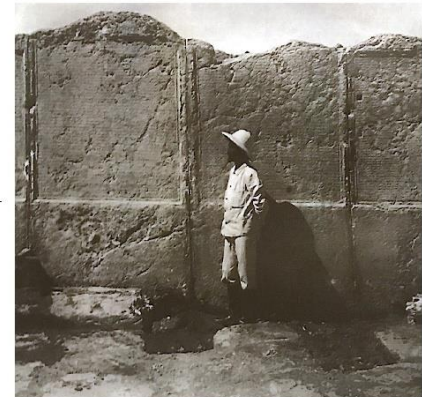
He orders to build the Temple of Nabat, and he made an extension to Agora (Joudalah, 1999, p. 258)

117 BC

Best Trade Road



the Nabataean Kingdom and ancient trade routes / Source: Palsabel-2005



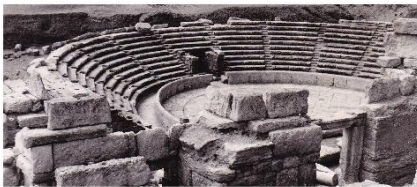
166' - (Landscape in front of the Tadmorian economic zone. Source: Zenobia queen of Tadmor and the east)

137 AD

212 AD -218 AD



Source: FFC - The Triumphal Arch



Source: DCAV - The Theater

Caracalla ruled Tadmor, and the city was given the name of the Colonia Romana. During his period the extension of the main road has been done, and the building of the Triumphal Arch. (Joudalah, 1999, p. 253)

It is possible that the theater has been finished in his era page. (Zenobia queen of Tadmor and the east)

228 AD

The Persian occupied the Euphrates and Tigris rivers and prevent Tadmor from Trading. (Joudalah, 1999)

235AD - 267AD



Part of Zenobia - Instagram @alokanzarabloggers1

Ruled by Odaenathus (Uzaina) King of Palmyra, King of Kings of the East. The husband of Zenobia. Tadmor was flourished and has a lot of trace connections. In this period around 250 AD Zenobia Baths has been built. (Zenobia queen of Tadmor and the east)



Famous statue of Queen Zenobia in Ghent by Floris Hogenin (1843)

Ruled by Zenobia, her Emperor included the Arab East, the northern part of Levant, Egypt, Anatolia, and Armenia they called her the DREAM CITY. A destruction of part of the southern wall in the war with Aurelian.

(Zenobia queen of Tadmor and the east)

269-272 AD

273AD - 274AD



Aurelian has taken Tadmor (Palmyra) and arrested Zenobia. (Zenobia queen of Tadmor and the east)



Temple of the Baalshamin - Louis Mahseul - Paul Getty Trust

285AD - 305 AD

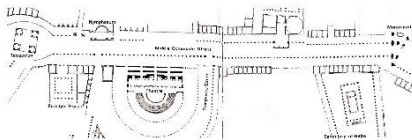
312 AD

The decree by Constantine, of the freedom of religion, paganism, Christianity, or Muslim. (Zenobia queen of Tadmor and the east)

The rule of Diocletian
1- Built a Military Camp " CASTRA" over the ruins of Zenobia & Uzina palace, 2- he renovates some buildings, renovates Zenobia baths in the beginning of the 4th century, 4-Restore the Southern walls that have been destroyed. (Zenobia queen of Tadmor and the east). The situation got better with the Persian and Tadmor has become a Trade area again. (Joudalah, 1990, p. 262)

The Byzantine Emperor

330AD - 635AD



Colonnade street, Source: Palmyra by John Crowning

The restoration of the colonnade street. (Crowning, 1978)

327 AD

527AD - 565 AD

Procopius of Caesarea said in one of his books said: Justinian the Byzantine Emperor has reinforced the city wall and its castle, he has made Palmyra a Province of Phoenicia. (Zenobia queen of Tadmor and the east). Temple of Bel, Baalshamin and al-Hat were turned into a church (Joudalah, 1999, p. 263)



Map of the Islamic Caliphate - Wikimedia Commons - L. Worsley Hoese

634 AD

The shift from the Classical Palmyra, with the beginning of the Islamic religion. (Crowning, 1979). After Khaled Ibn al Walid Controlled "Souria Al Tabia" or " Levant" (Syria, Lebanon, Jordan, Palestine). Palmyra has become Tadmor Again.

661 AD - 750 AD

The Umayyad Caliphate

The capital was Damascus. (Joudalah, 1999, p. 263)

727 AD-743 AD

The city flourished in the era of Hisham ibn Abd al-Malik the Caliph of the Umayyad Caliphate. He built the Qasr al-Hayr al-Gharbi & Qasr al-Hayr al-Sharqi. Located some forty miles east and west of Tadmor. (Zenobia queen of Tadmor and the east)



Qasr al-Hayr al-Sharqi (east), the eastern enclosure entrance



remains of the gateway of the Umayyad complex at Qasr al-Hayr al-Gharbi (West)

745 AD

The city was attacked by Marwan Ibn Mouhamad the Umayyad Caliph and damaged part of its walls. (Zenobia queen of Tadmor and the east)

901 - 1000 AD

A lot of buildings were destroyed due to an earthquake. (Zenobia queen of Tadmor and the east)

1169 - 1250 AD

The Ayyubid Dynasty

1096 - 1291 AD



the castle of Fakher al-din al Maani 1210-30, Source: USAAM

The Crusades era. The Tadmourian has moved inside the Temple of Bel, changing it into a mosque. Until the 30's of the 20's century. (Zenobia queen of Tadmor and the east). A restoration of the temple wall, and a restoration of the castle that becomes the castle of Fakher al-din al Maani (Jousselin, 1990, p. 263)

End of 14 century

The Turco-Mongol, Timurid, had entered the city and destroyed it. And put an end to its trade. (Jousselin, 1990, p. 263)

Discovering Palmyra

1678

Journey by a group of Englishmen from Aleppo to Palmyra. (Wendy, 2015)

1691

Another Journey by a group of Englishmen from Aleppo to Palmyra, including the artist G. Hofszoo van Esson, who has been asked by the Dutch Consul in Aleppo, Constant Calckbom, to paint the ruins. (Wendy, 2015)

Constant Calckbom, Governor Palmyra 1682, Source: Universiteit van Amsterdam



1751 AD

Robert Wood that includes a lot of drawings and plans for Palmyra. (Wood, 1753)

1900 - 1920



~Naxos village in the ruins of Temple of Bel - c. 1900-1920, Stronach
Two spaces begin to emerge together in the same place: Palmyra, an ancient site, and Tadmur the city.

The French Mandate

1920 - 1916



Triumphal Arch after restoration - IFPO

The First restoration on the Arch by Amy. (Amy, 1938)

Excavation in the Agora.



Temple of bel, Restoration work on the west wall - Source: SOAM

1911

1949

1917



Vally of Tombs, Source: IFPO

A German archaeological mission has drawn up an almost complete list of the different funerary constructions. publication of Wegand (Palmyra, Beir., 1932)- IFPO, 19-9

1929



new tadmur Palmyra, The New V. site. Substituting the old village formerly in the courts. American Colony Jerusalem, c. 1929.

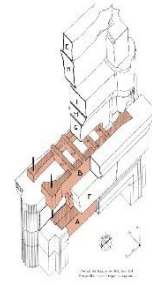
The new town offers a road and gardens, a simple structure based on local vernaculars adjusted to two-storey modern needs.

1932



IECOCHARD, Serie 16, 1937, (p. 1009).

Restoration of the temple gate. Overview of the construction site from the northwest. - IFPO



1951 - 1970

The Discover of the Coonrado street, the road of Baa shamin, the Agora extension, Nebo Temple, Zencbia Baths, and some tombs. (Zencbia street of Baaham and the east)

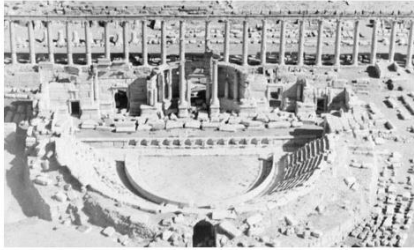
Syrian Arab Republic

1961– Present



1952

The theatre before excavation in 1952 / source: DGAM



The theatre after excavation in 1953 / source: DGAM

The excavation work on the theatre in the 50's. Source DGAM



1962

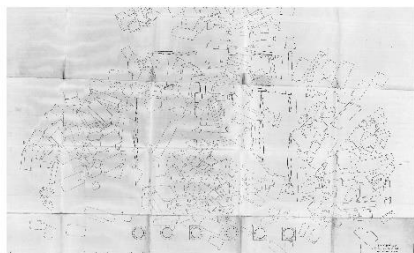
The agora after excavation work / source: DGAM

The excavation work and discovering the Agora extension. Source DGAM



1969

Funeiry Temple after excavation work / source: DGAM



Funeiry Temple reconstruction showing work / source: DGAM

Funerary Temple, Excavations and renovation by a Syrian mission. (Zenobia queen of Tadmor and the east)



1953 -1955

Temple of Baal Shamin in 1953 / source: DGAM

Removing the Byzantine building located in front of Temple of Baal Shamin, in 1953 to show the exterior façade of the temple. With the permission of doing excavation work in 1955. Source DGAM



1967-1969

The Tetrapylon before restoration / source: DGAM



The Tetrapylon after restoration / source: DGAM

The restoration of the Tetrapylon by a Syrian Mission, led by Khaled al Asaad. (Zenobia queen of Tadmor and the east)

1970-1975



Bath of Zenobia - mskedon-a-axarodotobogost.t

Syrian Mission working, by Syrian Khaled al Asaad, Rabiaa canman, Saleh althah Rebuilt the Crant columns of Zenobia Baths. (Zenobia queen of Tadmor and the east)

1975



Camp of Diocletian / source: DGAM

The discover of Diocletan camp by a Polish Mission.



Restoration work on the theater / source: DGAM

1977

2002

Syrian mission has discovered the Southern Wall. they have restored the northern part of it about 2 km, Height between 5 to 6 m, using its own stones. By Khaled al Asaad. (Jadwet zenobia: University of al baas: 2002) (Zenobia queen of warrior and the east)

The War in Syria

2011- Ongoing

2012 - 2015



Press TV in May 2016 / source: <https://www.youtube.com/watch?v=33kxv8s8n10>

The installation of military units "heavy weapons" in the archaeological area & in the new city of Tadmor. (Al - 2015)

1976



The colonnade Street columns / Source: IFCO

Rebuilding 7 columns of the Colonnade street from the Northern corridor, by Khaled al Asaad.

1981 - 1983



The theater restoration / source: DGAM

The restoration of the theater by Khaled al Asaad

2005

Study for the Agora. (Zenobia queen of Tadmor and the east)

21 May 2015

The invasion of the terrorist militants of ISIS to the World Heritage city of Palmyra. (DGAM)

July 2015



Restoration on Lion of Al - at status from the city of Palmyra, captured by ISIL. JHLUSSO

The destruction of Assad Al Lat by ISIS. (Damascus, Monday 24 August 2015)

In the interview with the journalist Maher he said: Al that moment, no one was speaking about the restoration, but there were there with us in Palmyra, two foolish archaeologists, who has restored once the lion statue, where they have come to restore it again, and now the lion has been transferred to Damascus. (Al -Mounes: 2017)

24 August 2015



Temple of Baal Shamin, which has been apparently blown up by Isis. Photograph G. Dagli, Uff. Jo Agostini Getty Images



Temple of Baal Shamin was destroyed by ISIS - DGM

"Daesh placed a large quantity of explosives in the temple of Baal Shamin ... and then blew it up causing much damage to the temple," said Maamour Aoulikarim, using another name for Isis. (Damascus, Monday 24 August 2015)



Source: EUROPLAN SPACEL MAGING, DIGITAL GLOBE

The tombs in Palmyra, which was among the best-preserved sites from antiquity, were blown up 70 days ago. The Jambique, Enbel and Kitnot tombs (Shahoon, September 2015)

End of August 2015



Citadel Aleppo in Syria - Source: DGM

26 March 2016



Another damage to the Citadel of Aleppo in Syria - Source: CNN News

31 August 2015



Temple of Bel before it was destroyed by ISIS - DGM



Temple of Bel after it was destroyed by ISIS - DGM

The Temple of Bel was destroyed by ISIS (Shahoon, Isis destroys terracotta monument in Palmyra, 2017)

4 October 2015



Triumphal Arch in Palmyra by PA YOUSUF / IFAJARA



Aerial footage showing the damage of the Triumphal Arch - Source: DGM

The Triumphal Arch was destroyed by ISIS. (Shahoon, Isis destroys terracotta monument in Palmyra, 2017)

5 May 2016



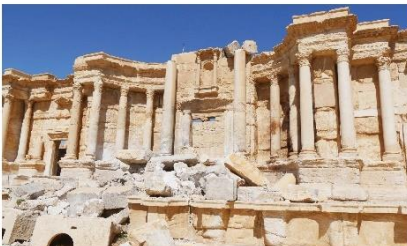
Palmyra - Russian Orchestra - Source ABC News

The Russian Conductor Valery Gergiev Leads An Orchestra Of Musicians (Nolan, 2016). After liberating the city on 27 of March 2016 (DCAM). The Islamic State retook the historic city Of Palmyra on 11 December 2016. (Shahreen, Islamic State re-takes historic city of Palmyra, 2016).



An Islamic State flag flies atop Roman ruins at the ancient city of Palmyra. Photograph: AFP/Getty Images

January 2017



The once highly decorated facade of the theatre in Palmyra, heavily damaged by Islamic State forces in January 2017. (The Guardian)

Tetrapylon destroyed and nearby Roman theatre damaged in January 2017 after surviving first Isis occupation. (Shahreen, Isis destroys tetrapylon monument in Palmyra, 2017).

January 2017



The ancient Tetrapylon in Palmyra, photographed in 2005. Photograph: Azmy



The ancient Tetrapylon in Palmyra After ISIS. Source: DCAM

End of February

Syrian Government recaptures Palmyra from Islamic State nearly three months after Isis took it over. (Chubb, 2017)

1 October 2017



The Lion of al-Lat after reconstruction - UN-3900

The Restoration of Assac al Lat (2017)

IV.II Introduction

Historical records show that the name of Palmyra has first been found in the archives of Mari in a written part backdated to the 2nd millennium BC, using the name Tadmor, which how the city is known today (Browning, 1979). Tadmor " Palmyra " known as the Bride of the Desert, As UNESCO has described Palmyra in the simplest of terms as if we can hold history between our fingers like a pen. "An oasis in the Syrian desert," Palmyra lies 240 km north-east of Damascus, 150 Km east of Homs (Ancient Emesa), halfway between the Syrian coast and the valley of the Euphrates and Dura-Europos" 210 Km" southwest Deir ez-Zor. The ancient Tadmorian people have lived in the city and built the desert next to a spring water called Afqa Flowing from the end of the western mountains (KTEFAN, 2013). The importance of Palmyra is reflected with the monumental ruins of the city that are backdated to the 1st and 2nd century, the architectural integration of multiple civilisations with a Graeco-Roman techniques, and moreover, the local traditions and its influence by the Persian. The city importance has grown with being a trade route linking Persia, China and India with the Roman Empire (UNESCO, Site of Palmyra). Browning has noted in his book that the development of Palmyra was unique, and not similar to any other towns in Syria, Palmyra was able to develop own its interpretation of late Hellenistic architecture, (Browning, 1979). The authenticity of the city is shown with its splendour, remarkable standing; Palmyra is a cultural centre that has been influenced with the Graeco – Roman world, its where the west has met the east in culture. Palmyra traditional craft working is not known to the city, as it has been mentioned before, Palmyra was an east-west trade road who has its own economic powerhouse. Moreover, the historical importance of the city with its ruins and its oasis that are linked together (UNESCO, Site of Palmyra). As Al Rifaii note" Palmyra is not only a heritage it is a place to change culture" (Alrifai, 2017). Moreover, Palmyra is a universal heritage inscribed to the WHL since 1980, thus, due to the ongoing situation in Syria. Palmyra, as many other cities have become under threat, it has been inscribed to the World Heritage List in Danger (UNESCO W. H., 2013). A few months back the archaeological site and the modern city were a battle field. Moreover, the city has fallen under ISIS control, which they have caused a loss of many monumental items and symbols of the city. This information has been confirmed by ISIS propaganda and many reports (Michael Danti, 2015).

IV.III Development of the city and problems

IV.III.I Brief

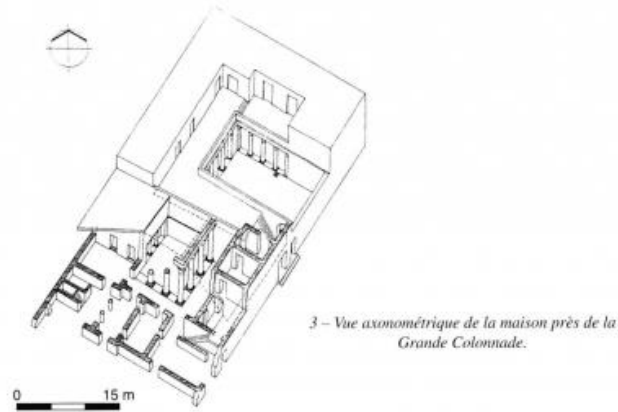
The urban development of the city was a Graeco-Roman planning that extends from Temple of Bel until the spring water Afqa; the city includes the oasis and the tombs outside the walls. 10 km north of the city are the stone quarries, which broke the city with the hard limestone used on the visible parts of the buildings. The stone sections of soft limestone used in the foundations were obtained from the quarries of Jabal al-Tar (behind the Arab castle), 5 km north-west of the city (KTEFAN, 2013). The city is currently composed of 3 principal areas: The Archaeological site, The Oasis orchards, and the living city next to the archaeological site 'Modern city'. However, the modern city was part of the Urban development of Palmyra in 1929, when the French have substituted the old village that was in the site, to add a recent "new Tadmor /Palmyra".



Palmyra tourist Map – Source: DGAM

As Browning describes the old Palmyrene houses that probably the merchants were living in, located the northern part of the colonnade. The houses were from mud brick, with a high degree of comfort; the rooms were ill-ventilated strung around an internal courtyard, the windows were small to protect from the summer heat and the winter cold. The external of the houses were blank walls with doorway

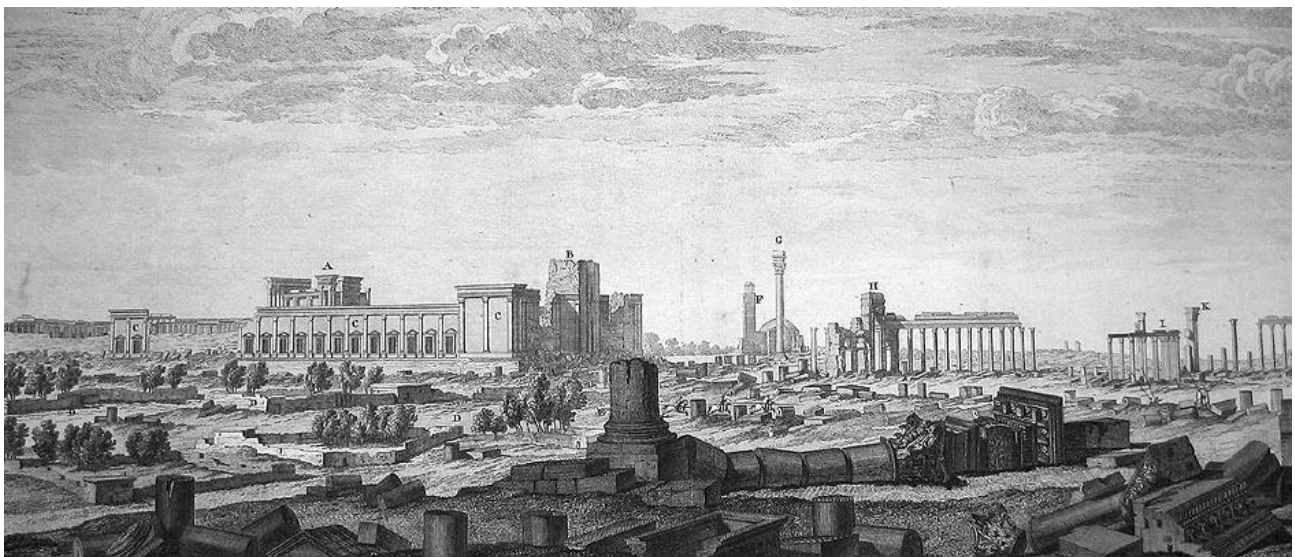
to the street (Browning, 1979). However, this type of houses is no longer exist. The city has developed on multiple stages. Starting from a small village between the ruins. To having now a new Tadmor city that is considered the living city, where the houses are cement boxes.



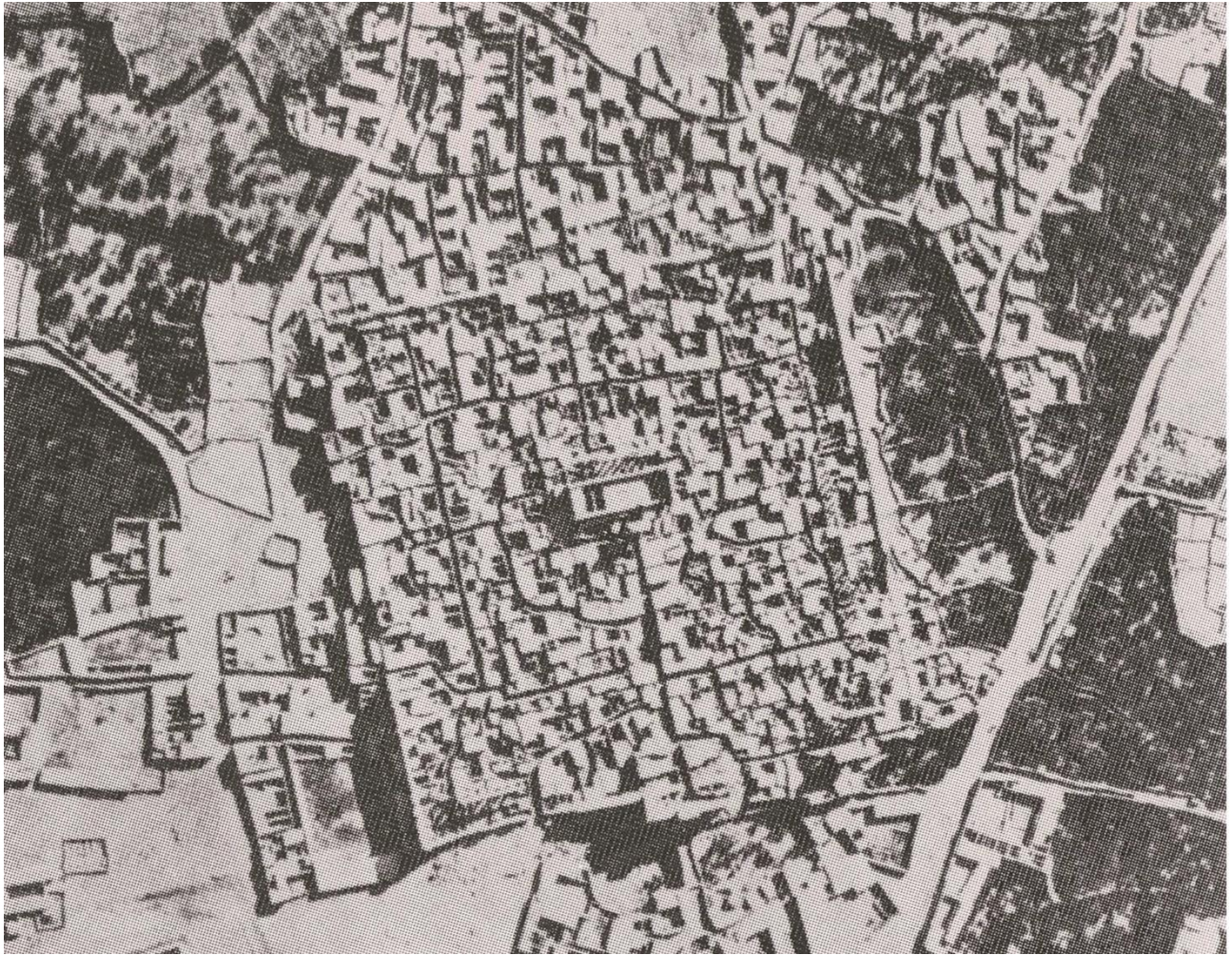
The old typical Palmyrene's house- source: GAWLIKOWSKI, 1997 (Yon, 2002)

IV.III.II The 20's & the 30's: The Urban development within the ruins

All we know about history is the documentation that we see, or we discover. As much as we know Palmyra had always been a living city, and this what photography prove in the late 90's. However, all the drawings that have been drawn by travellers, where just empty ruins. When Borra and Hofsted draw Palmyra, they have drawn it empty. Just a ruin. And perhaps this village embed with the site has come later (Wendy, 2015). Those drawings are a clear testimony of how the western think about heritage, and how the eastern do.



Giovanni Battista Borra, The Ruins of Palmyra, in Robert Wood, The Ruins of Palmyra, otherwise Tadmor, in the Desert, London, 1753., Source: Special Collections, University of Washington Libraries



1900 – 1920, Palmyra, an ancient site, and Tadmur the city. Source: Amer Sebail

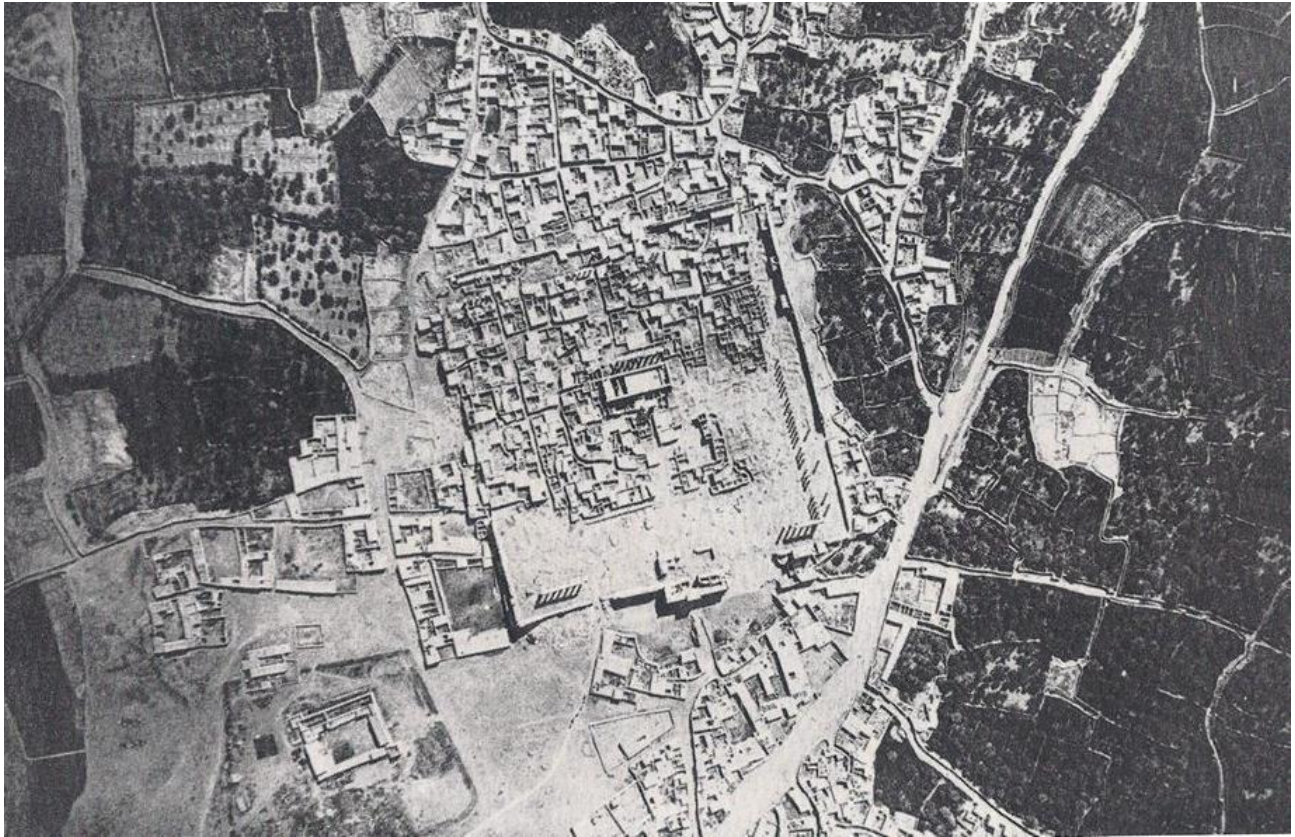
The photos show how the architecture of those little houses, is a Vernacular architecture, that depends on the locals, and took multiple generations of reconstruction and repair. A photo taking in May 1929, shows how the local women were working on repairing their little houses, by adding a new layer of mud. This village was not spread on the whole ancient city; rather it was only between the temple of bel and its sanctuary. Creating a native grid composed of multiple narrow alleys. However, in 1929, during the French mandate on Syria and Lebanon. The general director of antiquities arranged the creation of a new living town next to the site, and relocate the villagers to this new site (Wendy, 2015).



The Gate of Bel Temple, Source: Louis Vignes/J. Paul Getty Trust. (Rowland)



Palmyra, May 1929. LOC 13939, (Wendy, 2015) – the work of the women



1930, The beginning of the new town outside the ancient site. Source: Amer Sebail

In 1930, it was the birth of a historical monument and the death of a village. As it was called in a report by the IFPO. The reason after this house displacement and destruction of the village is to be able to do excavations work in the temple area, moreover to restore the monumentality of the original sanctuary (IFPO, 2015). The modern village, meant to be in the north of the ancient city walls. A simple structure based on local vernaculars adjusted to two-story modern needs. With having new roads and gardens (Wendy, 2015). With this relocation of the village, the way the villager's performance with the site has changed. They have become workers in the archaeological site, instead of a citizen. Thus, it was also the beginning of the tourism. Moreover, with the change of relationship between the locals and the archaeological site, a good part of the locals became part of a new town that is controlled by the capitalist economy, depending less on the agricultural work. Thus, the locals have been transformed into a tourist guide and have lost his tactile relationship with a space that becomes transposed into a historical narrative that distances it from him as it makes it closer to the European visitor. Nevertheless, that does not mean this heritage has lost their meaning to their locales; it is just to emphasise the change of the relationship between the locals and the site within the city development. However, our heritage is a heritage of remembrance, memory, and

performance. It is true that this ruin belongs to universal heritage, but their people own it, those people they didn't buy this place, rather they own it through the tactile processes of incorporation that weave the walls of the home between stone trees that precede them. The new city has grown without having any linked with Palmyra spirits, taking a look at the past we can see what is the architecture of the desert before the concretes houses of today invaded the Middle East.



1936, bel temple and its sanctuary, after destroying the old village. Source: Amer Sebail



The modern town of Palmyra, Source: Bernard Gagnon- Wiki Images

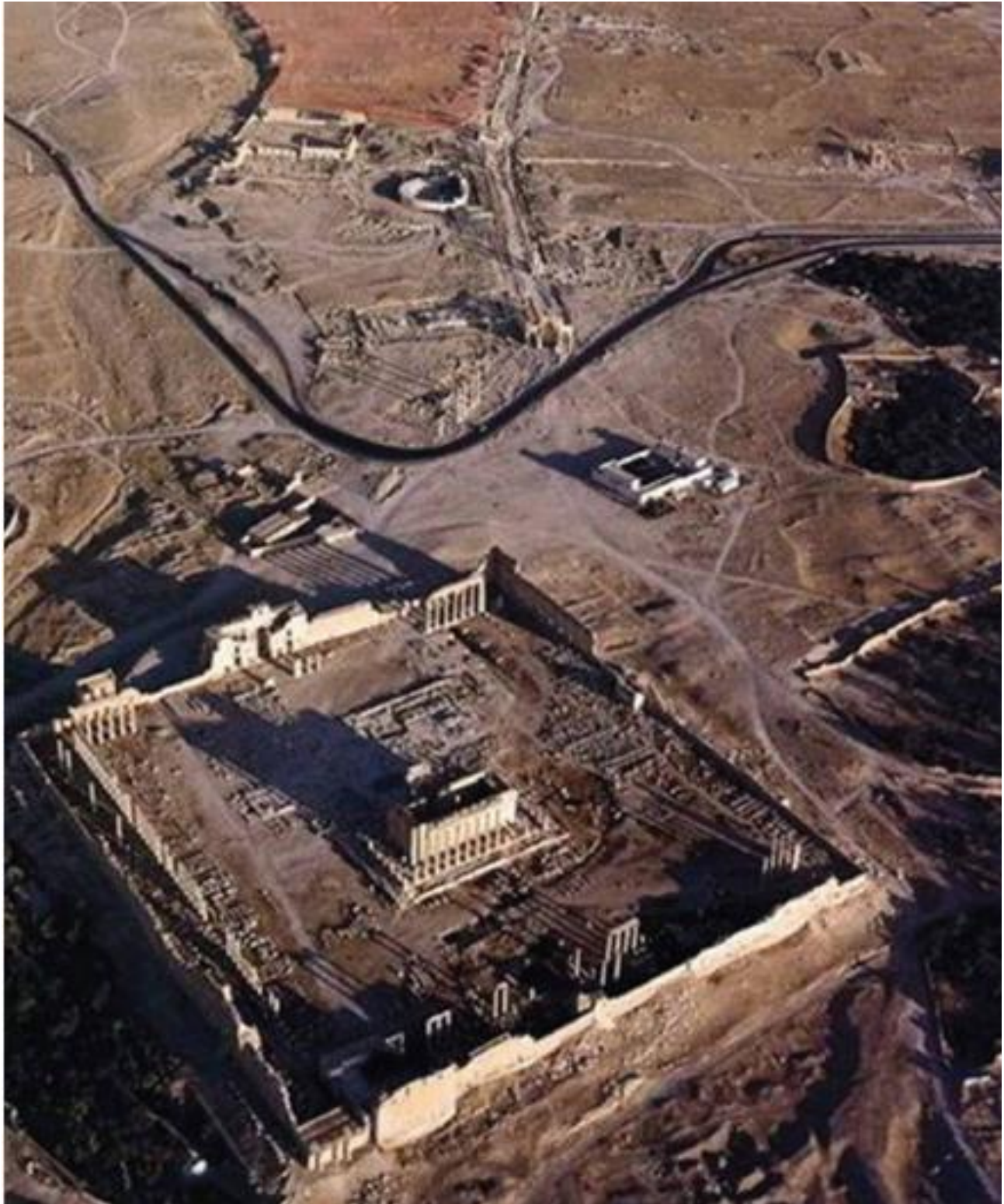
Map shows the location of the ancient city, and the link with the Oasis & the modern city, Source: Lias Abdulmawla



IV.III.III Site management and Urban Problem

Despite the archaeological site urban development during the years. And despite all the preservation and restoration work that has been applied to Palmyra archaeological site. The site had some aspect that some could consider as a threat to this heritage. As it explained before, the living city has been moved outside the ancient one. However, in the prior war period, the pollution of the city was increasing which encroaching on the archaeological zone (UNESCO, Site of Palmyra). In the interviews carried out in Damascus, Alrifai, argue the relationship between the new city and the archaeological site saying: " before rebuilding we have to think about what was not working in the site before. Sadly, I would say that the new city of Palmyra is totally separated from the old city; and does not have any relation to its planning or construction. Also, the Oasis has been neglected. We must look to all the signs and think carefully about the site and the heritage itself." While Amayri and Najati, have argued about the problem of the site management on multi-levels. Saying "The site is missing management on multiple layers, not only economic and tourism, but also entering the site, the services, the cafeterias, and archaeological site itself ... Imagine at the moment the road is passing inside the archaeological site arriving at the new city". While Najati said: Prior the war, the main problem was managing the site. The organisation of the site is so weak starting from having a touristic plan visit, ending with not having any buffer zone or any protection the monument itself, as you know he told me anyone could enter at any time, moreover can touch or site wherever he wants. Second, the transportation road that is leading from Damascus towards the governorates in the western region is passing through the archaeological site. However, Alrifai has indicated that not only a site management will be enough, rather a human development is what it will be needed. He said: Sadly, we had a lack of taking care of the organisation of the site, and the walkability inside the site. But the question is: is that what we only want to do? What we have is a cultural heritage. We should not only develop the economical use. Instead, we should think about the people. It is our duty to think how to change the use of this heritage to development; we have to think about the people. It will need human study, regional study, understanding the area around, understanding the traditional work that starts to disappear. When we do that we will guarantee a future preservation to the site. When the people know that this heritage is making their culture spreading, they will start to take care of that heritage more than any government will. What we must think about is a strategy, a The regional strategic action plan of priority. Where the people could not wait until all the heritage is restored to start working. Rather, an attraction point could be restored, that could hold events; then it will be a

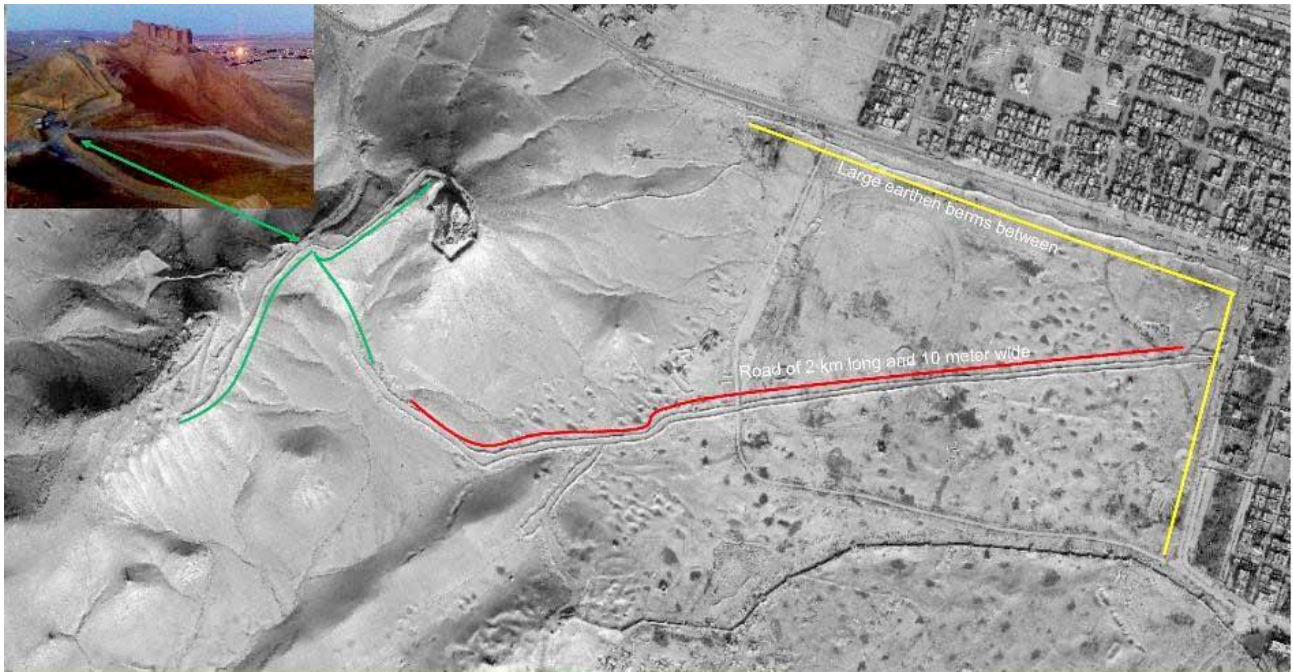
parallel plan with everything. Thus, it will need to understanding of the area, the needs and the priority.



The Passing Road next to the Archaeological site, Source: Damascus University

IV.III.IV Current Urban Situation – Territorial Damages

In wartime, cities have to adapt to war conditions. Some changes must be done in order to be able to control the areas or to defend it. Many changes are the results of losing parts of the cities, and other changes are created in order to have new accesses to the cities. Also during times of conflicts, the distribution of the armies has its impacts on the cities which influences the cities territories. According to a Syrian journalist who has visited Palmyra after each destruction, The road next to the archaeological site, still exist moreover it is used for military tanks and cars, he noted that in the past it was forbidden to fly above Palmyra, in order to preserve the city from any vibration caused by the airplane. Now days not only flights are flying above the archaeological site. But tanks are passing next to the site. Moreover, The appearance of the Palmyra has changed due to shelling, clashes, and the explosion of mines while removing them.” (Al-Mounes, 2017). Palmyra is not only affected by the destruction that happened in the archaeological site, or inside the city but also the circulation of the events that were happening during this period in order to save the city, has affected the territory. The distribution and the installation of the armies inside the city in order to control the security of it have made significant changes in the structure of the archaeological site and its surrounding. Taking as an example the opening of new infrastructure in order to facilitate the transportation between Palmyra citadel, the modern city (police station - al Badya) located east of the northern-area tombs and the military operations situated in Jabal al-Rwissat. This road is 10 meters wide and protected all along its path by large lateral levees. The main damage that this path has created is its location. Because it passes through an area with numerous ancient tombs. Reports say that archaeological remains that stood in the path creation were removed and in particular the foundations of the tombs. Some archaeological stone blocks have been moved for defence purposes. Which may not only cause damage to the remain stones but its displacement it will cause the loss of evidence for any reconstruction of the building that was located by. The installation of heavy armaments such as tanks in the archaeological site with a creation of military operation centre. This aspect is not only changing the territory by creating centres out of urban architectural strategies, but it is also affecting the site with the daily movement of the tanks, and the fire that may be caused, that could lead to a loss of certain archaeological layers.



The path of the trail that runs through the archaeological area. Sources: Aerial photo from ASOR (ALI, 2015)



The Installation of heavy armaments in the archaeological site Source: press Tv, exclusive report from Palmyra May 2015

The other aspect that caused a change of the site appearance is the creation of the levees. The levees were created from the soil that existed in the sites. The concept is similar to when the ancient people were building a fortress in order to defend their land or their city. The damaged that has been caused because of the levees is that those levees they were not only created on the road path like the road that has been recently established. Moreover, they were also created in multiple areas near the archaeological site, with different high. While this not only cause a change of the site appearance but it may also cause a clearance of certain archaeological layers.

Chapter V Archaeological Site

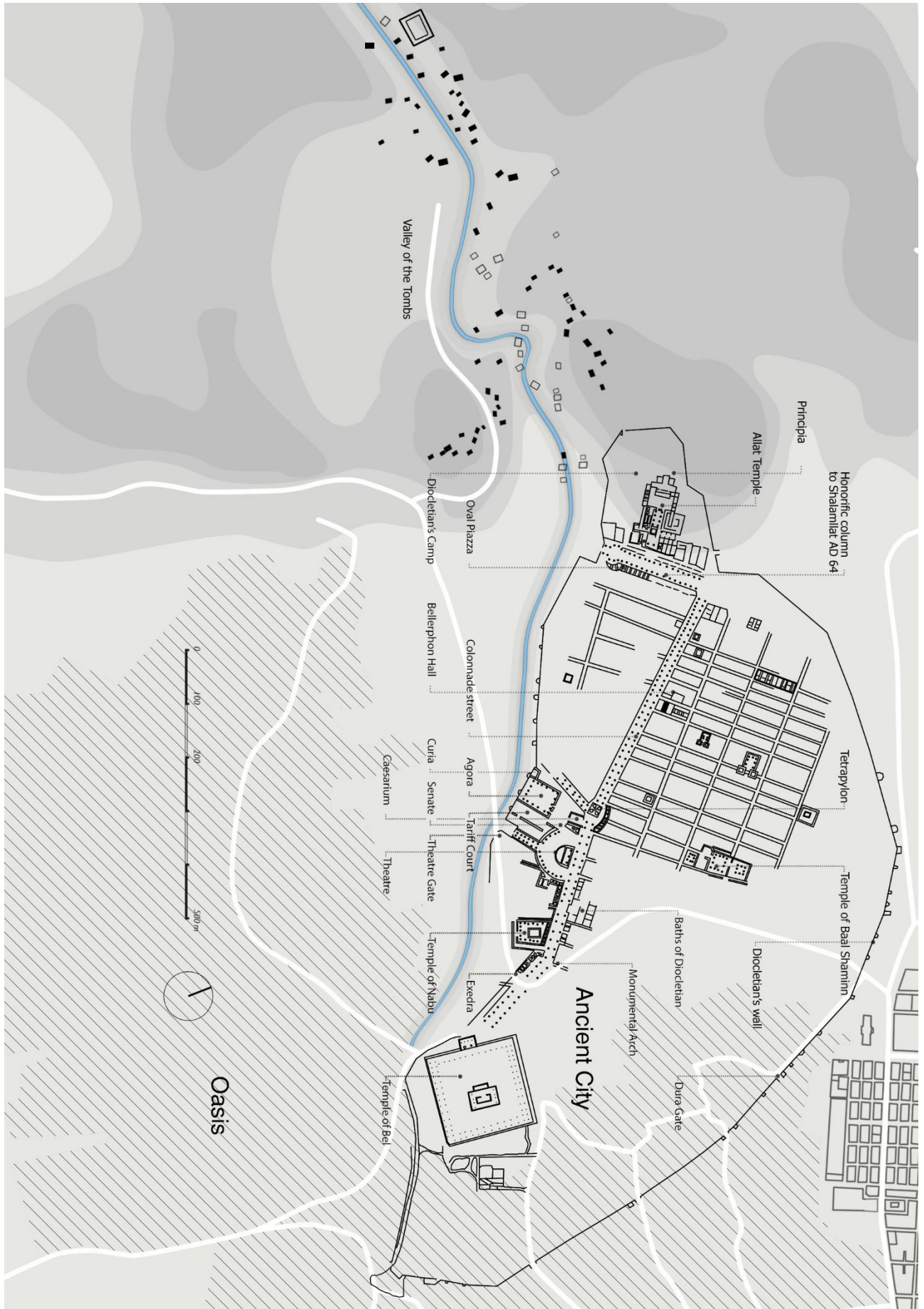
V.I Introduction

An ancient city is located in the heart of the Syrian desert all surrounded by sands. An ancient city that has flourished by a great civilisation next to a water spring. This ancient city is named Tadmor which means the miracle in Aramaic language moreover its means the resistance city in the Amorite language. While the other name that is called with is Palmyra, which it has been named after the palms trees that exist in the Oasis that spreads above three hectares in the middle of the desert, laid just next to the Ruins. Nowadays this Oasis its totally negated while it should be considered a Natural heritage that needs to be preserved. A water spring is passing at the edge of the Oasis named Afqa, which proves how human was able to live in the area of Palmyra. However, in 1993 the Afqa spring has dried up due to the amount of excavation that were ongoing around. In the north-east of the ancient city, a modern city has developed, which is threatening the ancient city with its developments. Moreover, the connection between the two cities is weak, and decreasing the opportunities that each of the cities could offer for the other one.

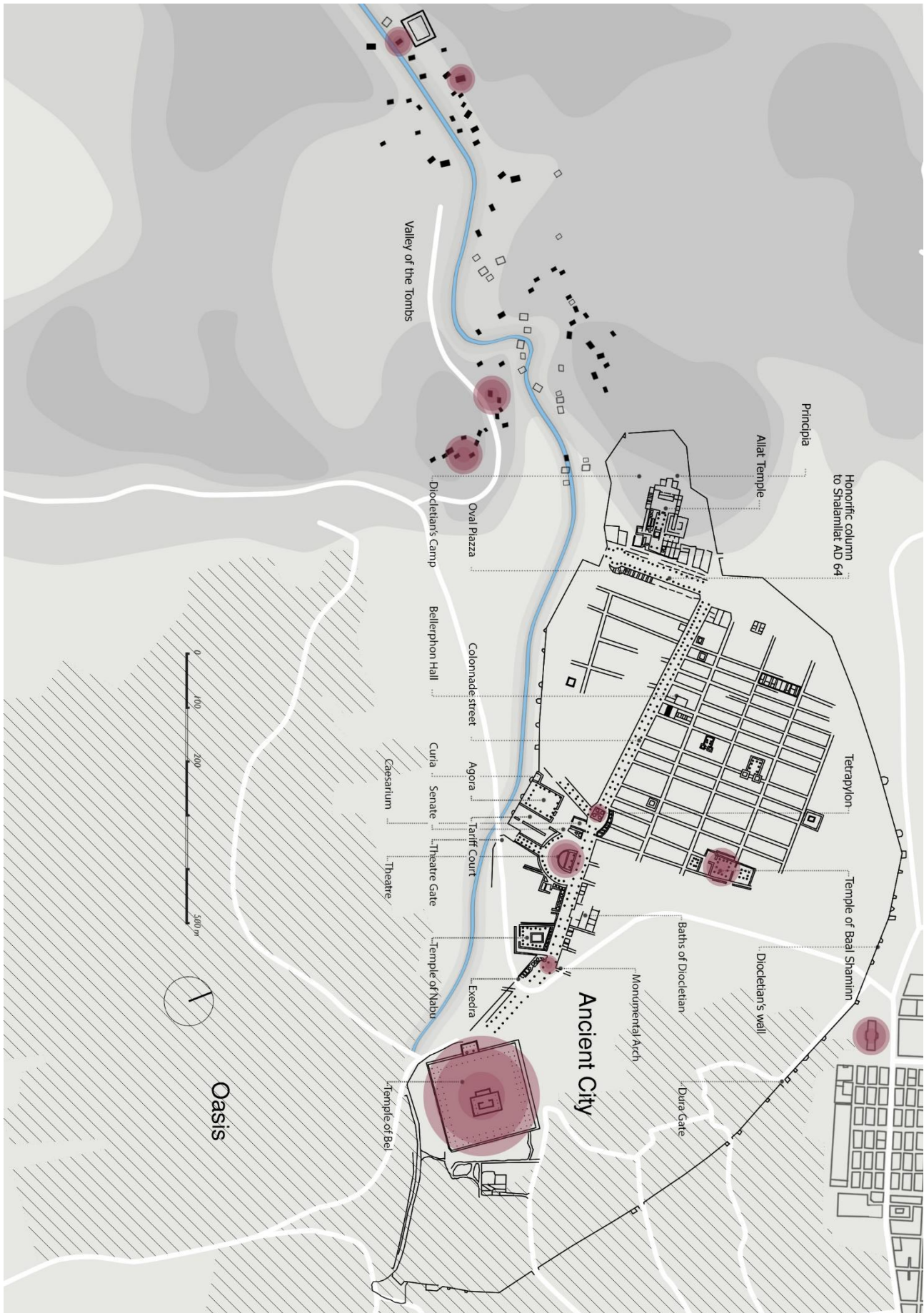
However, in the past Palmyra has flourished with its Architecture and trade, plenty of wars and emperor has ruled the city” look chapter 4 – Timeline”. Nowadays, Palmyra has become a ruin where all the history is shown within its architecture.

The map 1 shows all the historical monuments of Palmyra that has been found or excavated, ending with becoming our cultural heritage. The ancient city is surrounded with Zenobia Walls as it has been raised by the Queen Zenobia, cutting the city into two when the Palmyrene army was trying to defend their city after Aurelian has left the road open to Palmyra (Browning, 1979). Part of the walls is passing inside the Oasis. Due to the ongoing war in Syria, many of those monuments have been damaged or destroyed due to the vandalism of the extremist armed groups. Based on the media, and on the reports, that has been produced by the DGAM. All of following monuments “ the temple of Bel, the temple of Baal, the Triumphal Arch, the Colonnade Street, the Theatre, the Tetrapylon, and the Funerary Towers” has been destroyed or dramatically damaged. ‘Look Map 2’ Therefore; I will go through part of the destroyed monuments in order to understand their cultural value, their authenticity. Moreover, in order to have a better vision for a post-war reconstruction phase. A vision that is based on an understanding of the history and the authenticity of the place.

Map 1 – The Ancient City Monuments, Lilas Abdulmawla



Map 2 – The Ancient City Destroyed Monuments, Lilas Abdulmawla

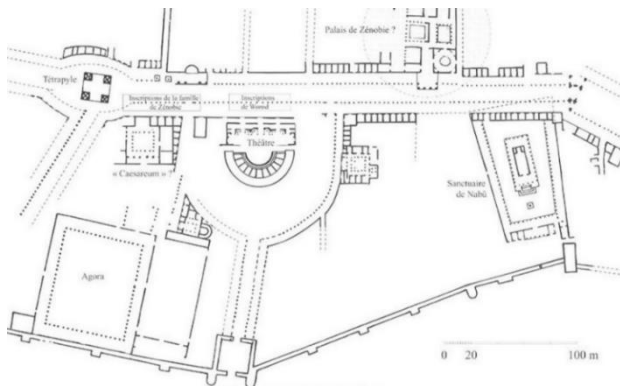


V.II Archaeological Monument life

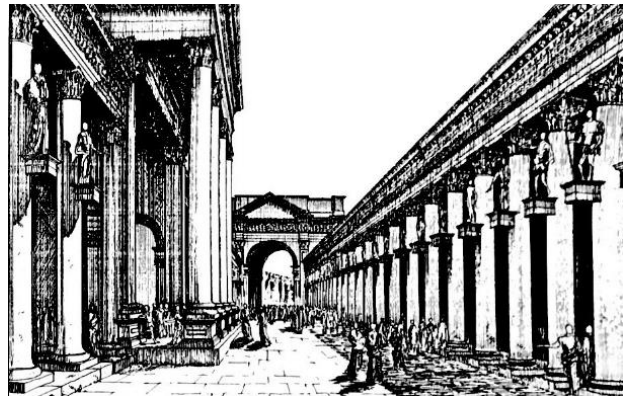
V.II.I The Colonnaded streets

Architecture

This type of street exists in another Roman provincial, but the dominant architectural role in Palmyra is what is making it special. The colonnade Street it is one of the spectacular survivals of the ancient city that is considered as a civic development, with its dramatic effect that is ending in the west with the funerary temple seen through the arch, and the temple of bel from the east. now it has been transformed into a monumental feature of the city. In ancient past, the intention may have been to have a continues the street until the temple of Bel, and if it was done, we could have the longest street in the ancient world. However, if this was the case, it might have caused the destruction of the Temple of Nebo. For that reason, the street has a few degrees of direction change to the north. The inclination has created an occurred feeling that has been fixed with building the monumental Tetrapylon " the mid of the Street' 'where the street is inclined with 10 degrees, and the monumental arch at the east end of the street where the street is inclined with 30 degrees. The rhythm was also important in architecture, where the portico of the bath of Diocletian, breaks the monotony of a long run of pillars. The portico was higher than the colonnades, and its pillars were red granite whereas everything else was a pale honey colour (Browning, 1979).



The map shows The Colonnade Street with its inclination Source: (Browning, 1979).



Reconstruction of the Colonnade street looking toward the Triumphal arch with the Portico Source: (Browning, 1979).

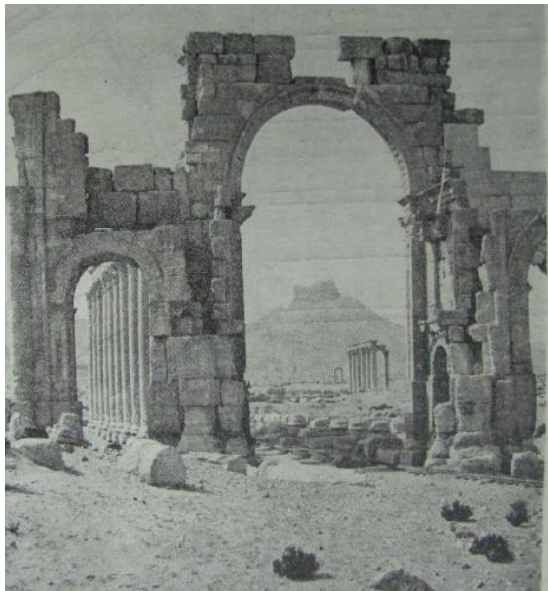
The Restoration Works

In 1976, A Syrian Mission had reconstructed seven columns of the Colonnade street located in the northern corridor, the mentioned mission where led by Khaled al Asaad (Asaad, 2010). The photos

show the reconstruction of the seven columns, where the shoot of the photo has been taking looking from the temple of Bel toward the Triumphal Arch.

The Current Situation

Three columns of the colonnade street have been destroyed in the 26 October 2015 (UNESCO, Technical Assistance Workshop to World Heritage Sites in Syria, 13-15 December 2016). Moreover, some of the columns had the risk to fall due to the displacement of some of the stones (Damascus University, 2016).



The colonnade street through the Arch Before,
Source: Amer seabai



The colonnade street through the Arch After restoration work,
Source: DGAM

V.II.II The Tetrapylon

Architecture

The tetrapylon is built on an oval square, located in the mid of the colonnade street to the north-west, it is composed of four square blocks 10*10 meters, each block is 75 cm high contained four granite Corinthian columns of two meters high. Those columns serve a holding a stone of decorative ceiling (AlHariri) .According to Browning, the Tetrapylon serves no practical purpose; it is a purely decorative element that aimed to hide the 10 degrees of incline in the colonnade street(Browning, 1979).

The Restoration Works

The Tetrapylon has been discovered between around 1963-1964 by a Syrian mission. The only part that was in good condition was the four blocks base, rather for the columns and the ceiling they were destroyed. However, between 1965-1968, the same Syrian mission has worked on the restoration of the tetrapylon. Based on a study of all the original stones and using the mythology of anastylosis. However, there was part of the columns that were missing. Thus, the missing columns have been replaced with a casting of a composite granite.

The Current Situation

In January 2017, the tetrapylon has been destroyed by ISIS (Shaheen, Isis destroys tetrapylon monument in Palmyra, 2017). By assessing the damage from the photos, it shows damages in the four bases of the blocks due to the destruction of the columns and the ceiling, where only four columns have survived. And from the photos at least one of the columns that have been destroyed is the one with the original stones.



The tetrapylon before reconstruction work, Source: DGAM



The tetrapylon during reconstruction work, Source: DGAM



The ancient tetrapylon in Palmyra, photographed in 2008. Photograph Alamy



The tetrapylon after ISIS destruction, Source: DGAM

V.II.III The Theatre

Architecture

The theatre has been built based on Roman tradition resembling the theatre of Bosrah (Browning, 1979). However, it has been built on a flat ground which is reflecting the Palmyrene architecture; it is possible that building the theatre has been finishing between 212 AD- 218 AD, “ look Timeline”.

The theatre is located on the left side of the colonnade street Between the Tetrapylon and the Triumphal arch, with a semi-circular form of 50 meters wide, composed from thirteen steps for the audience and a façade stand behind a rectangular platform “950 cm * 4550 cm “, the platform is higher than the middle courtyard with a 195 cm. The courtyard is covered with carved stone. In order to enter the theatre, there are three entrances for the public, one on each side west and east side, and one on the south façade. However, the northern that is formed by mounting on columns contained also five entrance which led to the backstage (KTEFAN, 2013).

The Restoration Works

In 1952 the excavations work started on the theatre after it has been found down under the sands. Moreover, multiple restoration works have been done on the theatre, by missions led by Khaled al Assad in between 1981, 1984 (DGAM).

After the excavating the theatre, the main damage was the last four rows of stairs that most of them were missing, the upper part of the façade with its niches were totally destroyed with some molded columns. In 1981, the first restoration work included the restoration of the southern façade, also a restoration of the theatre steps. In 1984, the restoration of the theatre façade and rebuilding the

some of the missing parts of the original materials. Moreover, until 2007, the theatre had continued maintenance “Strengthening, cleaning, and lighting”. (Damascus University, 2016)

The Current Situation

Due to controlling the city by ISIS in January 2017, the theatre has been damaged, where part of the upper niche in the façade has been destroyed, and part of the platform has suffered damaging because of this destruction (Shaheen, Isis destroys tetrapylon monument in Palmyra, 2017).



The Theater under the Sands 1952 Source: DGAM



The Theater after excavations, Source DGAM



The Theater prior 2017 Source: Amer Sibaii



The Theater After ISIS Destruction 2017 Source: Ruth MacLean

V.II.IV Temple of Bel

Architecture

The temple of Bel was most likely built of mud brick with no fixed luxuries, and it has been levelled with a splendid stone temple, back to the AD. 32. The temple is an example of a hybrid Romano-Syrian architecture, where it has the appearance of a Graeco-Roman, but the plans meet the needs of the oriental culture.

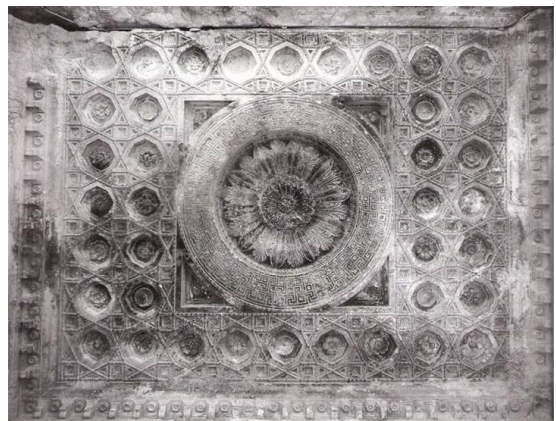
Under Hadrian's liberal, Palmyra has flowered as like other cities; this floweriness has been reflected through the Hellenistic style that has burst upon Tadmor with its rich decoration especially in the temple of Bel where it was reflected in the temple of Bel. And during Antonino Dynasty the Temple was completed. The temple is demonstrating a fully mature style with a strong technical skill, where Before building this temple it could be assumed that there was no early school of architectural style. With the strong Hellenistic architecture existing in the temple, the temple has eastern influences with Palmyrene interpretation while the north and the south walls were Greek inspiration (Browning, 1979). Nowadays, it is considered one of the most famous religious temple in the ancient east. The temple is surrounded by a sanctuary (205 * 220 Meters) composed of 375 columns placed in the middle of the sanctuary the Cella that only the priests were allowed to enter (KTEFAN, 2013).

The sanctuary is surrounded all over with porticos, all the Porticos are composed of two raw of columns except the western corner of the sanctuary was raised higher than the other walls, but it was treated the same where it is Corinthian pilasters standing, between them as a framed window. However, must of them have collapsed, and only seven and a half has remained.

The Cella is levelled over multiple steps, in order to enter the main gate is located on the western side of the Cella. However, the Cella is also surrounded by a portico of decorative columns, holding a decorative Roof. The Cella is divided into two parts, the southern one, and the northern one. The southern one it was created for worshipping the God Bel, and it has a Roof full of decoration and sculpturing that is showing the art of the tadmorian, while the other Northen part has a roof composed of one big stone, sculptured to reflect the force of the God Baal (Damascus University, 2016).



The Southern Roof, Photographer: Hisham Zaweet



The Northern Roof, Source: DGAM

The Restoration Works

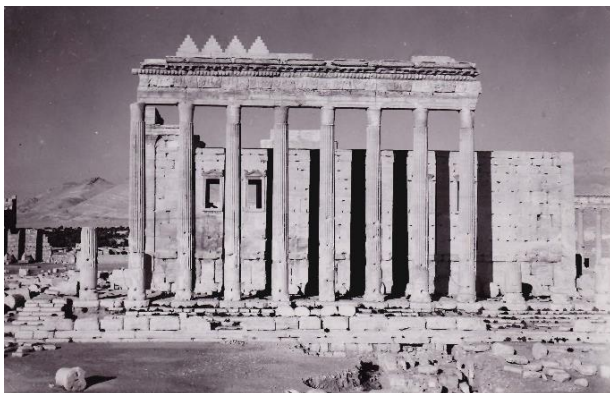
In the year, 1932 after the moving the village from the surrounding of the temple of Bel” look Chapter 4 “. A restoration work on the temple has started. The restoration of the 28-meter-high entrance of the Temple was a necessity, where the entrance has been in a dangerous condition, and its loss will be a big loss. Therefore, two phases of restoration have been applied to this entrance. The first one was for the base where it had to make sure that it will be stable on the earth. As a result, an injection of reinforced concrete has been adding as an extension with a study of how this solution could be done without exposing the entrance to any collapse. The second phase where a restoration for the upper part of the entrance that includes mainly the work was done on the (Écochard, 1937). Some restoration work has been done during the 60’s on the sanctuary part (Browning, 1979).



The Temple of Bel Gate before Restoration work, Source: (Écochard, 1937)



The Temple of Bel Gate after Restoration work, Source: (Écochard, 1937)



East façade of The Temple of Bel, Source: DGAM



West façade of The Temple of Bel, Source: DGAM

The Current Situation

On 23 August ISIS has exploded the Temple of Bel (Damascus, Monday 24 August 2015). The news of the explosion of bel temple has spread so fast due to the media and the photos that have been published by ISIS. However, the imaged has shown a total destruction, where it was clear that the Cella of the temple is completely destroyed, and the stones have been turned into fragmented small stone spread around the place. While the sanctuary around the temples has shown in the photos few damages. In addition, despite the damage of the monumental portal, it is the only element that remained standing probably because to the implemented reinforced concrete structures at its base and at the level of the lintels, during the restoration works in the 1930s. According to the analysis of the workshop in last December led by the UNESCO, it is possible that the stones did not suffer the same destiny of destruction. Where looking to photos it is possible to notice that some stones have suffered fewer damages and had the characteristics of a classical collapse of a structure made of stone this difference it is possibly due to the location of the exploded materials, the 3D scan that has been done by the ICONEM, has confirmed that there are two types of materials destruction (UNESCO, Technical Assistance Workshop to World Heritage Sites in Syria, 13-15 December 2016). Also, it might be that the base of the temple could be preserved, where for the moment it is covered with the rubble of the exploded Cella.



The Temple of Bel after ISIS destruction, Source: DGAM



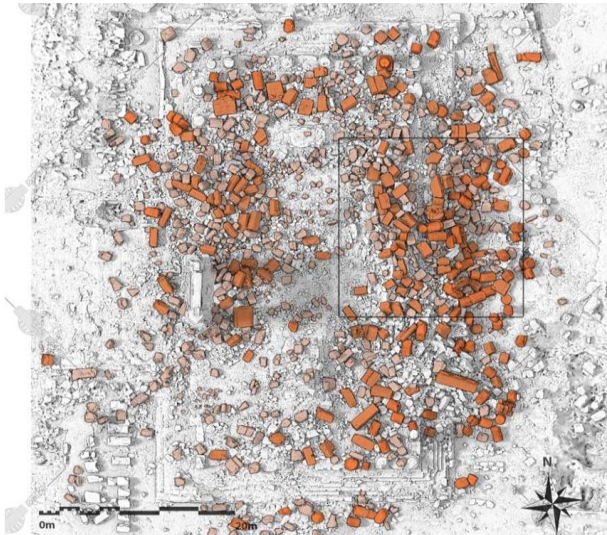
Ariel Footage to The Temple of Bel after ISIS destruction, Source: ICONEM



The Temple of Bel after ISIS destruction / The damage of the gate base, Source: Rania Al-Fahl



The Temple of Bel after ISIS destruction/ the collapsed pieces, Source: Rania Al-Fahl



Digital survey by 3D scan of the remains of the Temple of the cella Note the portico preserved at the West (Iconem/DGAM document)



The Temple of Bel after ISIS destruction / The damage of the gate base, Source: Rania Al-Fahl

V.II.V Temple of Baalshameen

Architecture

The Temple of the god of rain and fertility named by his name BaalShameen. The temple is located in the northern quarter of the ancient city, northeast of the Tetrapylon. The temple is built above the ruins of an earlier temple it is composed of two courtyards with a Cella (10* 20 Meters) and porticoes. In the 2nd century, the temple was an example of a Romano-Syrian architecture (Browning, 1979) where the entrance of the Cella create a triangular truss above six decorated columns. The Altar of the Temple has been built in the 115 AD. with the beginning of the Christianity the temple has been changed into a church as well as Bel Temple. The Tadmorian has created a special road that leads to this temple; this road is located next to the Tetrapylon linking the colonnade street with the temple. This Street Start with two columns in order to emphasise the entrance. (Damascus University, 2016)



Temple of BaalShameen prior war, Source: DGAM



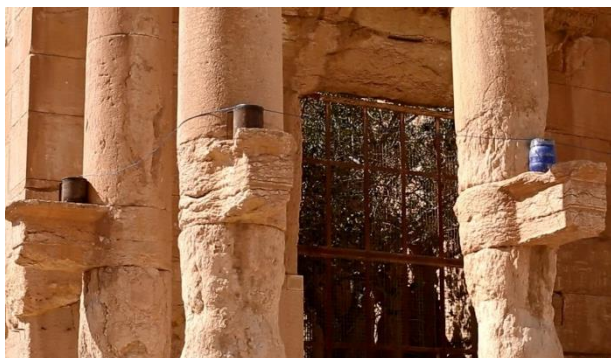
The Street leading to the Temple of BaalShameen prior war, Source: DGAM

The Restoration Works

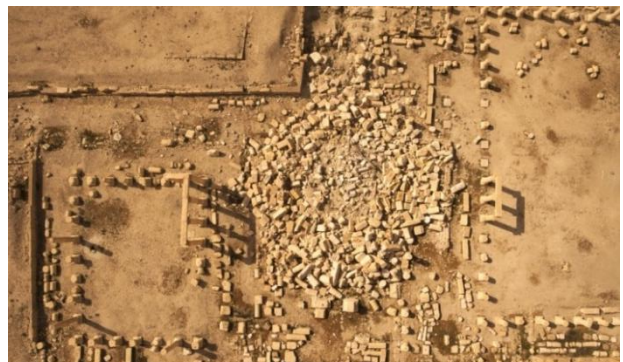
The temple of Baalshameen is one of the most completed ruins that have been found. Only a few maintaining works has been done for the temple by the French Ecochard in the year 1935. In 1963 due to excavation work the street that links the colonnade street to the temple of Baalshameen has been found. The result was 45 meters with 3.7 wide of this road were paved with unregular pavement. Moreover, a canal for drainage the water passes through the middle of the road (Damascus University, 2016)

The Current Situation

After blowing up the temple of Bel, ISIS blew up the Temple of Baalshameen on the 30 of August 2015, destroying the Cella of the temple. As like the temple of Bel, most of the exploded stones still on the site. However, looking to the photos, despite the total destruction of the Cella but the Northern and the Southern columns that are located just next to the Cella has survived from the explosion and have remained in good condition. According to the studies of last December workshop mentioned before, the explosive charges used in this temple seem less powerful than the one used in explosive the temple of Bel. Moreover, those explosives have been placed inside the Cella, where the reduced blast of the explosion towards the outside of the Cella resulted in a tilting of its lower parts and the collapse of the upper parts (UNESCO, Technical Assistance Workshop to World Heritage Sites in Syria, 13-15 December 2016). However looking to the pictures it will be notable that there is a big part of the stones that are not fragmented and still recognisable but still have been damaged due to the collapse. In addition, one of the most important thing that has been mentioned inside the report of the mentioned workshop is that Based on the location of the used explosive at the middle of the Cella, it has caused a very strong radial deflagration. As a result, it has caused a radial displacement where it will be easy to identify the position of the original blocks (UNESCO, Technical Assistance Workshop to World Heritage Sites in Syria, 13-15 December 2016).



Temple of BaalShameen before explosion, Source: Media

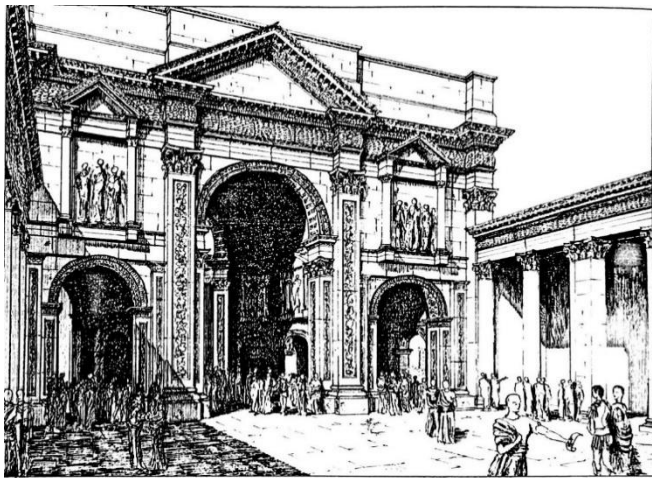


Ariel Footage of Temple of Baalshameen showing the destruction of the Cella. Source: DGAM

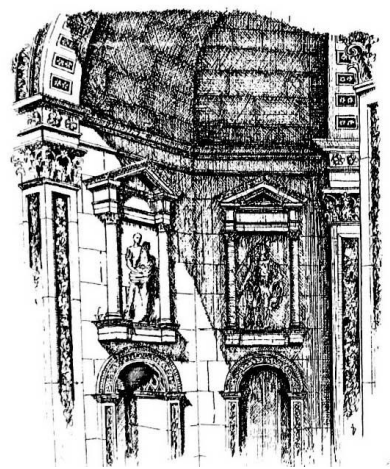
V.II.VI The Monumental Arch

The Arch Form & Architecture

The Monumental Arch is one of the most famous monuments of Palmyra. The uniqueness of this Arch came from the way that the arch transit between his two façades the northern one, and the southern one. This what has made this Arch one of a marvel of the structure. Moreover, its uniqueness also comes from its decoration, where the arch contains a wide range of decorative carve details of floral, and leaf design that it can hardly found the same treatment for each one. The decoration and its treatment are what is giving the monumental Arch of Palmyra half of its glory. Moreover, these decorative details emphasise the strong architectural form that the arch has (Browning, 1979).



The monumental arch from the southern side (Browning, 1979)



The Syrian niches, within the central opening of the Monumental Arch – Source: (Browning, 1979)

The Architecture

According to Browning, the Architecture of the arch was the one displaying in the picture above. The Arch was a mix between a Roman and a Palmyrene architecture. Looking at the picture above; The Roman form can be noticed through the way the arch is composed of three arches, with a central height arch that is displaying the Triumphal arch of the Roman imperial. Moreover, its also notice through the Roman art with it rigid coffers, with an amazing counter-play of curves and straight lines. While the Palmyrene art is display with all the decorative characteristic, and its carved ornament, moreover with the Niches displaying in the central opening of the monumental arch and on the façade, The Palmyrene art is also displayed through the pediments above the niche “ known as Syrian pediments”. All these aspects are displaying a unique architecture of an arch with a mix of cultures.

The Form

The Arch has a bend with 30 degrees, making each of his façade facing the right angle of the street. Creating a V shape. The V shape is due to a planning strategy, where the Arch meant to be facing the colonnade street, and the temple of Bel. Thus, if this the case the colonnade street needed to be straight from north to south and this will cause the distraction of Nebo temple. So, with creating an inclination in the colonnade street, this has caused the creation of the v shape of the Triumphal Arch in Palmyra in order to have the southern façade facing the temple, and the northern façade facing the colonnade street. This fascination structure where the two facades of the arch started from the same point, creating a high central arch with a lower arch from each side, the distance between the two facades is wide enough to see the transverse arch; and containing arches of comparable size which are surmounted by pedimented Syrian niches (Browning, 1979).

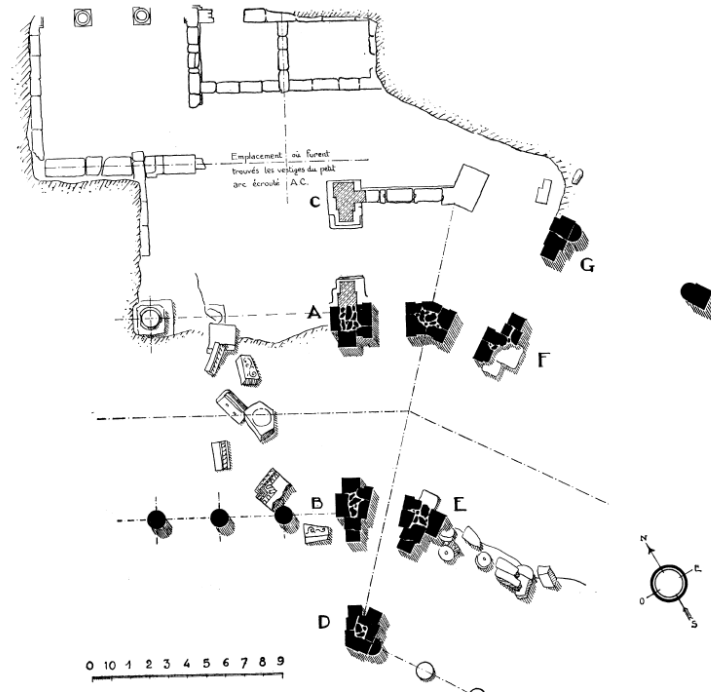


The Starting point of the V shape – Source: DGAM

The Restoration Works

The Triumphal Arch is one of the monuments that has been restored during the French Mandate on Syria and Lebanon. Due to the condition that the arch has been found. A French general has decided on consolidated all the bases of the arches by encasing in the bases of the arch with a layer of a cement concert in order to make the base stronger. Thus, this decision it was not made based on a restoration study. The first restoration work in 1930 on the Arch was by Robert Amy the French archaeologist and architect, which was responsible for the restoration work in Palmyra. With the long history that this city and the arch have lived, the arch has been found not in a very good condition. While due to earth quick, and maybe due to all the past wars, some part of the arch where found

already destroyed. While other parts were damaged or worn out. Looking at the Arch picture from the 20's, the central arch is in a Critical condition that could cause it collapse. While some of the side arches had already collapsed. With the Arriving of Amy, the restoration work was concentrated on the central arch which is name AB in the following plan, and the side Arch AC. Moreover, during the work, a Stone between C & G has been discovered which is creating the seat of a wall.

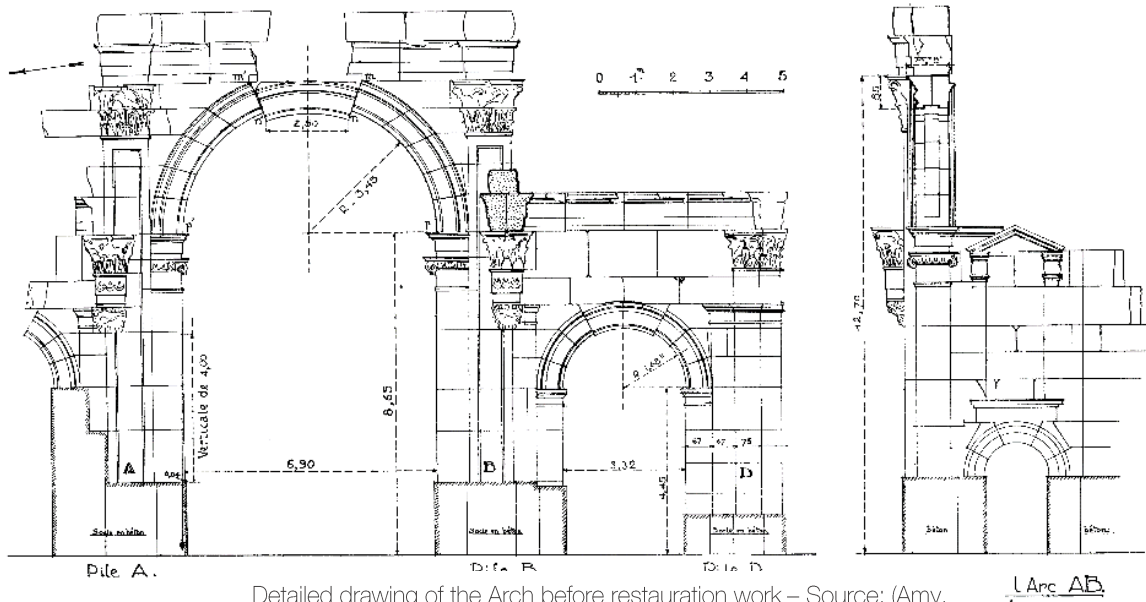


The monumental Arch plan – marked with alphabet for restoration work –
Source: (Amy, 1933)

Working on the big central arch from the north-west façade to the Arch “AB”, an urgent intervention needed to be taken. Where the keystone that is holding the arch had some displacement due to earth movements. This displacement may cause the Arch collapse in case of falling this stone. Moreover, while checking on the arch physical condition, it was found that the base was eaten from inside, this fact has been discovered through a hole with a size almost 2 Quebec meter. However, the restoration work on the central arch was mainly to return the keystone to its original plan, with the challenge of keeping both sides of the arch safe. The restoration has been completed using scaffolding to support the structure and using steel plate following the moldings serving permeant framework. This plate has inside it concrete with cement, which has helped to return the keystone and fix it in its place (Amy, 1933)

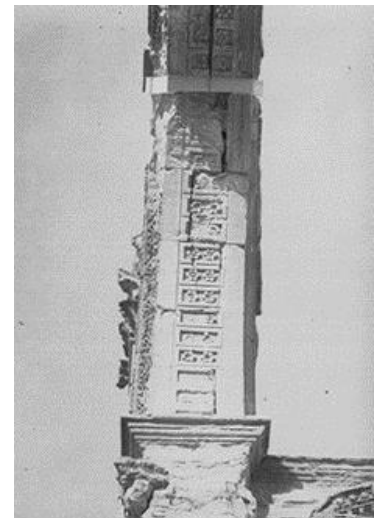


The Monumental Arch – Triumphal Arch in the 20's – Source: IFPO



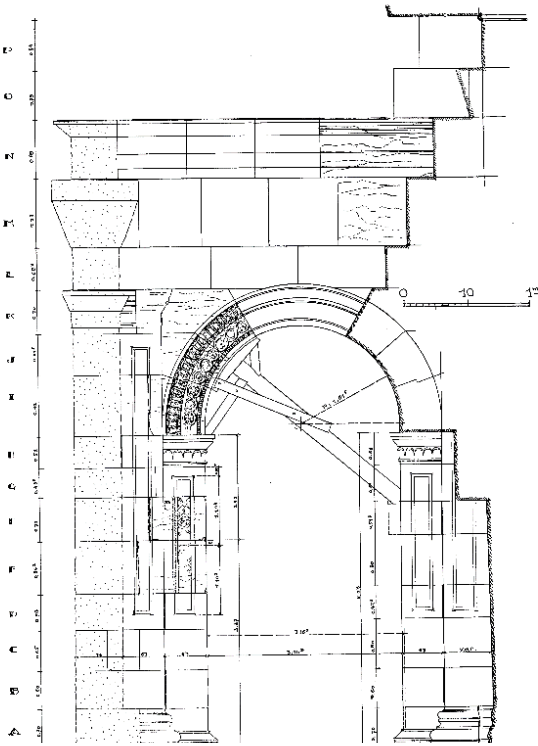
Detailed drawing of the Arch before restoration work – Source: (Amy,

L'Arc AB

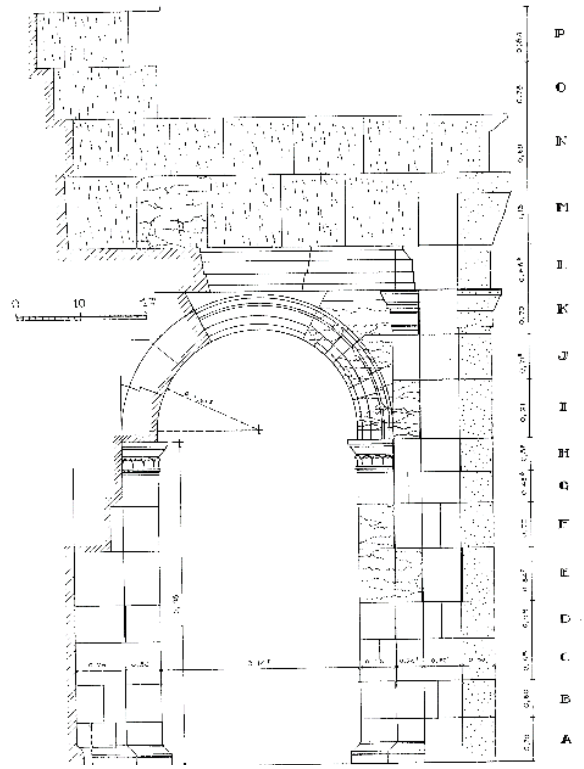


The Monumental Arch – AB- Restoration work – Source: IFPO

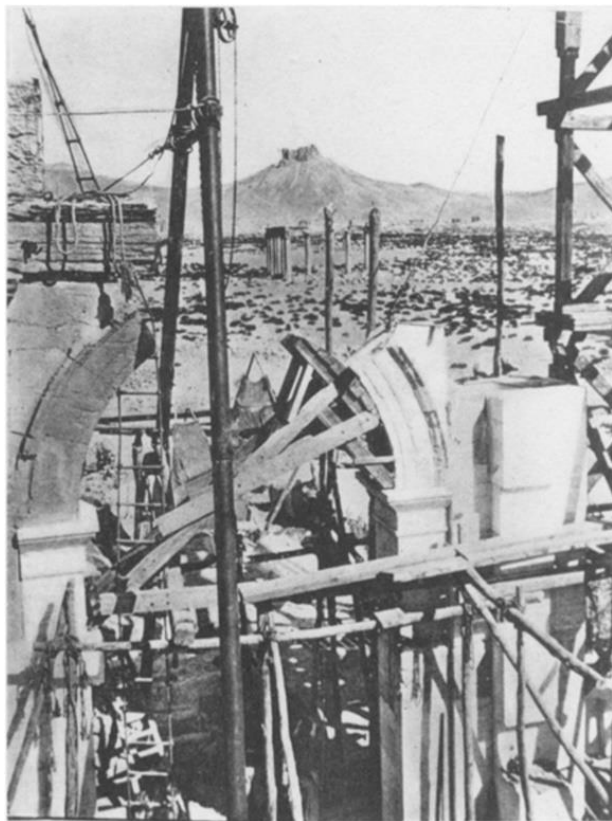
After finishing the work on the big central arch, a decision has been taking for starting the work on the side small arch AC; which is located on the north-east façade of the Monumental Arch. According to Amy's report, this part was destroyed due to earth movement. Where the column that is standing as part of the central arch 'Part A' was missing. And Just a little part has remained from this arch part 'C,' and it was molded. In order to be able to rebuild the missing part, an understanding of the plans and the Height of this arch were needed. In order to have this understanding, a study on remained exciting symmetric Arch BD has helped (Amy, 1933).



Exterior Façade of the retorted arch AC (Amy, 1933)



Interior Façade of the retorted arch AC (Amy, 1933)



During Restoration Work on the Arch AC (Amy, 1933)
source: IFPO



The Arch After Restoration Work (Amy, 1933) – Source
IFPO



12 November 2010 – The Triumphal Arch prior war. Photograph: Youssef Badawi / EPA

The Current Situation

The Triumphal Arch was one of the Monument that has been effected through the conflict in Syria. In 2011, a picture was published through the media propaganda, showing that part of the monumental arch has been affected by the clashes around the archaeological site. Where those clashes have left a trace on the arch. The publish picture shows that this damage was on one of the small side arches, in the south-west façade.



The trace of damage on the small Arch

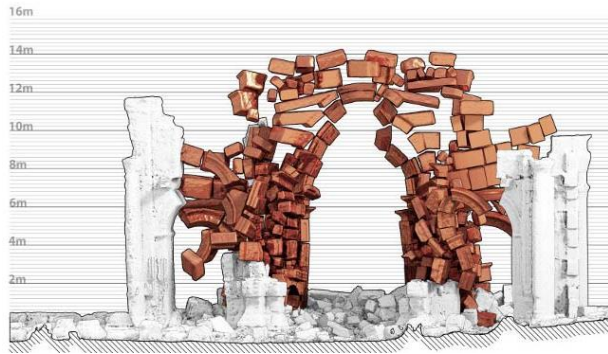
Thus, in the 4th of October 2015 a news of a Total destruction of the Monumental Arch. “ *The Triumphal Arch was destroyed by ISIS (Shaheen, Isis destroys tetrapylon monument in Palmyra, 2017)*. At that time, it was impossible to an assessment of the destruction. In order to know the possibility to rebuild, or to take any other decision. However, the pictures where clear that the arch was destroyed, and only the columns have remained, considering that the physical conditions for the columns are unknown. Therefore, any information on the arch condition was needed. According to Syrian journalist, that visited Palmyra on 27 of March 2016, he confirmed the destruction saying what is left is the bases of the arch. The Triumphal arch is not only a monument, is one of the outstanding heritage in Syria, the destruction of such an arch, may cause a loss of history, moreover an identity. While interviewing Faisal Najaty; the General Manager of Tourism and Technical Training Authority. He said “ the one who was destroying knows very well the history of the city and know the arachnological sites, today what has been destroyed is the unique site of the city, that does not exist in other cities that goes back to the same historical era.” Professor Kevin Butcher, professor of classics and ancient history at the University of Warwick. Noted the same idea of Al najati in a Guardian interview saying “The site is large, and systematic destruction of all of it would be an immense task” “It looks as if the most iconic buildings were targeted – the arch, the best-preserved temples, and the big tower tombs.” (Graham-Harrison, 2016)



Ariel Footage showing the damage of the Triumph Arch (Museums, 2016)

A mission has gone to Palmyra on the 25 of April 2016, in order to confirm and assess the damage on ancient city. This mission has been sent after the UNESCO demand 'General decision 40 COM 22 '. In collaboration with the DGAM. This mission has supported their fast survey with a report. Explained That the central arch and smaller arches have flanked were destroyed by dropping the middle span of the arch leaving the columns on all the sides standing. The report has mentioned that a restoration could be possible were most of the stones still on the site, and much of them survive. (Museums, 2016). On the 15 of December 2016, the workshop led by the UNESCO, that aimed to study multiple sites of the world heritage, included in the Site of Palmyra. Where this workshop has recommended urgent step for the Triumphal Arch such as removing the unstable upper stones, in order to avoid further destruction. The workshop has also noted that any restoration work will be in a next stage. Which will need an understanding of the remains of the arch stones, and storage the destroyed elements with a precise survey, recording all the fragmented stones in the place must be done prior to any intervention. It is precisely mentioned that no elements should be moved- until finding a development of a scientific methodology of processing. Ensuring that a reconstruction stage will have to wait until having a better security condition (UNESCO, UNESCO - State of Conservation, 2017). Despite what has been published in the news of the way the Triumphal Arch has been destroyed. However, a scientific study is needed to be done, similar to the case of Aleppo, with the study of professor Chesi mentioned in Aleppo Chapter. In the report presented by the mentioned workshop before. Doubt about the way the Triumphal Arch has been destroyed; proposing that the Arch might not be posing the question that the Triumphal Arch has been exploded as ISIS has to publish, it might that the Triumphal Arch has fallen due to earth shaken equipment, either excavator or a bulldozer. The reason for having this doubt is due to the better condition of the stones in comparison with the other exploded monument, where some of the stone could be easily identifiable (UNESCO, Technical Assistance Workshop to World Heritage Sites in Syria, 13-15 December 2016). While it is essential to remember the article 15 in the charter of Venice, noting that All reconstruction work should, however, be ruled out "a priori". Only anastylosis, that is to say, the reassembling of existing but dismembered parts can be permitted (ICOMOS, Adopted by ICOMOS in 1965). In addition, in the first scientific mission that went to Palmyra for a survey, the ICONEM, has joined the mission team. The ICONEM has documented the site with aerial views, documenting all the blocks with a survey. The reason for taking this aerial view is not only for documentation; rather it is to create a 3d model,

in order to help the archaeologist to reconstruct by facilitating the localisation of the fallen stones. With a theoretical simulation of the destruction. Thus, this technique might help to re-put the original stone in its exact space. (Iconem, 2017) However, using technology in order to help to rebuild is important; as long as we keep the authenticity of the heritage.



Theoretical simulation - (Iconem, 2017)



The Triumphal Arch Remains - (NAJATI, 2017)

Chapter VI Post War Reconstruction Debate

VI.I The Triumphal Arch Replica

Discussing the preservation method in Syria, Professor Amayri described this method by saying: “we are separating the history with mummification; we are not using our heritage as a continual heritage. So, it becomes a PROCESS OF HISTORY, Instead of HISTORICAL PROCESS” (Amayri, 2017). Maybe this was the case, but currently, our problem is that Syrian heritage has been affected, damaged, and destroyed during the last years of conflict. The post-war reconstruction and rehabilitation are the following steps to take, and in order to be able to progress to arrive at this phase, we will need to go through all the process of documentation and recording. Moreover, what it is needed is to be objective. This objectivity will require a heritage understanding, cultural understanding, and a development strategy and those, in turn, will help to preserve the identity of the heritage, the identity of the people, moreover to preserve the authenticity of the place and monuments.

In history and same in the Palmyra history, the worshipping places were adapted to the changes of religion. The temples have changed from worshipping the God Baal to become a Church and afterwards a mosque (زنوبيا ملكة تدمر و الشرق, 2010), and ending up with being a Syrian cultural heritage. The lesson that is needed to be learnt from this point is: if buildings are able to adapt, and are having a process of life that is a continuance, then why the decisions made to protect those building are becoming subjective.

The existence of extremist in the ongoing war in Syria has harmed the humanity, the territory, and the existing heritage in this land. In an article from the Guardian, the Director of Museum and Antiquity in Syria said: “I tried to persuade ISIS not to destroy the Roman temple of Bel, explaining that it had served as a mosque for centuries, but they blew it up anyway. They said that we are afraid that one day the world will return to paganism, so they destroyed it. It is absolute ignorance. They are barbarians.” (Guardian, 2015). Though the will of destroying the cultural heritage should not be replied with naivety. Rather, the next step to be made should be based on a scientific methodology.

Far from preservation and conservation principals, suggestions start to appear. The use of the technology is strongly related to that suggestion. The use of 3D scan for destroyed or damaged sites in order to record and document the site is a very recommended aspect. Moreover, it could help to facilitate the studies and to progress to the next step (Iconem, 2017). However, there is a fine line

that could turn the use of this technology from a scientific way into a destruction of the heritage itself and its identity, and resulting damage to the already destroyed site more than if it stayed as it is destroyed now. Where the attention of revenge the vandalism act on the heritage has blind the science. Moreover, it could cause the loss of the authenticity that it is still with the remains of the destruction. It is important to understand that this damage is part of the Syrian heritage, and should not be erased and instead it should be preserved with the next step by keeping the trace of the Syrian war that will remain as a lesson for the following generation to learn from.

“My intention” is to show Islamic State that anything they can blow up we can rebuild exactly as it was before, and rebuild it again and again. We will use technology to disempower Isis.” Those are the word of Roger Michel, the Executive Director of Institute for digital Archeology, who has reproduced a copy of the Triumphal Arch of Palmyra (Jenkins, Tuesday 29 March 2016). Those words are a total neglect of the principles of preservation, and it could be described as a mechanical reproduction. While the Venice Charter in 1964, in Article 15 argued that the Ruins preservation and the importance of not losing the meaning of any architectural feature. Moreover, the article has shad the light on the reconstruction principles. Noting the importance of the anastylosis priority and the rules of integrating any material.

As stated in the Article 15: *“Ruins must be maintained, and measures necessary for the permanent conservation and protection of architectural features and of objects discovered must be taken. Furthermore, every means must be taken to facilitate the understanding of the monument and to reveal it without ever distorting its meaning”* (ICOMOS, Adopted by ICOMOS in 1965).

“All reconstruction work should, however, be ruled out "a priori." Only anastylosis, that is to say, the reassembling of existing but dismembered parts can be permitted. The material used for integration should always be recognisable, and its use should be the least that will ensure the conservation of a monument and the reinstatement of its form” (ICOMOS, Adopted by ICOMOS in 1965).

Watenpaugh argued the concept of war and culture, noting the importance of the documentation during the wartime. Explaining that in the time of war, the cultural heritage is the first to be affected. Understanding the past is an element to be able to avoid what happened in the past and to build the future. In the time of war, the documentation, the analysis, and all the information become an urgent case (WATENPAUGH, 2016). In the case of Syria, many organisations started to work on the

documentation work; some of that organisation is in collaboration with the DGAM or the UNESCO, others private institute. However, the million Image database is a program in collaboration with multiple academic partners such as Oxford University, international organisations such as the UNESCO, and it is in collaboration with the government of the United Arab Emirates. This program aims to record and collect millions of 3D images of heritage that are under threat in conflict zones. Those images will be used for educational purposes, but those images have also been used for a creation of a 3D replica of the Triumphal Arch of Palmyra, using 3D printing techniques (The Institut for Digital Archaeology).

VI.1.1 The beginning of a replica production

“It can be rebuilt anywhere in the world for all humanity to enjoy”, this what the Institute for Digital Archeology - IDA has claimed to be a success. After the destruction of the Triumphal arch in Palmyra, a 3D replica of the Triumphal Arch has been produced. The replica is 1/3 scale of the original triumphal Arch, reproduced with an art of 3D technology as Roger Michel the Executive Director of Institute for Digital Archaeology described. A claim that indicates the ability to reproduce a new copy of any monument from the ancient world would be an achievement to keep the history for the next generation to enjoy. Moreover, having the ability to be exhibited to the public in different cities. As Mohammed Abdullah Al Gergawi the Minister of Cabinet Affairs and The Future, Dubai UAE said: *“it can be rebuilt anywhere in the world for all humanity to enjoy”* (The Institut for Digital Archaeology).

The replica of the Triumphal Arch has been produced in Italy in the quarry in Tuscany, and it was placed next to where Michelangelo quarried a block of finest-quality white marble to his famous sculpture “David”. David Massari, the co-owner of the Carrara workshop; claimed that reproducing the replica in a location that has authentic value will give in turn the replica an authentic value. As well explaining that for him even if it is a machine that is cutting the edges of these stones, the principle will remain old like that oldness of the location that has been chosen to cut these stones; the principle will be the same as the sculpture of Michelangelo. Saying: *“Nothing changes!”* (Richardson, 2016). It is true that the replica will have its own new authentic value a value that is completely separated from the original, authentic value of the Triumphal Arch.

The result is a replica of the Triumphal Arch of Palmyra, built in Italy with imported Egyptian marble used as a material. A replica that does not represent the authenticity value of the original Triumphal Arch with a claim that it will be a preservation of the history for next generation to see.



The quarry in Tuscany - Replica building location, CREDIT DANILO SCARPATI (Richardson, 2016)

While as it has been mentioned in Nara's document referring to the importance of understanding the values and authenticity of a cultural heritage through a truthful information by stating:

"Conservation of cultural heritage in all its forms and historical periods is rooted in the values attributed to the heritage. Our ability to understand these values depends, in part, on the degree to which information sources about these values may be understood as credible or truthful. Knowledge and understanding of these sources of information, in relation to original and subsequent characteristics of the cultural heritage, and their meaning, is a necessary basis for assessing all aspects of authenticity" (ICOMOS, THE NARA DOCUMENT ON AUTHENTICITY , 1994).

Moreover, for the IDA, this replica was the first step in order to prove the quality of the work. Explaining that the machines can also build a replica scale 1/1. Aiming that in the future this project will progress and be used as a methodology to rebuilt destroyed heritage. Where Michel Roger has revealed this aim in an article for the Telegraph News; saying that he is trying to get the approval on rebuilding the destroyed minaret of Aleppo Umayyad Mosque with the 3D technique (Richardson, 2016).

However, this replica as it has been mentioned before, it has been exhibited in multiple cities. Where it has been exhibited in Italy in Arona and Florance, and it was exhibited in the international cities

starting by London, New York and ending up by Dubai. Where the reason behind those exhibitions is to prove the solidarity with all the lost souls in Syria (The Institut for Digital Archaeology). But, is this propaganda, and the Political tour is showing this solidarity or is giving the risk to start a 3D totalitarianism and a loss of authenticity and as well a loss of the aura?



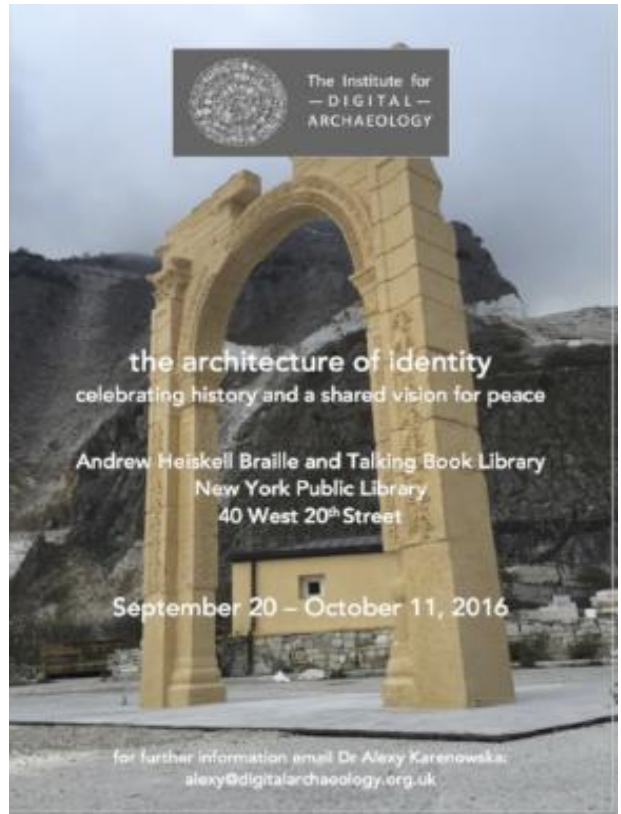
World Heritage Week on Trafalgar Square, London 19-21 April 2016, Source: (The Institut for Digital Archaeology)



27 March - 27 April CROWDS VISIT THE ARCH IN FLORENCE for the for the G7 conclave is cultural heritage preservation- in the Piazza Della Signoria – next to Michelangelo's great masterpieces, David and Neptune, Source: (The Institut for Digital Archaeology)



April 29th, 2017 Arona (The Institut for Digital Archaeology)



September 20- October 11, Newyork (The Institut for Digital Archaeology)



February 12th in Dubai, Source: (The Institut for Digital Archaeology)



VI.II 3D totalitarianism & authenticity

VI.II.I Debate

Syrian Cultural heritage is worth to be preserved. The ongoing war has already harmed the souls, the humanity, moreover the identity. The use of the Syrian and world emotions in order to sale a replica reproduction; is equal to the vandalism of destroying the heritage. The publicity of the Triumphal Arch replica was using the subjectivity of the people by creating a fake defence of the extremist who destroyed this heritage, and using this fake defence, in order to sale a 3D totalitarianism void from cultural value. Giving a false hope of going back in time by creating a monumental recreation as it has been called when it was exhibited in London's Trafalgar Square.

According to Alexy Karenowska, a Professor at Oxford University and the leader of the IDA team. Producing replica of threated heritage; using the 3D technique will give a chance for the world to celebrate the rich history of it (Brown, 2016).

Having the idea of reproducing a moveable Arch, that could be exhibited in any country, in order to celebrate its rich history or to have the possibility for each country to have its own copy is not acceptable. While uniqueness defines the authenticity of an element, the authenticity of an element is defined by its original material and its ownership. Moreover, authenticity is defined by the duration of producing an element with the time and space. Walter Benjamin has pointed out this idea saying: "Even the most perfect reproduction of a work of art lacks in one element its presence in time and space; its unique existence at the place where it happened to be. While restoring architecture, of course, it could be" (Benjamin, 1936)

The Triumphal Arch of Palmyra is not an individual art element that could be transferred. Rather, it is part of a context; it is part of a site. Moreover, it is part of an ancient city. The Triumphal Arch has been there for a reason in a specific time. It is representing a cultural heritage by definition it is immovable.

Reproducing a replica of this Arch, with an Egyptian/Italian Identity; with one material that does not embed with the original material, nor does it give any trace of history or any trace of the age of the Arch, this replica cannot be right. This act is raising the question "A COPY OF WHAT?" A copy of which stage of a monument or in this case of this Arch? A celebration of which moment of the rich history? On the hand, using the anastylosis methodology will result in the next phase of the Arch life. The

stage that represents the after collapsing which tries to be authentic as much as it can, a stage that will document the war in Syria as one phase of the life of the heritage in this way the cultural value will be preserved. And if we substitute what has happened with a copy, obviously it is erasing the ancient history. Moreover, it is hiding the ongoing history. At the end, if we fake our history how we can learn from it?

The picture below is showing the replica of Triumphal Arch where the used material is the same for all the Arch.



Photograph: Marco Secchi/Getty Images - Showing the use of one material for all ages of the Arch.

As it has been mentioned before, the process of rebuilding will need a full understanding of the heritage and its history. The aim to learn from history is important to be kept. In order to do that, the restoration work needs to be a process of preserving and revealing the aesthetic and the historical value of a monument (ICOMOS, Adopted by ICOMOS in 1965). The restoration work will need to deliberate what is authentic and from what is not authentic. At the end, the reconstructed part of the ancient city should be restored on authenticity not on deceitfully. Of course, in the time of mechanical reproduction, we could have a perfect 3D Palmyra, but this will turn it into a fake replica instead of having a continues history of preserving what has happened as one chapter of the

monument life. However, the concept of reproduction is not a new concept, as discussed by Walter Benjamin the idea of a reproduction of artwork, with shedding light on its authenticity and its aura. He argued the idea of having two sides of authenticity. One is displaying the relationship between the artwork and its technique, and the use of the artwork in the man society from the other side. All the history of work art has been reproducing through different techniques, from 1900 the reproduction of artwork modified the way of their enjoyment. Taking the cinema and the photography as an example of a reproduction project. In the past, the authenticity was defined by the uniqueness of the work of art together with its materials and ownership, the authenticity characterises the work of art, and all other reproductions are imitations. While in the age of mechanical reproduction it does not make sense to talk about authenticity because the work of art is conserved to reproduce. A movie and picture transfer the work of art into a context of daily life use. And this multiplication of reproduction became the characteristic of the 20th century where the aura disappears, and the aura in the work of art is open by its uniqueness that change by time into a cultural value so what we consider an aesthetic value is not related to the natural friction or its religious value. The cinema and the photography invalidate the idea of originality of authenticity where the copy has now the same value of the original. This causes the loss of the aura that is according to Benjamin is a sort of emotion that the public feels in front of the original work of art. He reflects that saying, "Even the most perfect reproduction of a work of art lacks in one element its presence in time and space; its unique existence at the place where it happened to be". This means the significance of the original authenticity. The authenticity of the things is the essence of all that is transmissible from the beginning; extending from its material duration to its testimony to the history. The testimony depends on the duration. This means what is really comprised when the historical testimony of the work is affected, is the authority of the object that is affected. So, what is missed in the era of reproduction is the aura of the work of art. The decline of the aura, determinates by the advent of technical reproduction should be the sign of a huge change in the way and the kind of sensorial perception because every age has different artistic and expressive forms. The reproduction of testimony by a machine not by a human will miss the human, will miss the duration so that we will miss the testimony and when the testimony is unbalanced, so it loses its authority, that means what is unbalance is the aura. The aura that is the here and the now, and that is the authenticity of art. Defining what Benjamin called its aura is a kind of immaterial fog surrounding the work of art, and

that is irreproducible by the new technical devices. Although the decay of the aura is an evidence of change in social perception moving away from handmade goods toward producing art and items that can be reproduced, mass distributed and digitised, and the uniqueness of the work of art is inseparable from its being embedded in the fabric of tradition. For the first time in world history, machinal reproduction emancipates the work of art that barely depend on ritual to an ever-greater degree the work of art reproduced becomes the work of art designed for reproducibility. For example, in case of producing multiple copies of a photography authenticity will not make sense. But the instant the criterion applicable to artistic production, the total function of art is reversed instead of being based on ritual is being based on politics. Reflecting that on architecture, the architecture that represents a prototype of a work of art that a man has concentrates to be able to do. The buildings have always been part of our life, a place of shelter some of them develops, and some of them vanished, but the rules are the only one revived, and the need for this shelter is lasting. With the history of the building that is a living force as its claim, those building has significance in every attempt on the masses to art. Taking as an example the totalitarianism that is seeking to increase the formation of masses; giving the chance to explain themselves. While the result of preserving a property is an aesthetics into a political life and everything pours into one thing; The War. While the formula of the war is setting a goal for a mass movement while maintaining and respecting the property system (Benjamin, 1936).

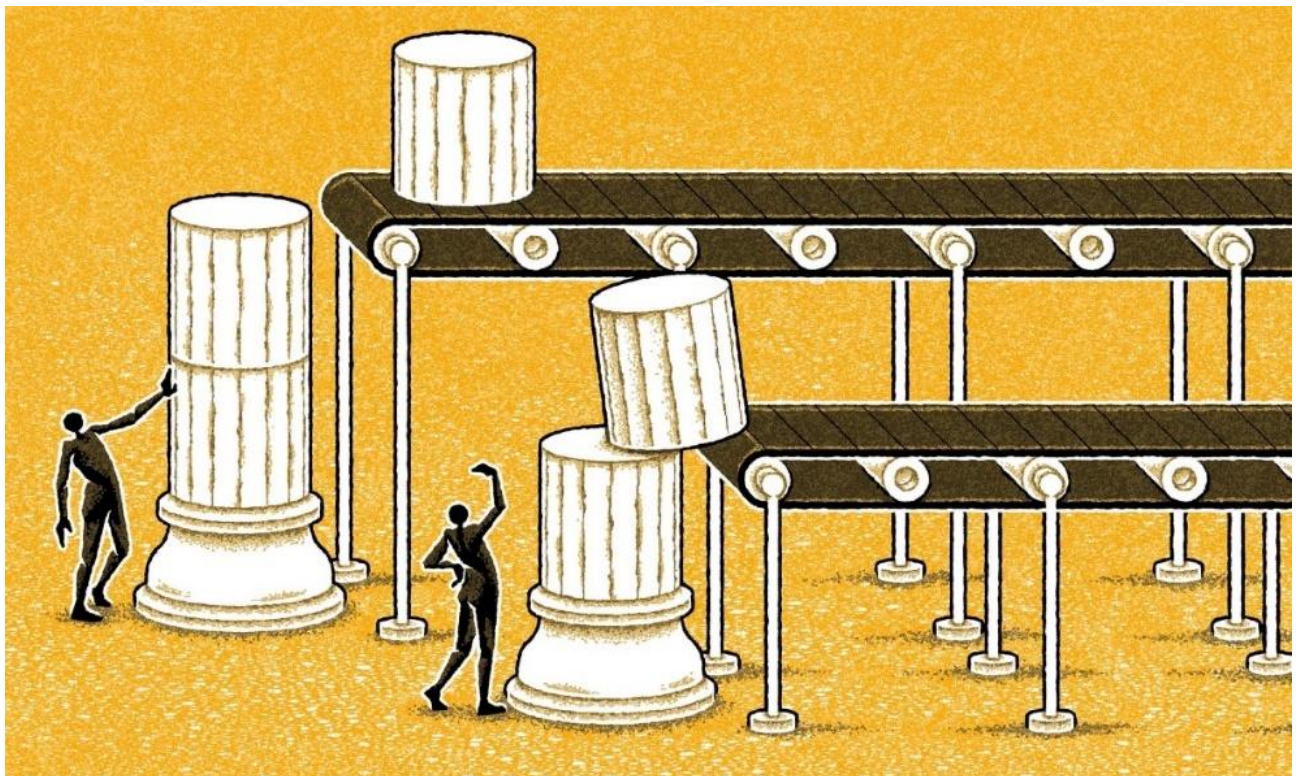


The quarry in Tuscany Building the Replica, CREDIT DANILO SCARPATI (Richardson, 2016)

Palmyra was a ruin before ISIS, and it is still a ruin today. The atmosphere of a city will never go or change. David Reed, a local has written a letter written to the Guardian saying no restoration should be done in Palmyra, except putting a welcome sign: “Welcome to the ruins of our once-great city, destroyed by mindless fanatics in the name of their twisted version of Islam” (Reed, 2016).

In the age of 3D totalitarianism, it is easy to restore a ruin but the question to be asked; is the refabricating is the way? We have techniques, and with this technique, we can do wonderful things, but wonderful things are not always the correct ones. It is not about ignoring the importance of the 3D technology but when it concerns a specific aim, a copy of a status needed for a specific purpose in order to keep the original one safe, the 3D replica will be a great solution.

In the case of Palmyra what is authentic on the spot with the interaction; the Arch is authentic by its complexity and diversity, as well as other monuments in the ruins. Even with the collapse or the destruction of heritage, there is no doubt that an anastylosis of ruin is much more significant than a perfect copy. It is always more moving to see what really happened in the past than to see a refabricated past. Our will is to keep the authenticity in the place, moreover is to offer an authentic place to the visitor of the future. To provide them with a message of the past, the historical monuments of generations of people remain till today as living witnesses of their age-old.



Source: Matt Kenyon, 2017

VI.II.II Principles of Restauration

It is very important to understand the principles of conservations, renovation, restoration, and replacement. It is always useful to understand the difference between those terms in the narrow sense. Where nowadays those terms are used in the meaning of preservation. Thus, the conservation is always the starting point for all deliberations of the field of preservation; it is making the history present through the scares of time. While the conservation of the existing fabric of a monument only attempts as far as is necessary to stabilise individual area technically and to eliminate the source of danger that directly treater the fabric. The restoration is concerned with the overall appearance of the monument as historical evidence; a restoration could add a new element without reducing the original fabric. To restore is to re-establish. Moreover, under the restoration, you will find the replacement of completion of components. Which it must integrate, but with being distinguishable, so it won't falsify the historical evidence which mainly what article 12 in Venice charter note (Petzet, 2004). The how of replacement depends critically on the design, the condition of the part to be completed, as well as our knowledge of the earlier situation. While a replacement by a copy it is only acceptable for some cases; were a figural element on the exterior has been damaged, and can only be saved through the production of replicas, with transferring the original to a secure place or to the interior. It is the only way where replication is considered as preservation, as a means saving a monument. Moving a monument to save it is not always possible, as when you are dealing with a historic building, it cannot be moved nor can be replaced by a replica. However, in case of war destruction, or natural disaster, a restoration work will be needed, and the Venice charter did not totally forbid it in this case article 15 spoke about "anastylosis", and of course regarding any replacement it should be distinguishable, and the building that has been restored should not be more beautiful than before. Based on the knowledge that the history is not reversible, and a destroyed monument is an evidence of history. Evidence that could be lost with the reconstruction (Petzet, 2004). The reversibility, it the main idea that is controlling the mind with the new proposals that started to appear. It is important to understand that the reversibility it is a utopian idea (Schinzel, 1999) and it must be remembered that a monument is inseparable from the history to which it is beared as a witness and from the way the monument appears now.



Photography sources: Andrea Avezzi & Sam Jacob Studio (Mairs, 2016)

The Triumphal Arch replica is not the only replica that has been produced lately. Multiple exhibitions have taken place exhibiting serial of replicas. In 2016, an exhibition has taken place in Venice Architecture Biennale. The exhibition demonstrates, a 3D copy of a refugee shelter, multiple antiquities with various of original artwork, having alongside various of replication made with varied materials. This exhibition aimed to bring the attention of the digital archaeology, in order to show that creating copies owned by museums could help with preserving the material culture; the existence of those copies will be a vital resource for designers and artists (Mairs, 2016). Before this exhibition, two exhibitions have been held by Salvatore Settis, and Anna Anguissola exhibited in 2015, in Fondazione-Prada in Milan And Venice. The exhibitions focus on exhibiting a serial/Protobal copy of classical sculptures. Where those two exhibitions had different attention than the first one. The Classic serial exhibition aimed to investigate the complex relationship between an authentic sculpture and its imitation. Also, it aimed to show that ancient art faithfully mirrors contemporary art and that

mirroring one another, they help us to understand the world and its complexity. Moreover, it was a way to make people think about the difference between the contemporary art and the classical one. Where the contemporary obliged the audience to think rather than the classical one is seen as static, motionless, immobile. Settis wanted to demonstrate that classical art is not only the dusty sculptural that we see in a museum but to show that the classical art has a political aspect where the artists were citizen working for citizens, where the work of arts was beautiful, but especially where the idea of beauty had a moral aspect. Within the choral nature of the city which also operated through art. The replica of the sculpture is trying to demonstrate and recreate that choral nature, as well as the sorrow, the loss, the disaster that affected ancient art. Moreover, Settis has argued that classical art is not a unique masterpiece as it used to be defined but it is an art of multiples, repetitions in which quality and beauty do not conflict with repetitiveness.

In this exhibition the way of representing the sculptures were different from the classical art is normally display. In this exhibition, the statues were no longer on top of very high pedestals as in museums, but they were presented at the same height as the audience in this way the relationship between the audience and the statue will change from looming above the audience to a state where the audience could dialogue with the status. Moreover, those copies will make the visitor doubt with the classical purity because after using different materials for reproduction it will appear different in a way will make the audience think.

What is important to know that; in the time of western art, there where an importance for creating copies of great masterpieces of the past. While nowadays we tend to associate the classical art with the idea of uniqueness.

Moreover, the exhibition in Fondazione-Prada in Venice has added one more idea, which is the seriality with small scales. This divers' scales copies are attempted to show how the rich people liked to fill their houses, not only with status from ruins but also with little bronze status and this what Settis has called it Renaissance seriality (Settis) (Prada, 2015)



Renaissance seriality, Portable Classic- Fondazione Prada, Venice source: (Prada, 2015)



Serial-Classic-Veduta Della Mostra. Source: Attilio Maranzano. Fondazione Prada, Milano

VI.III Cultural Value - The loss of identity

In order to understand the meaning of the loss of identity, it will be needed to understand where the identity is coming from. Franco La Cecla has argued the meaning of getting lost. He defined it by saying: “getting lost meant being attracted by an unknown place and at the same time feeling the burden of losing the ground”, he argued saying that getting lost is like getting oriented. Both are a cultural experience and are linked to a pre-existent cultural and social context. However, there is a various way of getting lost. One of those ways is linked to experience that we do every day by orienting our self to what is surrounding us; where localising our self gives us a sense of belonging. This belonging is defined by the social life that we are experiencing every day on a territorial map. However, if this map is scratched we feel lost. The reason after this feeling is that when a destruction happened in this territorial map that is defined by the social experience, and the building that is part of this orientation and part of the daily life, moreover part of the pre-existence social daily life; it loses the sense of orientation, it loses the memory. Thus it loses the sense belonging, and the belonging is defined by identity (Cecla, 2000).

In wartime, when cultural sites and monuments are destructed and damaged, this destruction also causes damage to the people identity. Where destroying people cultural heritage cracks their belonging by destroying their history and their memory. In another word, it is destroying their identity because it is erasing the trace of people exist and the social frameworks, and sometimes it is erasing its very existence. Christoph Doppelhofer, described the destruction of the cultural heritage in Syria by ISIS, with saying “re-creation of identity”, where he has argued that the shared memory of the society and the social process is what is making them an important target for ISIS where “the authority over the history and identity of conquered territories” he said. Thus, with erasing the people memory, the memory that it existed before them, as Irina Bokova Described it is a “Cultural Cleansing” (Doppelhofer, 2016).

Thus, in the case of Syria the argument of how can we preserve the authenticity of the destroyed cultural heritage in order to revive the lost identity is important. Many theories have argued the authenticity of a restored monument. John Ruskin said: “do not let us deceive ourselves in this important matter it is impossible to raise the dead or restores anything that has ever been great or beautiful in architecture. Also, Lowenthal suggests that authenticity is not something that can be recovered because “the past is a foreign country” (Vinas, 2002). But in the case of Syria; the Syrian

heritage has been destroyed in a period that it's already documented, it is not a hypothesis of its shape. History is recorded. Moreover, that heritage is the testimony of the society that lived, and it is a testament to the societies which they have generated this place "the pre-existence society" where this war has created a new chapter in the life of this heritage, it has added a testimony of how the society has lived in this period. Any Syrian citizen, has something changed during this war, the society, the life, the fear, the destruction, the death, and the experience, all this has created a new chapter and reshaped people's identity, same as their cultural heritage. Though the cultural heritage and the society are two linked elements, one can not exist without another. Human nature is to survive, despite the sorrow that the Syrian has lived, they are learning how to continue their life and rebuilding the hashes. This heritage is much more than mere stones, where today for this stones thousands of people have died. When the human is representing himself, as a single stone is representing a humankind and a history. In the war in Syria, families have found hard to leave their houses; they were staying there until the last breath; moreover, they go back to live there with the destruction; it is the sense of belonging. This house they refuse to leave, they lived in it for twenty years or maybe more. So, if this is the case with a house how about a heritage that is representing a whole history? However, the cultural heritage is not only represented through the building, but rather through the society culture, their oral heritage, their tradition, and their art craft that they are also representing their identity for that reason, it is also important to preserve it.

As it is the case in other war based on the argument of Gary Yia Lee ' (Lee, 2005). It is the same case in Syria, some people are still living in their homes, but there are also people who faced the displacement inside or outside the country. For whom how were outside the country, they have tried to preserve this cultural heritage in order to keep their identity (as explained in chapter two). However, the cruciality of this cultural heritage is obvious when it comes to the issue of national identity and this what makes a Syrian a Syrian (Azm, 2015). Therefore, these ancient stones, traditions and cultures are Syrian heritage and constitute a part of cultural identity which is worth protecting (UNESCO, 2017).

Thus, the recovery of the cultural heritage is a necessity; knowing that this step will be a long process, especially that is tending to recover the needs of cultural heritage; where there is no specific way to reconstruct after a war. Each situation it is a unique situation that will need its own study linked to the culture of the society. For that reason, this step should be done based on a clear vision, moreover

based on an understanding of the culture of the society. In addition, the reconstruction phase will need the participation of the locals before the external participants, where the locals should play a key role in this reconstruction because post-war reconstruction is a challenge of development; where in prior experience it has been proved that when developing a city with the orientation of the local, it tends to be more effective, as they are the first to understand their culture and their identity (Barakat, 2005). Western could have a vision for the future Syria, but then there are two choices. We can choose to be western and maybe use a 3D technique; or we can choose the recovery of the people loss identity; and go with scientific studies; in order to decide what should be rebuild based on anastylosis and what should remain as it is now.

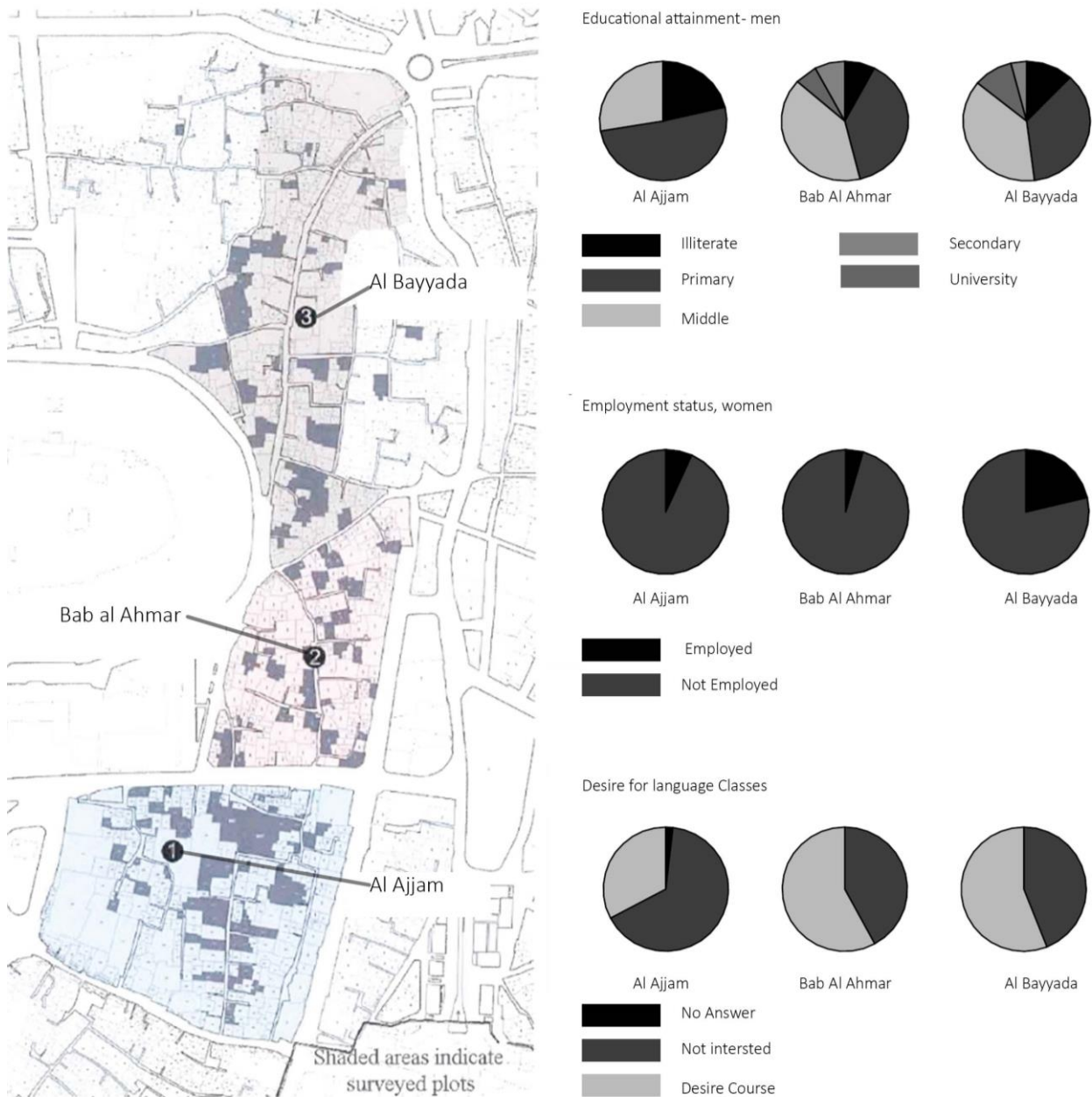
VI.IV Lessons to Learn – Place for Development

In a Paper Wrote by Paul Collier in 1999, aimed to discuss the reason behind the civil war since 1965. The paper aimed to proof that diverse group hatreds linked with the grievances are the reason behind the conflict. However, while writing the paper, Collier found out that the economic situation is fundamentally related to the civil war. Pointing out any society that has a high percentage of young men with an unbalanced economic situation will increase the risk of conflict, because it will invite the economic prospects for rebellion, especially in a country with large natural resources. However, by increasing the opportunities, by opportunities he meant education, the risk will decrease especially where in developing countries the education is much important than the proportion of young men and this education, in turn, will increase the opportunities of having a better life condition (Collier, 1999).

In the case of Syria, there is a different percentage of the economic situation and the educational situation. Where the economy in Syria does not only depends on the education but as well on the traditional craftwork. Knowing that; the schools and the universities of Syria are all public, with an obligatory education until the primary school. However, the education percentage is different from a city to another. Moreover, it is changing between the districts of the same city, depending on their traditions in the narrow sense.

Taking as an example the city of Aleppo in Syria, the AKTC did a Socio-Economic Survey in 2007. The survey was carried out in three residential area located in the east of the Citadel “Bab al-Ahmar, Al-Bayyada, Al-Ajjam”. The survey aimed to interview both men and women to gauge their willingness to participate in training courses, take out small loans for income generation and act as neighbourhood leaders. However, the survey has shown the unbalance situation between the women employment and the men employment; where more than 75 % of the employees are men, while women are working as a homemaker. Moreover, the result of the survey part that is focussing the educational aspect has shown big differences between the areas with higher educational levels. Where in Al-Ajjam area, only illiterate, primary, the middle level could be found, and no secondary nor university education level existed in this area. However, in the other two areas the educational level was increasing and all the areas a will to study in another language exited; with the demand of having a course. A survey for the house condition around 2005, shows that 90% own their houses

and despite the sewage problems, the lack of health services and insufficient space for recreational activities thus 87% of the residence has expressed a keen desire to continue to live in their respective neighbourhoods. Despite the current situation that evaluation will help to understand the people situation before the war. Moreover, the survey will help to the establishment of an employment generation an economic revitalisation programmers (van der Tas, Nov-2017).



The 2007 Survey results, Source: AKTC (van der Tas, Nov-2017)

In addition, there is another element that will need to take into consideration. This element will help the locals to investigate the natural heritage that they have moreover benefit from it. The eco-

tourism, according to Serra, tourism is considered as one of the largest world industry, the eco-tourism is relative to the tourism that is a way of preserving the natural heritage and the traditional cultural heritage through improving the situation of the local community. Despite the small percentage of this tourism, thus it is considered as a fastest growing industry according to the world tourism organisation. However, this type of tourism could have a negative result if it is increased without appropriate planning and management, where an ecosystem should be regulated in order to control the flow of the tourist to avoid any threat on the ecosystems and local culture (Serra, 2007). In Syria, there is a lot of unknown natural places, which are not preserved such as Slnfh, Kasab, Alsamra, Alfourolk forest, any many other. Moreover, the Oasis of Palmyra it is considered as a natural heritage, an Oasis in the desert. Palmyra Oasis is composed of Palm trees which from where Palmyra got its name. However, there are also other kinds of trees with agricultural filed. Moreover, the oasis is linked with a seasonal Salt Lake. This Oasis could provide a good quality of experience for the visitor, especially for tourist that would like to do natural tourism and are looking for a quiet place far from the noises and the presence of cars. Which good be a good investigation into an eco-tourist. Thus, it will need management since it was ignored before and as Al Rifai said “The oasis has been neglected.”



Palmyra Oasis, Source: Discover-Syria

Moreover, in some cities in Syria, the heritage is working along with the city, taking as an example Aleppo, Damascus, Homos and many other cities that are considered as living cities. Where the

heritage is part of the everyday cities life, a clear example of this are the souqs; meaning the old markets which are considered as heritage and also part of the daily life of the locals, as it is a place of working and a source of living for many people in those cities. However, in the case of the ancient cities, such as Apamea, Dura-Europos and Palmyra, these ancient cities are separated from their modern cities. Thus this is resulting that they are separated from the touristic and the economic point of view.

In Palmyra despite the closeness between the modern city and the ancient one, the modern city does not have any linked with the ancient one, neither in planning nor construction; sometimes people do not even know that a modern city exists. Therefore, the traditional work starts to disappear. So, what is needed is to grantee a future preservation for the site including organisation and walkability lines. Moreover, there is a need to take care of the use of this heritage to develop the economy and the human. When we speak about heritage, we do not refer to it only from a cultural perspective or from a natural one, but we as well refer to the non-material heritage. What I mean by the non-material heritage, is the human traditional culture integrated with the society. The non-material heritage since 2001 has been taking into consideration as a heritage needed to be preserved, due to the amount of value that it has in it, from complexity and the mix value of a cultural society (UNESCO, 2003) (le patrimoine culturel oral).

Finally, to rebuild Syria the challenge will not be only a technical problem, but it is the choice of the implication used to rebuild that will influence the destiny of Syria; or better said: the next Syria, Syria of the future. What it will be needed is to arrive to a more complex understanding of the choices that will be made, and how they are going to influence the society; where it could always be a choice to appear western by using 3D printing and imported materials. Or the choice could be; involving locals not only with the technical part but with education and empowerment. Moreover, for rebuilding it is also needed an establishment of a legal framework to solve the war problem and to solve the prior war problem concerning the protected area and the ecotourism in Syria, which will be a step to enable the society to increase economically through education and eco-tourism.

An archaeological site, or a historical site, or an ancient city inside a living city, all the cultural and natural heritage in Syria are opportunities for young Syrians. It should be a place where it can be found qualified jobs, high culture; it should be a place for research and science, a place for investigation. In the end, it must be a place for *development*.

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VII.II Appendices

VII.II.I Interviews

From 25/04/2017 Until 19/05/2017.

The trip to Syria focused on getting information about the city, doing interviews, and trying to go there on a field trip.

- Most of the information was collected from Meeting with different people working for the DGAM 'Directorate-General of Antiquities & Museums', The Ministry of Tourism, the Syrian Engineers Syndicate in Damascus, And Damascus University.
- Interviews were seeking to be with people who had lived, worked, or study the city. Some of them they were a brainstorming. Besides the interviews that has been written in thesis research. A Meeting with *Dr.Khalil ALHARIRI*, The director of Palmyra museum and with *Tarek AL ASAAD* the son of *Khaled ALASAAD*, who they have gave me books about Palmyra.
- In order to be able to go to Palmyra, I have been able to get the security approval with the help of *Ayman HAMOUK*, to go to a field trip for 3 days, but with a phone call done by *Mouhamad Kheireddin Alrifai* the President of the Central Heritage Committee of the Syrian Engineers Syndicate to *Dr.Ammer SEBAI* the President of the Central Heritage Committee of the Syrian Engineers Syndicate in Homs city, the trip has been cancel were he said that it is still not safe to go.

- I. Maher Al Mounes; A journalist that has gone to Palmyra after each destruction
Interview date: 09/05/2017 – Duration: 25 Min
- II. Faisal Najati, the General Manager of Tourism and Technical Training Authority.
Interview Date: 02/05/2017 - Duration: 13 min
- III. Ayman Hamouk, The director of engineering in the department of museum and archaeology. Interview Date 02/05/2017 - Duration: 15 Min, to which I am grateful for giving me the facilities to go to Palmyra.
- IV. Mouhamad Kheriddin Alrifai, The President of the Central Heritage Committee of the Syrian Engineers Syndicate in Syria. Date of the Inetrview 09/05/2017 – Duration: 35 min
- V. Abd ALnasser Amayri: Advisory Centre for Architecture, Construction and Restoration of Heritage Buildings. Professor at Damascus University Date of the Interview: 14/05/201730 – Duration: 30 Min

VII.II.III Keywords

Heritage, Experience, Memory, Identity, Remembrance, Performance, Preservation, Conservation, Restoration, Reconstruction, Rehabilitation, Eastern, Western, Theory, Syria, Paradox, Truth, propaganda, Current situation, Damage, Destroy, Aleppo, Apamea, Bosra, Dura Europos, Palmyra, Living city, Ancient city, Excavation, Looting, History, Outstanding heritage, universal heritage, UNESCO, WHL, DGAM, IDA, AKTC, ICOMOS, ICONEM , Proposal, Tadmor, War, Wartime, Conflict, Post-war, Development, Problems, Society, Archaeological, Destruction, Monumental Arch, Replica, Copy, 3D, Technology, Totalitarianism, Authenticity, Serial, portable classic, Mechanical Reproduction, Photography, Assessment, French Mandate, Danger, loss, lessons, Value, Oral Heritage, Cultural Heritage, Socio-economic, Ecotourism, Modern City, Management, Non-material Heritage, Education, Future, Development, Natural Heritage, Documentation, Rebuild.

