



# RISING FROM DESTRUCTION

EBLA • NIMRUD • PALMYRA

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7|10|2016 • 11|12|2016



EBLA

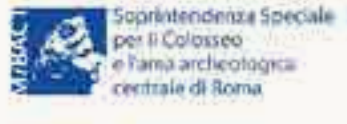


NIMRUD



PALMYRA





THIS EXHIBITION IS CONCEIVED BY ASSOCIAZIONE INCONTRO DI CIVILTÀ, ORGANISED BY SOPRINTENDENZA SPECIALE PER IL COLOSSEO E L'AREA ARCHEOLOGICA CENTRALE DI ROMA WITH ELECTA AND WITH THE SUPPORT OF FONDAZIONE TERZO PILASTRO - ITALIA E MEDITERRANEO.

*Curators*

Francesco Rutelli  
Paolo Matthiae

*Soprintendente*

Francesco Prosperetti

*Direzione del servizio di valorizzazione*

Rossella Friggeri

*Direzione del Colosseo*

Rossella Rea

*Direzione tecnica del Colosseo*

Barbara Nazzaro

*Scientific Committee*

Paolo Matthiae, President

Mounir Bouchenaki

Stefano De Caro

Maamoun Abdulkarim

Cristina Acidini

Frances Pinnock

Davide Nadali

Marta D'Andrea

The three reconstructions have been released thanks to the fundamental support of Fondazione Terzo Pilastro - Italia e Mediterraneo

*Chairman* Prof. Avv. Emanuele F. M. Emanuele

*Director General* Prof.ssa Alessandra Taccone

Coordinators of the on-site reconstruction works: Cristina Acidini, Frances Pinnock

Media Partner



- 4 Irina Bokova  
The deliberate destruction of heritage is a war crime
- 6 Dario Franceschini  
Ready to serve against heritage destruction
- 8 Paolo Gentiloni  
A moral and humanitarian imperative for Italy
- 10 Federica Mogherini  
Cultural diplomacy: the challenge of memory
- 12 Emanuele F. M. Emanuele  
Our moral duty to react after cultural catastrophes
- 14 Francesco Prosperetti  
How was it  
Where was it
- 16 Roberto Pisoni  
Producing culture, changing society
- 18 Francesco Rutelli  
Incontro di Civiltà: roots, reasons, goals of our initiative
- 28 Paolo Matthiae  
The World Cultural Heritage: values, destructions, reconstructions
- 34 Alessandro Zuccari  
Destroying someone else's city is like destroying one's own

- 36 EBLA
- 38 A revolutionary Italian discovery
- 40 The Royal Archives at Ebla: study and reconstruction
- 44 NIMRUD
- 46 The first capital of the Assyrian Empire
- 50 Lamassu. Geometric mediation. Additions and removals
- 58 PALMYRA
- 60 A great city along the Silk Road
- 50 From virtual reconstruction to physical copy through the digital anastylosis
- 68 STUDIO AZZURRO  
Eyes chasing memory



IRINA  
BOKOVA



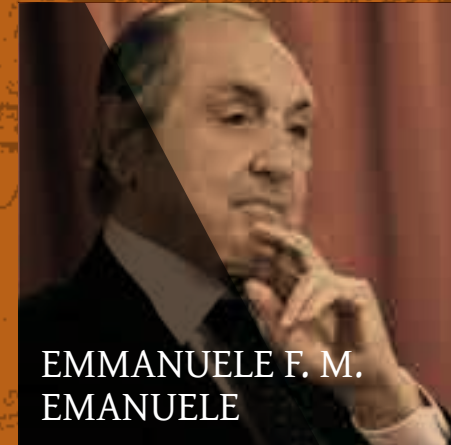
DARIO  
FRANCESCHINI



PAOLO  
GENTILONI



FEDERICA  
MOGHERINI



EMMANUELE F. M.  
EMANUELE



FRANCESCO  
PROSPERETTI



ROBERTO  
PISONI



FRANCESCO  
RUTELLI



PAOLO  
MATTHIAE



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Irina Bokova  
DIRECTOR-GENERAL UNESCO

# THE DELIBERATE DESTRUCTION OF HERITAGE IS A WAR CRIME

4

Never in recent history has the heritage of humanity known such devastation as now in Iraq and the Syrian Arab Republic. The deliberate destruction of heritage is a war crime – it has become a tactic of war and propaganda. We see the ravages of this global strategy of cultural cleansing across the globe, when extremists target human lives on religious and cultural grounds, as well as the symbols and institutions of our shared history. The international community has a duty to respond, and UNESCO mobilized since the very beginning of the crisis to support the citizens and heritage professionals who are fighting to safeguard this heritage, at the risk of their own lives.

This is not about saving old stones. Heritage exemplifies the founding values without which there can be no human society. This is why the protection of heritage cannot be delinked from the protection of human lives. Syria is a crossroads rich with the heritage of Assyria, Greece, Rome, Persia and Islam, showing there is no “pure culture”, as all cultures are enhanced by mutual influ-

ence. Iraq and the Mesopotamia is the cradle of civilization, the birthplace of the mathematics, the rule of law, the wheel and irrigation techniques all of which have changed the course of human history.

Protecting and rehabilitating this heritage represents an unprecedented challenge and resists any ready-made solutions. No “one-size-fits-all” formula can be applied to the diverse sites of the region. To succeed, we need to bring together the best of the world’s knowledge and expertise, from all sides, and this exhibition, “*Rising from destruction. Ebla, Nimrud, Palmyra*”, is a crucial step in initiating debate and reflection. It is a call to #unite4heritage, as a founding principle of human dignity.

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Tetrapylon, Palmyra, Syria  
© DGAM





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Dario Franceschini  
MINISTER OF CULTURE AND TOURISM

## READY TO SERVE AGAINST HERITAGE DESTRUCTION

6 We have entered an era we thought we would never experience, a time in which cultural heritage is intentionally targeted and destroyed because it represents a different culture, religion, or identity. Looting often follows destruction, as was the case in Palmyra and Mosul, with the pillaging of the ruins of the ancient Nineveh. Looted items were then sold on the international black market, feeding an illegal trade that has become one of the major financing sources for terrorism. We must face this era using all the means at our disposal, as the international community is doing, and do our utmost to protect the citizenry and defeat terrorism, without forgetting to safeguard cultural heritage in crisis areas. Italy has acquired experience, professional skills, and techniques of a very high level. I am thinking of the Opificio delle Pietre Dure in Florence, the High Institute for Conservation and restoration (ISCR), and of the Central Institute for the Conservation and Restoration of Archival and Library Heritage (ICRCPAL). Conservation restoration specialists from these institutes are well known and much appreciated at the international level; they have been or still are active in Iraq, Iran, Jordan, Israel, India, and People's Republic of China. Italy is also a leader in the fight against the illicit traffic of cultural property. Italy was the first country in the world to establish a law enforcement unit specialized in the protection of cultural, archaeological, and artistic heritage. The Comando Carabinieri Tutela Patrimonio Culturale's roots lie in the establishment of the Nucleo Tutela Patrimonio Artistico on 3 May 1969. These trained officers were called upon to fight the "Great Plunder", as it was accurately defined, that caused Italy to lose some important elements of its cultural heritage. Men and women from the Carabinieri corps acquired cutting-edge investigative techniques and skills, made available to the international community through the training of a number of police forces worldwide and their first-hand commitment in Iraq. This has made Italy a natural leader in the establishment of a force of Blue Helmets for Culture, a topic that has been the subject of discussion for over a decade in our

country. On 13 November of last year, UNESCO passed a historic resolution that commits member states to establish national task forces for the protection of cultural heritage and calls for the United Nations to consider the adoption of a cultural component as part of its international missions. Italy promoted this resolution on the strength of the work it has carried out over the years, making it possible to quickly undersign, immediately after the vote of the Paris General Conference, an agreement for creating a second-level UNESCO centre in Turin for training Blue Helmets for Culture. This makes Italy the first country in the world to put at the disposal of the international community a task force specializing in the protection of cultural heritage: sixty men and women – including Conservation and restoration specialists, archaeologists, art historians, and Carabinieri from the Comando Tutela Patrimonio Culturale – completed the training course and are ready to serve in crisis areas to defend their cultural property. An additional step towards the creation of a system to protect the world's cultural heritage came from the trial currently underway at the International Criminal Court in The Hague against one of the culprits for the destruction of Timbuktu's ancient mosques. For the first time, a person responsible for the devastation of a UNESCO World Heritage Site has been called up to answer for a war crime that strikes at the very soul and identity of a people, and destroys the heritage of all humankind.

The exhibition "*Rising from destruction. Ebla, Nimrud, Palmyra*" that will open in October at the Coliseum illustrates and documents all of this, together with the expertise that the Italian archaeological community has brought to this process, thanks to the various missions carried out by Italian universities and scientific institutions with the support of the Ministry of Foreign Affairs and International Cooperation. This extraordinary work has helped the counties of the Near and Middle East rediscover the ancient civilizations of their past, and greatly boosted Italy's standing in the region.



Minister Dario Franceschini with  
Carabinieri of the Tutela Patrimonio Culturale  
(TPC) (Carabinieri for the Protection  
of Cultural Heritage)

Restorers of the ISCR - Istituto Superiore  
per la Conservazione e il Restauro (High Institute  
for the Preservation and Restoration)



Paolo Gentiloni  
MINISTER OF FOREIGN AFFAIRS AND INTERNATIONAL COOPERATION

## A MORAL AND HUMANITARIAN IMPERATIVE FOR ITALY

8

The exhibition “*Rising from destruction. Ebla, Nimrud, Palmyra*” is a wonderful example of Italy’s sensitivity and commitment to the conservation of cultural and archaeological heritage.

The destruction of priceless artistic treasures we witnessed in recent years, and which this exhibition encourages us to ponder, testifies to the degree of fanaticism of the actors involved in conflicts in which the eradication of cultural and artistic identities dating back thousands of years is often an explicit goal. Striking at a culture’s heritage is a way to undermine pluralism and deny the very possibility of peaceful coexistence by attempting to erase the past, heighten current tensions, and jeopardize any opportunities for future reconciliation. Destroying cultural heritage is also an international crime: the International Criminal Court’s trial against the perpetrators of the destruction of the mausoleums in Timbuktu is a historic event that Italy welcomes.

In light of the above, the protection of material and immaterial cultural heritage is now widely accepted as a moral and humanitarian imperative. The protection of human rights and cultural identity, which includes the cultural heritage of conflict areas, is an essential tool in the construction of peaceful, inclusive societies.

Italy was one of the first countries to commit to these issues, in light of its history, its contributions to crisis management, and its position as a cultural powerhouse. Our country’s skills in the recovery and restoration of cultural heritage are at the technological and operational forefront. Italy’s contribution is also confirmed by the crucial scientific and educational roles of the 180 or so



Beirut, National Museum. The Italian Cooperation restored the Tomb of Tyre

archaeological and anthropological missions that the Italian Foreign Ministry is supporting throughout the world, and by the success of its numerous cooperation projects in the conservation-restoration of cultural heritage.

Over the years, Italy’s Development Cooperation has implemented numerous programs including in the field of training, capacity building, urban redevelopment, research, and the conservation-restoration of cultural heritage. The most recent initiative was a collaborative effort between Italy and UNESCO to protect the archaeological site of Petra, in Jordan, from hydrogeological risk. Italy’s Development Cooperation has also supported the project to establish international guidelines against trafficking in cultural property as drafted by the United Nations Office on Drugs and Crime (UNODC), as well as UNODC’s recent publication of a technical handbook to promote their application.

In recent years, the cultural heritage of Syria and Iraq has been endangered by the actions of ISIL. Italy has participated in the activities of the Global Coalition to Counter ISIL from the onset. In particular, Italy has stood out for its training of police forces, which included the organization of specific courses on the part of the Carabinieri to train Iraqi officers in protecting their country’s cultural and archaeological property.

Equally important is our commitment to cutting off funding for ISIL. Within the Counter-ISIL Finance Group, of which Italy is co-president, we have created a specific sub-group to raise the international community’s awareness of the illegal traffic in cultural and archaeological property as a funding source for terrorism.



UNESCO has also responded to this emergency by equating the destruction of cultural heritage with war crimes, and by urging all member states to take part in the “Unite4Heritage” initiative. Italy was the first country to respond, by making available to UNESCO and to any country that requests it a well-organized Task Force to counter threats against cultural heritage. Our aim was to build upon an idea first suggested by Francesco Rutelli and to provide a tool unlike those offered by existing cultural agreements, within the framework of a more efficient, innovative strategy put together thanks to Italy’s scientific, technical, and training skills and training to the professionalism of our experts, civilians and Carabinieri alike.

Finally, Italy supports UNESCO’s efforts to add the protection of cultural heritage to the remit of UN missions authorized by the Security Council, in the belief that the protection of cultural heritage and its diversity is a critical tool for the promotion of peace.

The exhibition’s contents thus closely reflect the actions of our foreign policy. This is one of the many reasons why I would like to express the gratitude and appreciation of the Ministry of Foreign Affairs and International Cooperation as well as my personal thanks for this marvelous exhibition, with my best wishes for its utmost success.

Paolo Gentiloni and Irina Bokova  
during the ceremony for the creation  
of the Italian Task Force  
#unite4heritage, February 16<sup>th</sup> 2016,  
Hall X, Diocletian’s Baths, Rome



Federica Mogherini

HIGH REPRESENTATIVE OF THE UNION FOR FOREIGN AFFAIRS AND SECURITY POLICY  
VICE-PRESIDENT OF THE EUROPEAN COMMISSION

# CULTURAL DIPLOMACY: THE CHALLENGE OF MEMORY

10

Once again, there are those who want to turn memory and culture into a battleground. Some believe that Islam cannot co-exist with the past and with the symbols of other cultures. This is a lie that hurts Islam and Muslims first and foremost – indeed, they are the main victims of this terrorist violence. But it is also a challenge that concerns every single one of us. ISIS wants to erase our shared history, the history of the Middle East, the Mediterranean, and Europe. This is a history made of cross-pollination and reciprocal influences. The ravaged lands of Iraq and Syria are evidence of this. They remind us that the history of our region was written in equal parts by Assyrians and Romans, Jews and Arabs, Christians and Muslims.

There are various motives behind the war waged by ISIS and other terrorist groups against cultural heritage and memory. Ideology conceals some very real interests. The destruction of temples and statues is undoubtedly a ruthless propaganda campaign that feeds off sensationalism. More importantly, it is also a commercial operation: once the cameras are off, those who smash works of art to pieces often turn into smugglers. The value of stolen artifacts sold on the black market is estimated at hundreds of thousands of euros.

It is not just a matter of money. ISIS is afraid of places like Ebla, Nimrud, and Palmyra. It hates the Middle East’s incredible diversity, much as it hates those who feel both 100% Muslim and 100% European. It is afraid to acknowledge that our identity as individuals is made of countless different stories and overlapping cultures. Indeed, our European identity, as unique as it is, is exceptionally difficult to pinpoint and define. Over the course of the centuries, we have understood that our identities are ceaselessly being processed.

This is why we must tackle the challenge of cultural heritage and property head-on. The destinies of Ebla, Nimrud and Palmyra concern us all – especially as Europeans and Italians. Perhaps because of the photos we have seen in schoolbooks, or because Nimrud’s wonders have been displayed in so many European museums, or because it was Italian archaeologists from La Sapienza University who re-discovered Elba after almost three thousand years, but the treasures featured in this exhibition look familiar, they tell a shared history. Today their value is even more evident.

The destruction they have escaped, the hate they engendered, imbues them with new meaning. Today more than ever, these works are a living part of ourselves and our history.

A new awareness is rising from the tragedy of the Syrian war, and its crimes against cultural heritage. The trial against the perpetrators of the destruction of Timbuktu began in August at the International Criminal Court, the first such trial for war crimes against artistic property. Thanks to an initiative by the Italian government, there is finally talk of creating a force of Blue Helmets for Culture. The European Union has recently launched its first strategy for cultural diplomacy: it is a strategy in which the protection of cultural heritage plays a central role, as does the fight against the illegal traffic in works of art. Cutting-edge technologies are being used in the service of memory: from satellite images to computer graphics and the techniques used to restore to life the treasures destroyed by ISIS. This exhibition breaks new ground, and I am sure it will become a point of reference for the future.

As an Italian and a Roman, I am proud that the Coliseum has been chosen to host it: it is a symbol of the inextricable ties between our country, our culture, and the rest of the Mediterranean. As a European I can only hope that these works of art will be displayed elsewhere in Europe before returning to their places of origin. Those who destroyed them wanted to cancel a shared history and try to replace it with the lie of the clash of civilization. Our task is to protect and promote memory together with the peoples who are safeguarding this heritage. And to continue to nourish a living European identity that is open to change, in keeping with our history.

M. Checchi, A. Dardano,  
Asia Minore, Arabia e regioni contermini,  
Novara, Istituto Geografico de Agostini 1918.  
Courtesy of the Cartoteca della Società Geografica Italiana.  
© Gabriel Stabinger





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Emmanuele Francesco Maria Emanuele

CHAIRMAN FONDAZIONE TERZO PILASTRO - ITALIA E MEDITERRANEO

## OUR MORAL DUTY TO REACT AFTER CULTURAL CATASTROPHES

12

When Francesco Rutelli, President of Associazione Incontro di Civiltà, asked me two years ago about involving Fondazione Terzo Pilastro - Italia e Mediterraneo in an initiative that was originally called “Saving Palmyra”, which included not only actively participating in drafting the scientific and cultural plan of activities, but also providing economic support for ensuring the reconstruction of that city, a symbol of our civilization, I immediately offered my support. Over time, the project changed course and focused on the virtual reconstruction of Palmyra and its masterpieces, followed by the safeguarding of memory in other, equally historic sites and their works of art through the use of 3D printers. This was something we had discussed during the conference that was held at La Sapienza University in Rome in October 2015. Finally, the major opportunity we are presenting today took shape. I feel justified in saying that it is an exceptionally important event, and that it sets the stage – at least I hope – for the initial project.

Sadly, we are living in a world that has been bloodied and ravaged by a series of endless wars, and by a terrorist fury that is perpetrating atrocious massacres, including in the heart of the West. It is our moral duty to react. These are both humanitarian and cultural catastrophes, which often raze to the ground entire cities, destroying the lives of innocent women, men, and children along with the historical memory of entire civilizations.

Ever since its inception, Fondazione Terzo Pilastro - Italia e Mediterraneo has worked – in Italy, Europe, and beyond – to facilitate dialogue and cultural cross-pollination with the traditions of the Near and Middle East, in order to overcome our differences and mend wounds through the immaterial force of culture. As such, it has naturally embraced this important initiative. It fits right in with the main activities that the Foundation has carried out in recent years in the Mediterranean area, among which I would like to point out the following examples: the participation of the Rome Symphonic Orchestra to the International Music Festival at the El Jem amphitheatre in Tunisia, which paved the way for new activities in North Africa; the restoration of the Church of Saint Augustine of Hippo in Annaba (one of the few Catholic places of worship still standing in

Algeria), in cooperation with other Mediterranean countries; our involvement in the restoration of the 6th century Syriac Catholic Monastery of Mar Musa Al Habashi of the 6th century AD, north-east of Damascus; support for a massive irrigation project in pre-desert areas near Nabeul, Tunisia; a student exchange programme for Israeli and Palestinian high school students in Aqaba and Eilat; and the creation of a football pitch in Jaramana (Damascus, Syria) that is also open to Iraqi refugees that have settled there.

Today, we have decided – at least ideally - to blunt the weapons used by ISIS in their iconoclastic fury by creating life-size replicas, using cutting-edge technology, of three of the most important and spectacular monuments destroyed by the self-proclaimed Islamic State in the last two years. They are the Human-headed Bull of Nimrud, Iraq (the ancient Mesopotamia), which stood guard over the ancient Throne Room of the Assyrian Royal Palace; the Palace Archives of the city of Ebla, Syria, which were discovered in 1964 by an Italian expedition led by Prof. Paolo Matthiae, whose contents helped historians trace the history of this thousand-year-old town; and finally, the ceiling of the Temple of Bel in Palmyra (once again in Syria), an ancient city that was a hub for caravans and a crossroads of different cultures.

It is no coincidence that this exhibition is staged in the Coliseum, Italy’s most visited monument. It is a way to highlight the thread that unifies the masterpieces of history, which are the heritage of humankind as a whole regardless of their origin. It is also a way to involve as wide an audience as possible, so as to steer international scientific, political, and diplomatic opinion towards tangible, concerted, and effective efforts against the destruction, plunder, and illicit trade of cultural property. Italy has a key role in this collective effort, Fondazione Terzo Pilastro – in keeping with its nature – aims to be a constant trigger of debate and concrete initiatives in this field, beginning with this one-of-a-kind exhibition.



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Emmanuele F.M. Emanuele,  
Chairman Fondazione  
Terzo Pilastro - Italia e Mediterraneo

Basilica of St Augustine of Hippo,  
Annaba, Algeria



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Francesco Prosperetti

SUPERINTENDENT FOR COLOSSEUM AND ARCHEOLOGICAL CENTRAL AREA OF ROME

## HOW WAS IT WHERE WAS IT

14

With the exception of exhibitions of renowned forgeries, which are little more than spiritual exercises, an exhibition such as “*Rising from destruction. Ebla, Nimrud, Palmyra*”, where copies are the stars, certainly appears peculiar. This is all the more true for the Superintendency for the Rome city centre, which is deeply rooted in archaeology.

It is this peculiarity that makes “*Rising from destruction. Ebla, Nimrud, Palmyra*” a stimulating, fascinating exhibition.

When I think of the natural catastrophes that plague our country – the recent Amatrice earthquake is a recent example –, as an architect I have often asked myself whether things really should be rebuilt “as they were and where they were” on behalf of the ancients, who would have surely acted differently.

For example, location may have been of paramount importance for a pagan temple built on a sacred site, but in the past it probably would not have been rebuilt “as it was”. In other instances, monuments that were rebuilt often differed from the original in both aspect and location: this was the case of the church of Santa Maria Antiqua, destroyed during an earthquake in the 9th century and moved to the other side of the valley of the Roman Forum.

It was quite common for places to change function: the Great Fire of Rome in the 1st century gave Nero the opportunity to build the Domus Aurea, and the Teatro alla Scala opera house in Milan was built on top of the church of Santa Maria della Scala.

Speaking of theatres – many of which are still in function today – our experiences over the last 20 years have taught us that rebuilding them as they were is not always a good idea. This has meant eschewing modern buildings, with their lower maintenance costs and operating expenses. When the San Carlo theatre burned down in 1816, it was rebuilt in a completely different manner, giving Naples an architectural jewel, the most modern European theatre of its era. And finally, we have the Twin Towers: very few have argued in favour of rebuilding them “as they were and where they were”, and according to many the architectural quality of downtown New York has now improved.

I am not listing these examples, which come from very different eras, to provoke, but rather to ask a question: when faced with destruction, why don’t we try to build something new and equally significant as what we have lost?

As an architect whose entire career has revolved around cultural heritage, very often archaeological, I am well aware that this is a very complex matter. When ancient buildings lose their original function and become cultural heritage sites, their very nature changes.

The vestiges of the past are part of a densely woven fabric of culture, identity, memory, and social relationships: their symbolic value is immense. This is the case for the life-size replicas of the monuments of Ebla, Nimrud, and Palmyra on display at the Colosseum.

After all, the significance of reconstruction after the ravages of war has often gone beyond mere identity. When Dresden and Warsaw were rebuilt after World War II, their rebirth was also an attempt to turn the page and move on after the war. It was not a matter of building only cities, but peace itself.

Finally, we must not forget that the Italian approach to archaeology and conservation-restoration has little enthusiasm for rebuilding monuments “as they were”, a technique known as anastylosis. This position was very firm in the past, although in recent years a dialogue has been opened, albeit sometimes with great controversy, and restoration and reconstruction projects are evaluated on a case-by-case basis.

The exhibition “*Rising from destruction. Ebla, Nimrud, Palmyra*”, devised by Francesco Rutelli and curated by the archaeologist Paolo Matthiae, with visuals by Studio Azzurro, should spur a constructive dialogue around these matters. It shows how Italy is sensitive to these issues, and ready to give a generous hand to the victims of war and its destruction of human lives and culture.

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Historical picture of the Colosseum  
(19<sup>th</sup> century), Rome





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Roberto Pisoni  
DIRECTOR SKY ARTE HD

## PRODUCING CULTURE, CHANGING SOCIETY

16

A society without the seed of art is a dead society. Unfortunately, the rise of ISIS forces us to tackle this issue once again as we take stock of its iconoclastic fury which destroys the material heritage as well as the symbolic value of countries such as Iraq and Syria, undermining their core identities. Destroying museums, archaeological sites and works of art means attacking the cornerstones of a society that, on the one hand, can produce culture through them and, on the other, is fed with culture, which provides the identity and historical basis around which it is free to grow, thrive, and evolve.

These are the rigorous premises that led Sky Arte to become Media Partner for the exhibition “*Rising from destruction. Ebla, Nimrud, Palmyra*” and to release a documentary of the same title, made by Sky Arts Production Hub, which describes how art is becoming one of the main targets in the conflicts currently plaguing the Middle East. As part of this project, we wanted to document the extraordinary job by the three Italian conservation and restoration workshops, who worked under the close supervision of scientists and archaeologists and combined traditional methods with cutting-edge technologies to painstakingly reconstruct three of the masterpieces that were destroyed by ISIS: the statue of Lamassu, which watched over the Royal Palace at Nimrud; the ceiling of the Temple of Bel at Palmyra, with its exquisite bas-relief; and the Royal Archives at Ebla. These masterpieces have been restored to new life and will be on display at the Rome exhibition, held in a one-of-a-kind venue, the Coliseum.

Iconoclasm, or the political need to annihilate any evidence of cultures different from one’s own, is not a recent invention of Islam; it has always been practiced, at all latitudes. Today, however, thanks to new technologies and international cooperation, art can finally be protected from the ravages of war. Out of a sense of civil and moral duty, every image of destruction must be answered with images of rebirth, as was the case with the replica of Caravaggio’s *Nativity*, which vanished into thin air after being stolen by the Mafia in 1969, and was recently brought back to life and returned to the citizens of Palermo.

Furthermore, initiatives such as this one are excellent occasions to test the mettle and talent for which Italy has always been renowned worldwide. It is no coincidence that the Sky group – the European broadcasting company that invests in art more than any other – chose Italy as the home of the Sky Arts Production Hub, which is responsible for content dedicated to art and culture and intended for the international market. It is a veritable incubator of ideas and projects covering the breadth of the arts, and will continue to increase its commitment to promoting cultural heritage, from Italy and elsewhere, with the goal of becoming a reference point for the entire sector and creating new opportunities for developing professional skills and passion in the cultural production field.

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General view of the archaeological  
area of Palmyra, Syria.  
© DGAM





Francesco Rutelli

CURATOR, PRESIDENT ASSOCIAZIONE INCONTRO DI CIVILTÀ

## INCONTRO DI CIVILTÀ: ROOTS, REASONS, GOALS OF OUR INITIATIVE

18

The exhibition “*Rising from destruction. Ebla, Nimrud, Palmyra*” marks a turning point in our campaign to fight the destruction of Cultural heritage that has taken place in recent years. It is not true we are focusing on “stones” and overlooking the tragedies that have affected and continue to affect people. On the contrary, we do not want the brutal return of iconoclasm in the 21<sup>st</sup> century to be considered a marginal problem: it strikes at the pillars of our shared civilization and robs people of their identities, and all of us with them.

The Association we have founded – with the support of some of the leading lights of Italy’s cultural scene, and the foremost scientific experts in archaeology and historical heritage in the Mediterranean, under the authoritative leadership of Paolo Matthiae – is called Incontro di Civiltà (Meeting of Civilizations). As its symbol, we have chosen an image of an arch in Hatra, Iraq, a city that was destroyed because of the diversity of its traditions: Greco-Roman, Hellenistic, and Muslim.

We do not believe in the stolid refrain of the clash of civilizations. When it is taken up by terrorist groups and Islamic fundamentalists, we fight it: it is the exact opposite of civilization. We oppose it whenever anyone presumes that the promotion of European and Western cultural identities can be based on an ahistorical, impossible idea of self-sufficiency in the face of the cultural diversity that permeates and modifies an interdependent world.

In the words of Isaiah Berlin, we know that “values [...] can be incompatible between cultures, or groups in the same culture, or between you and me”<sup>1</sup>. Or as Robert D. Putnam argued, that the multiplication of diversity can lead to instances of “self-segregation”. But is any other nation’s DNA as shaped by the encounter between different cultures as Italy’s? Thanks to its institutions, which united profoundly different peoples, ancient Rome became great by letting itself be conquered by the philosophy and art of Greece, a nation it had defeated militarily and taken over. This is Italy, a country whose immense cultural, civil, and scientific wealth ranges from Renaissance humanism to the modern era; whose Unification was finally achieved after centuries of deep divisions, until the unstoppable cultural pluralism of the present.

If we want to trace back the meaning of the sudden return of iconoclasm, we must begin with a surprising post-WWII development: the outlawing of the destruction of cultural heritage. This was the result of a dramatic and enlightened ‘self-awareness’ on the part of the West, and of a Europe weary of half a century of war, symbolized by the destruction of Dresden and Montecassino, and by the criminal theft of Jews Art property on the part of senior Nazi officials. This engendered a refusal to use historic and artistic monuments as battlefields, to pillage cultural property, and to deliberately destroy the enemy’s heritage, especially if defeated.

This was a lengthy process, which took shape in a series of international agreements, beginning with the Hague Convention on the Protection of Cultural Property in the Event of Armed Conflict (1954). This was followed by a number of UNESCO Conventions, such as the one on prohibiting and preventing the illicit traffic of cultural property (1970), on the protection of the world cultural and natural heritage (1972), and on the safeguarding of intangible cultural heritage (2003); and a number of decisions made by the UN Security Council and the UNESCO Council<sup>2</sup>. This is the crux of the matter. It is not just a question of protecting cultural property in an individual country, or the ideas of culture specific to the world’s most powerful nation; instead, this was a seemingly irreversible process to outlaw the theft, trafficking, and destruction of the heritage of humankind as a whole.

This process saw Italy play a leading role. It helped frame the international debate in a rigorous and innovative manner, and not just for the protec-

Equestrian statue of Marcus Aurelius,  
Piazza del Campidoglio, Rome.  
© Gabriel Stabinger



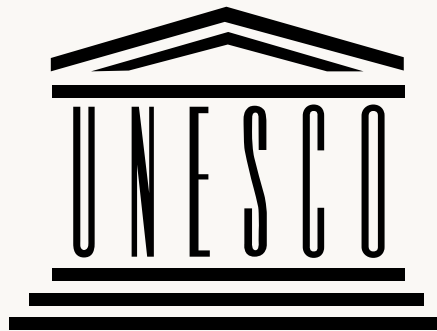




Montecassino Abbey, after the bombing, 1944



Arrival and delivery of the Archive and Library of Montecassino, at Castel Sant'Angelo, December 8<sup>th</sup> 1943



tion of an extraordinarily rich national heritage that had been repeatedly struck by grave robbers and other traffickers. Italy boasts formidable skills in its scientific sectors; extensive know-how in the investigative and legal fields; and a unique operational ability to fight crime, thanks to the special Carabinieri unit in charge of protecting artistic heritage. When it also has the political will to do so, it can achieve extraordinary results. Among other things, I can also refer to the activities I coordinated when I was the Minister of Culture, which not only led to the return of hundreds of stolen archaeological masterpieces to Italy<sup>3</sup> – whose insurance value alone was estimated at around € 500 million –, but also in the return of stolen items that were intercepted in Italy to other countries (including Pakistan, Iran, Iraq, and several Latin American countries). I am thinking of the scientific cooperation agreements that rewarded the international museums responsible for these restitutions with loans and medium and long-term collaboration programmes. I am thinking of the repatriation of the Obelisk of Axum to Ethiopia and the Venus of Cyrene to Libya, both items that were the fruit of colonial conquests. These repatriations were important acts of cultural diplomacy and of great political and symbolic value (as they were not dictated by mandatory laws, which are effective only as of 1970)<sup>4</sup>.

Finally, I am thinking of Italy's proposal to establish a corps of "Blue Helmets for Culture"; that is, to endow the United Nations Security Council and UNESCO with technical, scientific, and operational support in case of conflict, in order to take stock of the cultural heritage at risk, safeguard it whenever possible, act to fight illicit traffic, and contribute to post-conflict restoration.

That this is a difficult, long-term goal is underlined by the pervasiveness and proximity of instances of destruction of artistic evidence. When I say proximity, I am not only speaking in temporal terms. Physical proximity is also very eloquent. A visit to the Capitoline Hill, for example, allows us to meet Marcus Aurelius in the heart of Michelangelo's square (along with the original monument in the Capitoline Museums). In spite of his world-renowned wisdom, one

could argue that the phenomenal sculpture of the philosopher-emperor was spared destruction because it was indicated to be that of Constantine, the first Christian emperor. One need only visit the Philadelphia Museum of Arts – as I did a few months ago – to find a rather uncomfortable point of view: Pietro da Cortona's wonderful tapestry depicting Constantine ordering the destruction of pagan idols (the tapestry dates back to 1637, and was commissioned by the powerful Cardinal Francesco Barberini). Just a few steps away is a late 15th century oil painting by the Frenchman Josse Lieferinxe (painted in collaboration with Bernardino Simondi), originally from Marseilles and depicting an aggressive "Saint Sebastian destroying the idols".

Holy Destruction thus continued in spite of the Renaissance and the exceptional protection and patronage of the arts by of the Roman Church. There were, in fact, voices of protest – such as against the destruction of the Septizodium, where the Appian Way enters Rome at Porta Capena, on the part of that exceptional, brilliant builder Sixtus V.

The historical validation of power has almost always taken place through the submission of foreign culture. And *damnatio memoriae* has played an important role in this, in order to prevent the emergence of a counter-narrative, and to solemnify the victor's success. When Pope Clement VI excommunicated Louis IV the Bavarian in 1346, he wrote: "May his name be erased and his memory vanish from Earth within a generation!"<sup>5</sup>. Similar events were already hap-

Archaeological site of Hatra, Iraq







pening in ancient Athens. In Rome, the *abolitio nominis* against a public enemy was not generally targeted at his images, but rather his deeds and epigraphs. Most of us probably are not aware that the term ‘mudslinging’ comes from an ancient practice known as *lutatio*, in which an inscription referred to someone who was to be stigmatized in the eyes of the people was smeared with mud (*lutum*).

I would have to write far too much in order to recall the iconoclasm of the Byzantines in the 8<sup>th</sup> and 9<sup>th</sup> century (beginning with the debate over whether figurative decorations could be allowed in a church), or the English iconoclasm of the 17<sup>th</sup> century (in an attempt to eliminate religious art in the name of scientific progress). I would need to mention the destruction of Baghdad at the hands of Mongol troops in the mid-13<sup>th</sup> century (when the Tigris river ran black with the ink from the manuscripts held in the great Library that were dumped therein); the French Revolution’s assault on churches, monasteries, and their works of art; and of course, the Degenerate Art Exhibition staged by Hitler. For those interested in a historic, scientific, yet readable treatise on this, I recommend Paolo Matthiae’s book “*Distruzioni, saccheggi e rinascite*”<sup>6</sup>.

It was only after World War II – and the new technological ability to wage destruction on a far wider scale – that a widespread awareness arose concerning the unacceptability of destroying cultural property, leading to the emergence of the international institutions I discussed above. This truce of sorts held until the emergence of the cynical, media-savvy ISIS in Syria and Iraq. Cynical because behind its announcements of total intransigence against images of living beings – whether humans or animals – from any era (in the name of a deranged, pseudo-religious dogmatism), ISIS hides a profitable illegal trade that fills the earthly coffers of the so-called Caliphate<sup>7</sup>. Media-savvy because ISIS uses a sophisticated, well-organized propaganda machine in which the demolition of temples and sculptures, together with the tragic beheadings of innocent people, are used to intimidate and recruit through global communication channels.

We shall not resign ourselves to this return of iconoclasm, to the deliberate destruction of cities, works of art, archives, and monuments. Deep down, because we believe in the words Paul Ricoeur attributed to Martin Heidegger: “No one can ensure that that which no longer exists had never existed”<sup>8</sup> Today’s iconoclasts want to annihilate the sense of belonging and the collective memory of the local communities that are home to the artifacts they destroy. They practice “cultural cleansing”, as Irina Bokova, UNESCO’s Director-General, defined it.

We rebel against the tragic murder, on the part of terrorist groups, of brave defenders of art – about 20 have been killed in Syria alone – including custodians, archaeologists, scholars, or even people who publicly defended a heritage that is supremely dear to their hearts. The symbol of these heroes is

Palmyra’s elderly custodian, Khaled al-Asaad, who was slaughtered in 2015. Their tenacious point man is the valiant Maamoun Abdulkarim. From Damascus, he doggedly searched for any type of intervention or agreement, including with opposition groups, to save his country’s peerless heritage. In a recent interview, he said: “I refuse to use our cultural interests for political goals. It is our shared heritage, our shared identity. Politics will change, but our cultural heritage will not”<sup>9</sup>. We are proud to have awarded him the 1<sup>st</sup> Cultural Heritage Rescue Prize, two years ago in Venice’s Palazzo Ducale in the presence of the Minister for Culture Dario Franceschini.

The contents of the Coliseum exhibition are illustrated in this publication by all those who collaborated and contributed. On display are full-scale replicas of priceless works of art that have been destroyed (the Human-headed Bull

of Nimrud), criminally attacked (the ceiling of the Temple of Bel in Palmyra), or irreparably damaged (the Royal Archive in Ebla). The motives behind the exhibition go hand-in-hand with the work we carried out in the last few years: from the summer 2014 exhibition at Palazzo Venezia (“*Syria: Splendor and Tragedy*”), to the appeal to Irina Bokova issued in 2015 by thirty leading lights on the Italian cultural scene. They include the Italian government’s support for the establishment of the “Blue Helmets for Culture”, with the strong urging of Foreign Minister Paolo Gentiloni and Minister of Culture Dario Franceschini, together with the help of Prime Minister Matteo Renzi, as part of the UNESCO #Unite4Heritage initiative; and a cycle of conferences and events that took place in a number of cities, universities, and prestigious institutions (from the Accademia dei Lincei to the Courtauld Institute in London). In keeping with our campaign, the exhibition will also be staged in several major European cities. It should be stressed

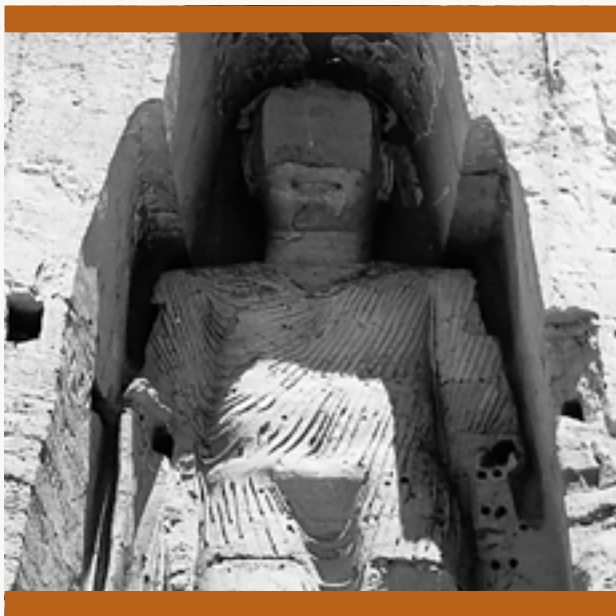
that without the full cultural support and pioneering work of Fondazione Terzo Pilastro – Italia e Mediterraneo, led by Emmanuele Francesco Maria Emanuele, this privately-funded initiative would have never seen the light of day. A major and innovative television network, Sky Arte, headed by Roberto Pisoni, provided a valuable contribution.

What are the exhibition’s goals, then? Its replicas – as scientifically accurate and lifelike as possible – of items that no longer exist or are now unrecognizable have three main purposes. The first is to raise awareness of the gravity of these events, so that these barbaric acts may be met with a strong and motivated response. The exhibition’s venue, the Coliseum, is itself the ultimate symbol of a two-thousand year history marked by conflict and wounds, triumph and glory, suffering and humiliation, pillaging and re-seeding. As the very symbol of Rome, it bears the prophecy of the Venerable Bede: “As long as the Coliseum stands, so shall Rome; when the Coliseum shall fall, Rome shall fall; when Rome shall fall, so shall the world”. I would like to reiterate that collaboration with the Special Superintendency for the Coliseum and the Central Archaeological Area of

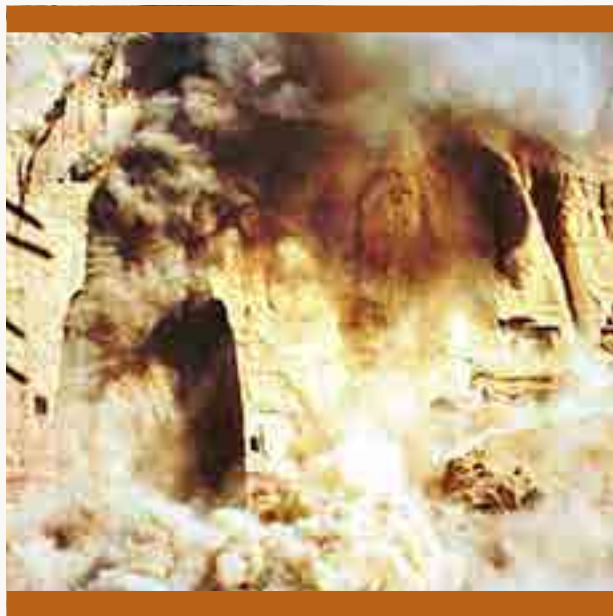


Etienne Dupérac, Septizodium, 1575





Buddha of Bamiyan, Afghanistan



Destruction of the Buddha of Bamiyan, Afghanistan



Executions in the Theatre of Palmyra, Syria, 2015

Rome headed by Francesco Prosperetti, Electa (Rosanna Cappelli), and the Coliseum management office (Rossella Rea) bore excellent fruits. The second purpose is to present these replicas to the public at large in an effective and scientifically appropriate manner: not only is their uniqueness highlighted, but so is the importance of the contexts they belonged, and the historical and cultural significance of the marvelous ancient civilizations that created them. The third purpose is to showcase the cutting-edge skills of Italian firms in reproducing these artifacts using proven or innovative techniques, such as robots and 3D printing. This work was rooted in painstaking scientific research and was able to perfectly reproduce their three-dimensionality and their lifelike aspect (if not their originality) under the experienced scientific guidance of Cristina Acidini and Frances Pinnock.

This provides food for thought for an important debate. What is to be done after such works are destroyed? Of course, before reconstruction can be attempted, accurate and incontrovertible documentation is paramount. Currently, this only happens in limited situations. In spite of praiseworthy efforts initiated in many countries over the last few years to create databases on cultural heritage, mainly in the Mediterranean regions, there are still too many institutions and bodies involved in these efforts without real coordination, even though many suitable tools are now at our disposal: satellites, laser scanners, drones, and new digital surveying and reproduction techniques. This is a far cry from the post-WWII era, when, to cite an example, it was necessary to use an 18<sup>th</sup> century painting by Bernardo Bellotto as a template to rebuild Dresden's Old Town Market Place.

One of the goals of our exhibition is thus to achieve international consensus for establishing a universal database, with the support of all interested private and public subjects, under the aegis of UNESCO and with the formal support of the International Centre for the Study of the Preservation and Resto-

ration of Cultural Property (ICCROM, based in Rome and very competently led by Stefano De Caro). It will need to have common scientific and technical criteria that are accessible, well-defined, and acknowledged by all. Taking a long-term view, this new iconoclasm is not the only issue on the horizon. The need to survey and catalogue cultural property, and to create an "International Risk Map" also reflects the often irreparable consequences of natural and environmental catastrophes. By mid-century, there will no longer be a question of whether sea levels will rise due to climate change, but only by how much. What will be the consequences for coastal cities, archaeological sites, and monuments? Good documentation is invaluable.

What to rebuild, and how? If we consider the Egyptian temples of Abu Simbel, which were moved a short distance in the mid-1960s to prevent them from being flooded after the construction of the Aswan dam, we know that there is no shortage of technical capabilities. In fact, looking back on the contribution made by Italian technicians to that effort, I would like to highlight Italy's internationally renowned and extensive technical skills. And I can look back with fondness at the work of my great-great-grandfather Giovanni Rutelli, who was the builder of Palermo's Teatro Massimo on behalf of G. B. Basile, a theater whose beauty has remained intact since the late 19<sup>th</sup> century. For that imposing work "in addition to the golden-yellow stone from the Solunto quarry, and the white Cinisi stone

for exterior decorations, we also used shell-encrusted tuff from the Aspra quarry, semi-compact tuff from Niscemi, and compact limestone from Billemi, all the varied treasures from the bowels of our Earth, a thousand years old a thousand times over; in the solemnity of the building, these treasures achieve their full triumph under the sun".<sup>10</sup> These are fascinating technical aspects of restoration and stereotomy that many of my family members developed until the mid-20<sup>th</sup> century; their restoration works included ancient Greek temples and Ara-



Bernardo Bellotto, Neumarkt Square from the Jewish cemetery, with the Frauenkirche (1749-51), Gemäldegalerie Alte Meister, Dresden

The ruins of the Frauenkirche at Dresden, bombed and destroyed by the Allies in 1945. To the right, the Frauenkirche after the reconstruction, 2005





bic-Norman architecture. Once the conflict in Syria is over, similar issues will arise concerning the restoration of Palmyra to its former splendor. But this is not just a technical matter. It is a matter of choices, which should never result in restored sites resembling some artificial Disneyland. Restoration and reconstruction efforts must thus be studied on a case-by-case basis, and carried out with great care following sound scientific evidence.

In this regard, the political will of local authorities can be supported by international cooperation, but not overridden by impositions from the outside. We are aware of cases – Beirut is one example – in which some of the signs of war’s destruction were willingly maintained, in order to keep the memory of those tragedies alive. There are also success stories, such as the reconstruction – with the European Union’s strong backing – of the 16<sup>th</sup> century Mostar bridge that was destroyed in 1993 during the Balkan War (the reconstruction effort, which took place twelve years later, features illumination donated and installed by Italy). On the other hand, if we think of the caves in Bamiyan along the Silk Road in Afghanistan, which housed the giant Buddha statues blown up by the Taliban, a great deal of uncertainty still surrounds potential restoration efforts, even now, 15 years after the fact.

I like to recall that the Muses, as the daughters of Zeus and Mnemosyne, symbolized Power and Memory. When a power wants to suppress memory, it puts a stop to what our modern civilization considers to be the path towards universal pluralism and cultural diversity. It is not a matter of affirming the hegemony of a philosophy or of a cultural system, or of attempting to achieve homogenization and assimilation at a global level. Rather, it is a way to continue along the path towards a new Humanism that was blazed in 1945.

Our exhibition, inaugurated by a authoritative, learned and attentive man, the President of the Italian Republic, Sergio Mattarella, is taking place concurrently with a major new development: the International Criminal Court sentenced to 9 years Ahmad al-Mahdi, on September 27, 2016. He plead guilty to the destruction of nine small mausoleums and a mosque in Timbuktu (alongside the devastation of numerous exquisite Islamic manuscripts) during the Al Qaeda-inspired assault carried out by Tuareg rebels in 2012 against this historic cultural hub in the heart of the Sahara. For the first time, an international war

crimes charge has been brought against someone responsible for destroying cultural property; the prosecutor Fatou Bensouda stated before the Hague tribunal that this was a “cruel assault on the dignity and identity of entire populations, their historical and religious roots”<sup>11</sup>. This event highlights the farsightedness of those who argued for the creation of the International Criminal Court, including the Transnational Radical Party, and those who tenaciously oversaw its establishment, including Kofi Annan, up to the historic signing ceremony on Rome’s Capitoline Hill in 1998. There were many doubts back then, and there have been many difficult moments since. But this slow march never stopped, and as some of us had hoped back then on the Capitoline Hill, it has now expanded its protection from crimes against humanity to include those against cultural heritage. We owe this to people such as the collector and scholar Abdel Kader Haidara, who secretly carried 400,000 ancient Islamic manuscript from Timbuktu to safety in Bamako, the capital of Mali. He saved them, and with the help of several international programmes, he is now restoring them. A hero who, once again, has found reason for hope and support in a legal and cultural innovation inspired by a unique energy the world is well acquainted with: the “spirit of Rome”. As ancient as it is, we have not stopped listening to it.

The displacement of the Temples,  
Abu Simbel, Egypt, 1964-68

Beit Beirut  
(Museum and Urban Center),  
Beirut, Lebanon

The bridge of Mostar,  
Bosnia Herzegovina, 2001  
© Gabriel Stabinger

Destruction of a mosque  
in Timbuktu

1. Isaiah Berlin, Un messaggio al Ventunesimo secolo; Milano, 2015
2. WWW.UNESCO.ORG
3. Time, October, 2, 2007
4. Nostoi: capolavori ritrovati, Roma Palazzo del Quirinale, 2007
5. Annales Ecclesiastici, AD 1346, edizione di Cesare Baronio
6. Paolo Matthiae, Distruzioni, saccheggi e rinascite. Gli attacchi al patrimonio artistico dall’antichità all’ISIS; Milano, 2015
7. Le rotte dei traffici illeciti in Europa e nel Mediterraneo. Conference organized by Ass. Priorità Cultura, Senato della Repubblica, 13 aprile 2016
8. Paul Ricoeur, La mémoire, l’histoire, l’oubli; Paris 2000
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10. Lezione tenuta alla R. Scuola d’Ingegneria di Palermo da Giovanni Rutelli, 11 maggio 1938
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Paolo Matthiae  
CURATOR, ARCHAEOLOGIST

## THE WORLD CULTURAL HERITAGE: VALUES, DESTRUCTIONS, RECONSTRUCTIONS

28

Tangible and intangible cultural heritage is part of the universal heritage of humankind. Cultural heritage is the cornerstone of the identity of peoples, but it is also the source of dialogue, co-existence, and understanding between peoples, because cultural diversity is an inestimable resource of humankind as a whole. The cultural property that has survived to this day in spite of the infinite destructions sustained over the course of history must be preserved for current and future generations, regardless of language, culture, gender, or religion.

Over the course of history, the world's artistic, archival, architectural, and urban heritage has sustained serious to catastrophic damage throughout the planet; indeed, much of it is now lost from memory. What has survived – rarely undamaged – is but a tiny fraction of what human talent has created, starting from the most remote prehistory and the beginnings of civilizations. Some of these losses can be attributed to the course of nature, but many more – even more than the most pessimistic assessment – are due to the blind violence of humans.

Obviously, cultural property is inherently subject to deterioration, which takes place in countless ways depending on the materials used, the type of damage sustained, local environmental conditions, and the use that was made of them, whether in the past or in the present. A highly deteriorated cultural monument, even if only a few remnants have survived, is generally referred to as a ruin.

The ruins of a dead city or of a destroyed monument – whether they are shapeless, ancient ruins in a modern city, unrecognizable outlines buried under sand and rubble, or better-preserved buildings concealed by dense tropical vegetation – acquire a different meaning from their original one, and take on new values that undergo endless variations in the minds of their visitors.

The life of ruins, after the death of the original monuments of which they are but vague, enigmatic, and incomprehensible ghosts, rises anew and perpetuates itself as they become interpretable and legible signs – albeit subjectively – through myriad new meanings arising out of the layers of memory in the minds of their visitors.

Ruins exert endless fascination in the collective imagination, because of their intrinsic nature as “open” works, where the loss of their original meaning allows for an endless array of interpretations. The more ruins are degraded, the more they are structurally and objectively open to the most disparate and arbitrary interpretations on the part of their visitors, which have been shaped over the centuries by their cultures.

In the Western world, ruins immersed in nature are perceived as a physical home for memory. On the one hand, they bring back to life in the collective imagination the men, women, and communities from books of old. On the other, they encourage the public to ponder the ephemeral fragility of human works and the oblivion of the meaning, function, and identity of times past.

In the Eastern world, and especially in China – where nature's subjugation of culture and culture's subjugation of nature, typical of the Western perception of ruins, are inconceivable – the material signs of human presence in sprawling landscapes seem to fall outside of time, in a space endowed by these very signs with a serene, almost transcendental harmony, where nature and culture seem to co-exist and merge into each other seamlessly.

Very often, works from humankind's past have survived to this day as ruins, due to destruction and pillaging both in the distant past and in the near present. In recent years, the deliberate destruction of works of art and monuments, the pillaging of museums, archives, and library, and the plunder of ar-

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Satellite images  
of the destruction of Bel's Temple,  
Palmyra, 2015







chaeological sites through illegal digs at the hands of the so-called Caliphate of the Islamic State have caused criminal damage to the cultural heritage of two countries, Syria and Iraq, where the succession of different cultures over time has had a seminal impact on the history of humankind. This area was home to the very first attempts at agriculture and at establishing villages; it was home to the world’s most ancient cities, states, and empires; and was the cradle for the three great monotheistic religions: Judaism, Christianity, and Islam.

The destruction and plunder of cultural property in Syria and Iraq, as well as in other countries of the Near East, Mediterranean, and Africa at the hands of ISIS is one of the great tragedies of our time. This obsessive strategy of destruction targets works of art, monuments, and historical sites to ruthlessly strike the identities of peoples and the universal values of humankind. The drama of the men and women from conflict areas, who must face unimaginable suffering, comes first and foremost, but as stated by UNESCO Director-General Irina Bokova “it is not a matter of choosing between saving people and saving objects: it is all the same fight”.

The Constitution of UNESCO, signed in London on 16 November 1945, just a few months after the end of World War II, during which an enormous amount of monuments and other cultural heritage had been destroyed, proclaimed – so that these horrors would not be repeated in the future – that while economics and politics can cause friction between nations, culture is the cornerstone of peace. The universality of culture is represented in its utmost form by the world heritage of humankind, which is to be found in every part of the planet.

UNESCO’s Conventions and Declarations for the protection of the world’s cultural heritage clearly establish the four guiding principles driving the organization’s work.

The first is the essential necessity for peace, and the related requirement for international cooperation between all member countries to ensure this universal need is met. The second is that in light of the possible economic and political frictions between states, culture is essential in building peace, since understanding between nations requires dialogue on the basis of mutual respect and sound scientific and cultural underpinnings. The third guiding principle for UNESCO is that culture is a core element in the identities of peoples and nations, that cultural diversity is one of humankind’s irreplaceable assets, and that dialogue between different cultures is equally irreplaceable; all these elements

are essential for peace. The last, extraordinarily important principle is also the logical consequence of the previous ones. It asserts that as different cultures are inalienable assets, so is the cultural heritage they produce, which has equal and universal value across cultures and is intangible .

There is now unanimous consensus among the men and women of our planet that the cultural heritage of humankind is universal, equal, and intangible, all in the name of peace.

The works of art, monuments, habitats, and cities that comprise the world’s cultural heritage, and which still survive on our planet, have universal value because this value is equal across cultures for today’s humankind. In light of their equality and universality – much like humans are all equal – they are intangible and cannot be destroyed, because their value does not arise out of their importance for a given historical culture, but from their significance for humankind as a whole.

The principle of intangibility for the world’s cultural heritage must be shared by all present communities of men and women. It is sanctioned by UNESCO’s Conventions and Declarations, but this intangibility should not only been seen in a utopian sense, but also in the real sense, as the premise to the binding necessity of their perennial preservation.

Today’s new barbarians, who are taking up the obsolete, deplorable, and unacceptable barbarism of the deliberate destruction of the Other in the name of a distorted, perverse exaltation of Identity, are equally ruthless in carrying out the deplorable practice of illegal archaeological digs, removing items from their original context for the sake of intolerable private economic interests to the detriment of the community, and in their obtuse, ferocious physical destruction of works of art due to religious, ideological, or cultural hatred.

This latter practice – with its inexorable, tragic cruelty, which sentences to death the Other as a hated emblem of ancient cultures of extraordinary wealth for the sake of an arrogant, totalitarian Identity that completely rejects the value of the plurality of cultures – is a deep and irredeemable injury to humankind, since it breaks the essential and irreplaceable bond between humankind, nature, and culture. This bond took shape over the centuries, in countless different ways and at every latitude, and it must be perceived as sacrosanct.

Whenever it has emerged during the course of time, whether in the most remote prehistory or in the present day, the bond between humankind, nature, and culture is a universal treasure. Its full value is hard to estimate, since every woman and man on earth is inevitably influenced – and at the same time enlightened and bound – by their education and culture, and since every generation – even the most tolerant, supporting, and sympathetic ones – cannot completely escape from the constraints of its identity.

The destruction of cultural heritage that is currently being perpetrated with great virulence in Syria and Iraq is a crime against humanity. Women and



Royal Palace G, Ebla, Syria.  
© Missione Archeologica Italiana in Siria

Temple of the Rock,  
Area HH, Ebla, Syria.  
© Missione Archeologica Italiana in Siria



men, the old and the young in every community in that region, or anywhere else on the planet, are living in a complex context in which nature and culture are essential, foundational elements of the physical, intellectual, and psychological reality. As we have said, this context forms a deep and irreplaceable bond: none of the elements that constitute it can be done away with. The women and men of a community who have been suddenly robbed of the natural or cultural elements in which they have traditionally lived, in a centuries-old layering of different experiences, become an empty and diminished people.

The reconstruction of works and monuments destroyed during wars, civil strife, or prolonged crises is a problem that has always been keenly, often painfully felt, especially in the West, and especially immediately after World War II. This is particularly true in Western Europe, because the local culture has a nearly obsessive yet understandable cult for the authenticity and the originality of works of art. It attributes aesthetic value only to original works, and barely conceals its contempt for copies, whose only value is considered to lie in the fact that they document – more or less faithfully – the original aspect of long-lost works. In the Far East, on the other hand, the essential value of a monument or work of art lies in the continuity of its tradition over space and time. This reflects the local culture’s veneration for all that which is considered “classical”, whether in literature or art, and for its need – which has only occasionally been interrupted – to have a constant dialogue with the past, while proclaiming the currency and necessity of a full return.

Especially after the end of World War II, when conservation restoration techniques were far less developed than they are now, the problem of the reconstruction of lost monuments and works became a choice between two different solutions to the disappearance of works of great historical significant and aesthetic value: should their ruins be left intact to decry these crimes against culture and to serve as a warning so that similar horrors may not be perpetrated against; or should these monuments be rebuilt as faithfully as possible in accordance with existing documentation, so that the local communities would not be forever deprived of a major part of their cultural identities?

Among the countless cities and towns destroyed during World War II, Coventry in England, Dresden in Germany, and Warsaw in Poland stand out. The two great wars of the 20<sup>th</sup> century also damaged or destroyed the Cathedral of Notre-Dame in Reims, France; the Abbey of Montecassino in Italy; and the Peterhof Palace. These are exemplary cases of ruthless destruction on the part of implacable foes, and of difficult decisions regarding the future of their ruins on the part of national authorities in their respective countries.

The ruined shell of Coventry’s gothic cathedral, which was destroyed during the terrible German bombing campaign, is still standing, reflecting the will of the UK authorities to commemorate one of the most grievous injuries

ever sustained by the British Empire. The history city centre of Dresden, one of northern Europe’s Baroque jewels, was left in ruins for years to document a crime against culture. It was then almost fully rebuilt by East and then West Germany, with the help of the United Kingdom as a way to symbolize a new alliance and peace between the two countries. All of Warsaw’s city centre, which was reduced to rubble by repeated, indiscriminate bombing, was also entirely reconstructed, on the basis of existing documentation, so that the historical image of the capital of the Polish nation would not be forever lost to memory.

After the Abbey of Montecassino was destroyed by an Allied bombing campaign of questionable strategic value, it was rebuilt to reflect the original as faithfully as possible, as the disappearance of a site where so many Roman antiquities had been preserved during the Middle Ages was deemed unacceptable. The ruins of the Peterhof Royal Palace in Saint Petersburg, a fascinating symbol of the power of the Tsars in Russia in the 18<sup>th</sup> century that was ravaged and pillaged by its Nazi occupiers, was rebuilt quickly and faithfully by Soviet authorities, so as to preserve the memory of the splendor of one of the most glorious periods in Russian history. After much of the spectacular Notre Dame Cathedral in Reims – one of the marvels of Gothic architecture in France - was damaged by

heavy shelling in World War I, it was fully restored to its former splendor. In July 1962, it was chosen by French President Charles de Gaulle and German Chancellor Konrad Adenauer as the site to celebrate the formal reconciliation between the two countries.

On a global scale, most of the historic monuments damaged or destroyed during wars have been rebuilt. Nevertheless, the debate over the legitimacy of some of these reconstruction efforts remains open and lively. A prime example concerns the complex, painstaking restoration project for the two monumental Bamiyan Buddhas, which the Taliban reduced to rubble on 12<sup>th</sup> March 2001. These famous statues were carved in the side of a cliff between the 3<sup>rd</sup> and 5<sup>th</sup> centuries by the Kushans and the Hephthalites, then decorated with paintings between the 5<sup>th</sup> and 9<sup>th</sup> centuries, and were revered by the local population.

In the face of ISIS’s deranged, tragic determination to destroy the centuries-old, layered cultural heritage of Syria and Iraq – which heritage is itself an extraordinary monument to cultural diversity over time – it is our duty as human beings to restore these ravaged cities and monuments to their full splendor, as was done with many monuments in post-World War II Europe. This should take place through scientifically sound projects and sophisticated modern techniques, so that those incomparably evocative ruins may faithfully be restored to their former aspect, before their recent destruction.

The reconstruction of Syria and Iraq’s damaged cultural heritage is not an option for UNESCO countries. It is an ethical duty, a way to restore the full humanity of the peoples of these countries, which played such a key role in the



Ebla, cuneiform tablet with lexical text.  
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development of our civilization since its earliest days. Our increasingly sophisticated technologies make it possible to rebuild damaged works and monuments with the utmost philological accuracy, reflecting their context and appearance before they were destroyed.

Three key principles should drive this effort: full respect for the sovereignty of the nations in which these monuments are found; coordination, oversight, and approval on the part of UNESCO; and broad-based, intensive, and supportive international cooperation.



## ALESSANDRO ZUCCARI

PROFESSOR OF HISTORY OF MODERN ART AT UNIVERSITÀ LA SAPIENZA

# DESTROYING SOMEONE ELSE'S CITY IS LIKE DESTROYING ONE'S OWN

34

In 547, as the Gothic War was in full swing and Totila held Rome under siege together with its monuments and historic marvels, the Byzantine general Belisarius wrote a letter to the King of the Goths, who threatened to raze the city, both for strategic motives and due to a deep-seated cultural hatred. In his famous missive, which asked Totila to jettison his plans for destruction, he stated, among other things: “*Much like adorning a city with new ornaments is the prerogative of wise men familiar with civilized life, so is destroying the ornaments therein is the mark of fools who are not ashamed to leave for posterity such evidence of their being... To assail Rome shall be seen as a great injury by men throughout the ages ... should you destroy Rome, you will not have destroyed someone else's city, but your own; by saving it, instead, you shall enjoy the riches of the most beautiful of your possessions*” (Procopius of Caesarea, *The Gothic Wars*, III, 22-23).

It is true: destroying the memories of the past is an act against “men throughout the ages”; destroying “someone else's city” is like destroying one's own. Belisarius's appeal shows how the preservation of archaeological, historical, and artistic heritage has deep and ancient roots, and yet remains highly current in light of the fury unleashed by ISIS and other terrorist groups in recent years that is devastating entire regions of Syria and Iraq and has struck numerous historic sites in several Asian and African countries. There is a difference, though: today's enemy is even more fearsome and chilling: it is faceless and nameless (think of the grisly spectacle of executions staged by hooded men), it does not accept as its own “someone else's city”, and rejects the civilized tools of diplomacy, which convinced the Barbarian king to listen to reason.



Nimrud, North-West Palace, the explosive charges against the palace walls, before explosion

The list of instances of destruction, damage, or pillaging of cultural sites that experts have put together and updated over the last fifteen years is frighteningly long. In 2001, before the emergence of ISIS, the Taleban used dynamite to blow up the Buddhas of Bamiyan in Afghanistan, after declaring that these gigantic statues were idols. Ever since, such acts have expanded elsewhere and multiplied. In Mali in 2012, the jihadi group Ansar Dine destroyed the mausoleums of Sufi holy men and the Sidi Yahya mosque in the ancient city of Timbuktu, where they also burned some of the 100,000 manuscripts held in public libraries. In Libya in 2015, militants from the so-called Caliphate vandalized Sufi sanctuaries near Tripoli.

After ISIS took over the Iraqi city of Mosul in 2014, it caused irreparable damage to historic buildings and archaeological sites. After demolishing the Shia mausoleum of Fathi al-Kaled, they then blew up the mosques of Khudr and Al-Qubba Husseiniya and the ancient tombs that are thought to be the burial sites of Seth, the prophet Daniel, and the prophet Jonah, venerated by Jews, Christians, and Muslims alike. The walls of the ancient city of Nineveh suffered the same fate, while the artefacts held in the Mosul Museum were smashed to pieces with jackhammers. Churches and monasteries in the Nineveh plain were also damaged; the temple of Lalish north of Mosul, the main sanctuary of the Yazidi faith, was blown up, as were numerous other monuments and sanctuaries in northern Iraq and Syria. The mosque of Al-Arbahin in Tikrit, which contained 40 tombs from the 8th century, was mined, and the Green Church was destroyed. The latter was one of the oldest Christian buildings in the Middle East, the symbol of a city that for centuries had

been a metropolitan of the Syriac Orthodox Church.

Numerous archaeological sites, including Dura Europos, Hatra, and Mari were extensively damaged, while looting of other sites, such as Ebla and many others, is a source of funding for ISIS. The best-known and most tragic news concerns the ancient Assyrian city of Nimrud – where the ruins of the royal palace of Ashurnasirpal II were destroyed together with their priceless trove of sculptures and bas-reliefs – and the marvellous city of Palmyra. The latter was also used as a setting for barbaric executions, including that of Khalid al-Assad, the archaeologist who sacrificed his life to defend the archaeological site of which he had been custodian for decades. ISIS razed the temple of Baal Shamin, demolished the arched doorway and funerary towers, damaged the solemn colonnaded avenues, and almost completely destroyed the temple of Bel. Concerning the latter, Paolo Matthiae ruefully noted that: “What the enlightened Umayyad caliphs, who were struck by the splendour of the temple that survived the upheavals related to the affirmation of the Christian fate had spared [...] when the building was turned into a mosque, tragically succumbed to the systematic ravaging of the past at the hands of ISIS gangs” (P. Matthiae, *Distruzioni saccheggi e rinascite*, Milan 2015).

The list of instances of destruction and pillaging is far longer, but we must not forget that Yemen has seen the recent devastation of the historic city centre of Sana'a and of two other UNESCO World Heritage Sites: Zabid, the country's capital from the 13<sup>th</sup> to the 15<sup>th</sup> centuries, and Shibam, known as the “Manhattan of the desert” for its 16<sup>th</sup> century high-rise buildings. Fundamentalist groups linked to Al Qaeda and ISIS were not the only ones to target these sites, since the coalition led by Saudi Arabia bombed other important sites. While they claimed to be attacking weapon depots, it is more likely that they were attempting to destroy historic sites and a cultural identity dear to the Yemeni people.

Many have puzzled over this rage against statues and books, temples and funerary monuments, churches and monastery, archaeological sites and museums, and even Muslim places of worship. This new iconoclastic fury is based on an extremist interpretation of Islamic tradition, and aims to erase anything that may remotely recall idol-worship and paganism, including the signs of a pre-Islamic past. ISIS's custodians of orthodoxy claim that the Prophet himself ordered the destruction of the statues, but the source is actually the Sunnah, or the sayings of the Prophet, rather than the Quran itself. Radical Islam, in contrast with a lengthy tradition of tolerance, is steeped in purist Wahhabism and embraces its most restrictive interpretation, eyeing with suspicion any three-dimensional reproduction of the human body. “The prohibition against worshipping any divinity ‘outside of God’ is one of the pillars of Islamic doctrine, but in the intransigent Wahhabi version this principle is accompanied by a prohibition against any sort of worship of human figures or relics, as folk religion is wont to do (R. Guolo, *Il partito di Dio. L'islam radicale contro l'Occidente*, Milan 2004). Indeed, Al Qaeda and ISIS have attempted to eliminate ancient memories of Islam.

This iconoclastic folly is not just triggered by theological motives. It also reflects an aversion to the past, which it attempts to erase, and to cultural and historical identities, which are deemed to be an obstacle to the establishment of a new regime, such as a caliphate based on Islamic jihad. The multi-cultural, multi-ethnic, and multi-religious past of the Middle East is unacceptable for ISIS, and its refusal of Western culture extends to archaeology, which it associates with the colonialism it blames for triggering the decline of the Islamic world.

Indeed, iconoclasm's deepest roots do not lie in the religious realm. Instead, they are a statement of power (political iconoclasm), as shown by the earliest iconoclast manifestations in Mesopotamia, ancient Egypt, and ancient Rome, and continuing through the French Revolution and the 20th century (V. Domenici, *Contro la bellezza*, Trento 2015; M. Bettetini, *Contro le immagini. e radici dell'iconoclastia*, Bari 2006). It is well known that this aversion towards anything that depicts artistic beauty and history “is partly due to the Islamic terrorists' desire to frighten and to appear in the eyes of the West (and even more so in the Muslim world, because ISIS fundamentalists are rebelling first and foremost against a Muslim world that is looking for a path towards development and its place in the world) as a force for terror that is unwilling to integrate with anyone, and eager to fight anyone who is different from them” (S. Malamocco, [www/geograficamente.wordpress.com](http://www.geograficamente.wordpress.com), 7 March 2015).

War is another leading cause. It brutalizes people and things and allows unreasonable acts: in the fog of war everything is justifiable, without any ethical limits or indeed humanity. In addition to the many atrocities committed in war zones, the looting of archaeological sites and museums and the illegal trade in historical and artistic heritage have also increased. European history teaches us that bombardments and battles not only destroy famous monuments; they also demolish cities, tearing apart an urban fabric woven through the centuries. One need only think of Aleppo, one of the world's oldest continuously inhabited cities, which is dying under a pitiless siege. Since 2012, when the war split it into two, it has seen over 30,000 of its inhabitants die, including countless children. Today it is a ghost town, with rubble everywhere: the Citadel, with its many layers reflecting thousands of years of history, has been seriously damaged, like the rich Archaeological Museum. The enchanting medieval souk lies in ruins, the minaret of the Great Mosque has been knocked down, and the Armenian cathedral bombed together with the city's warren of churches and mosques, madrassas, Turkish baths, aristocratic palaces, and ancient houses. But along with its artistic heritage, Aleppo is losing a community where Muslims of various branches of Islam and Christians from many denominations – Armenians, Orthodox, Syriac, and Catholic – have been living side-by-side for over a thousand years, in a living example of harmonious co-existence between different worlds. A future in their own city must be ensured for them.

One cannot remain silent before such a humanitarian and cultural catastrophe. In addition to appeals to the international communities, initiatives such as this one are crucial. With the participation of Fondazione Terzo Pilastro - Italia e Mediterraneo, chaired by Prof. Avv. Emmanuele F.M. Emanuele, it presents the cases of Palmyra, Nimrud, and Ebla, with virtual reconstructions and targeted restoration projects. Significantly, the exhibition is staged in the Coliseum, Italy's most visited monument, to involve as broad an audience as possible in this growing international debate, in which Italy is playing a key role.

35





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Cuneiform tablet from Ebla, ca. 2300 BC  
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## Ebla

# A REVOLUTIONARY ITALIAN DISCOVERY

38

Ebla, a large site, nearly 56 hectares in size, in north inner Syria, was the capital of an important kingdom, which flourished between 2500 and 2300 BC, when the town was destroyed for the first time by Sargon of Akkad. Rebuilt soon afterwards, it had a second phase of flourishing, as documented mainly by Mesopotamian texts. It was destroyed again, around 2000 BC, probably by Amorites, who settled in the town, rebuilding it and restoring it back to splendour. For a large part of this last phase, between ca 1770 and 1600 BC, Ebla was a vassal of Aleppo. The last, and final, destruction took place around 1600 BC was probably by a coalition led by the Hittite king Mursili I. A mere heap of ruins, Ebla was occupied by poor agricultural villages, during the first millennium BC, by a small monastic settlement at the beginning of the current era, and by a Crusaders' military camp, during the First Crusade. The discovery of the first Ebla (2400-2300 BC) was a real revolution in our knowledge of the history of the ancient Near East: the discovery of the extended Royal Palace, with its rich furniture and the large amount of written documents, the huge Temple of the Rock and the Red Temple, both dedicated to the head of the Eblaic pantheon, the god Kura, and of a building for handicraft production and food preparation, allow to reconstruct in detail a previously unknown phase of the history of pre-classical Syria, as well as the economic and social structures of a great capital of the second half of the third millennium BC. The site has been excavated since 1964 by an Italian archaeological expedition led by Paolo Matthiae.

The discovery of the town of Ebla of the so-called mature Early Syrian period (ca 2400-2300 BC) was a revolutionary one for several aspects, and the discovery of the different sections of archive of the central administration is certainly the most relevant. Three main archival sections were brought to light: the Great Archive, the Small Archive and the Trapezoidal Archive. The Great Archive yielded ca 17,000 inventory numbers, including complete tablets, large and smaller fragments. The tablets were written in the cuneiform writing, invented in Sumer, and they mainly deal with the economic and administrative accounting of the Ebla state; also texts about the international relations of the

town, ritual texts of kingship and school texts. Among the most important documents we may recall: the International Treaty between Ebla and Abarsal on the Euphrates, the first international treaty in history; the Ritual of Kingship, a renovation ritual in which the king and queen took part and which had some similarity with the Sed Festival of the Egyptian Pharaohs; the school texts, lists of words organized in categories, which are the oldest, with the similar Akkadian lists, to "translate" the Sumerian terms in the local language, in both cases a Semitic dialect, akin to modern Arabic and Hebrew. The Small Archive mainly preserved accounts of the delivery of food rations to palace officials, whereas the Trapezoidal Archive was probably devoted only to the temporary keeping of administrative documents.

The Royal Palace G contained also important remains, albeit quite fragmentary, of its fittings – life-size and miniature statues, panels with stone inlays, wood furniture, clay pots – which are a unique patrimony, for quantity and quality. These findings deeply changed the knowledge about the creation and development of the artistic and material culture of pre-classical Syria.

Ebla, miniature head of a warrior,  
marble, ca 2300 BC  
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Ebla

## THE ROYAL ARCHIVES AT EBLA: STUDY AND RECONSTRUCTION\*

40

Arte Idea Srl is a Rome-based company working in the industrial sector. It specializes in designing and manufacturing decorative elements in chalk and fibreglass for clients in many disparate fields, such as television, theatre, amusement parks, and private clients. Technological and scientific progress has allowed the company to evolve in terms of the items it manufactures, and to develop new, cutting-edge techniques through the introduction of new machines such as robots with five degrees of freedom and polyester cutting machines.

Through our manual and creative experience, we have been passing down the ancient art of fashioning and manufacturing products that continue to be entirely artisanal to this day.

All of our experience and energy is harnessed to ensure the total quality that is our company's guiding light and that has allowed us to remain a leader in our sector. Indeed, the products manufactured in our plant are crafted in a scrupulous, accurate manner, and our specialized staff has created highly prestigious decorations both in Italy and abroad.

To ensure the best possible outcome, the materials used by our company vary depending on the item to be manufactured.

In the case of the life-size replica of the Elba Royal Archives – which date back to 2300 BC – we decided to use polyester treated with a chalk and sand mixture. The Royal Archives consist of a square room of about 4 meters per side, originally built with raw bricks coated with a chalky white plaster. In order for us to make the replica, archaeologists provided us with drawings and photographs dating back to the site's discovery in 1975-76.



The reconstruction of the Royal Archives room,  
in the workshop of Arte Idea S.r.l., 2016

blocked with wooden scaffolding.

This is how we built our 'negative' model.

It was then that we began the casting operations to obtain a positive mold, but in a different material – plexiglass instead of polyester – to ensure greater

Detail of the reconstruction  
of the Royal Archive Room

After carefully analyzing the project, we manufactured an initial lifestyle model using custom-cut polyester as a trial run; the various sections were then put together to make the final model.

The polyester was modelled using artisanal tools such as hammers, iron brushes, and knives of various sizes.

Once the desired result was achieved, the model was further treated with chalk and coloured sand, which made it more realistic and life-like.

The so-called molding process then began, during which a 'negative' of the model was made using latex, chalk, and resin.

For this model, which had previously been divided into sections given its large size, an elastic latex mold was built, which made it possible to add even the deepest parts; this would have been impossible using other materials.

The next phase consisted of making everything more compact; we then built a mother mold out of plexiglas (hard material), which we







resistance and durability over time, with an internal metal structure to support the plexiglass. As we were proceeding with the construction of the replica of the Royal Archives, we received an additional request from the exhibition's organizers. They asked us to craft replicas of the layers of wedge-shaped boards that corresponded with one of the levels above the floor. This also allowed us to solve a serious problem: once brought completely back to light, the archives had a deep trench that cut through much of the floor. Once we created the layer of boards, we decided to reproduce the entire room, thus with a dirt-covered floor, and not with the original pressed limestone flooring. In order to create the replicas of the layer, we began with latex models based on casts made by the archaeologists, which were then added to the replica of the dirt floor. The latter was made in the same fashion as the room's walls, reflecting the available photos, in order to have as lifelike and realistic an effect as possible.

The last phase before assembly concerned painting, which required a careful choice of the tints to be used, involving an analysis of available photos and the direct input of the archaeologists who discovered the site.



\* Arte Idea S.r.l curated, executed and produced the Royal Archives Room reconstruction

- **Ivano Ferrario** *owner of Arte Idea S.r.l.*
- **Angelo Marta** *sculptor*
- **Alberto Ruini** *sculptor*
- **Antonella Prestipino** *painter*
- **Piervincenzo Crescimbeni** *reproduction fitter*
- **Andrea Masci** *photography*

Detail of the reconstruction of the Royal Archive room





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Nimrud, North-West Palace,  
detail of the lion hunt,  
London, British Museum  
© The Trustees of the British Museum







## Nimrud

# THE FIRST CAPITAL OF THE ASSYRIAN EMPIRE

46

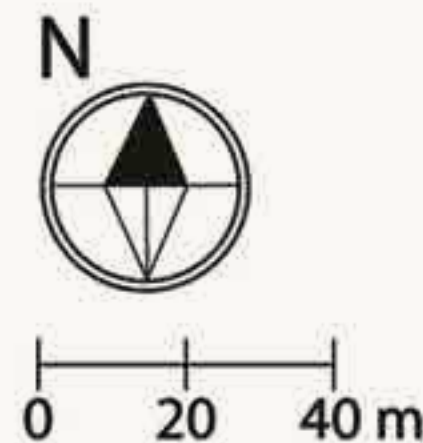


Founded in the 13<sup>th</sup> century BC by the Assyrian King Shalmaneser I (1273-1244 BC), Nimrud – the ancient Kalkhu of the cuneiform sources, was chosen as capital of the Empire by King Ashurnasirpal II (883-859 BC): he restored and rehabilitated the ancient settlement, which, as the King recalls in his inscriptions, had been abandoned, and its buildings were in ruins.

Nimrud is located nearly 35 km south of Nineveh and of the modern town of Mosul. The perimetrical walls, nearly 7.5 km long, limit a square, approximately 360 hectares in size, including the main citadel in the south-west corner – where Ashurnasirpal II's North-West Palace, other palaces and the major temples stood – and the hills of Tulul al Azar, in the south-east corner, where Shalmaneser III (858-824 BC), Ashurnasirpal II's son, built his own palace-arsenal. Nimrud was capital of the Assyrian Empire until when King Sargon II

(721-705 BC) decided to move it to his new town of Dur Sharrukin – “Sargon's Fortress” –, modern Khorsabad, nearly 20 km north-east of Mosul. The palace of Ashurnasirpal II was used and occupied until the 8<sup>th</sup> century BC and it in fact inspired the later royal residences of the Assyrian Kings at Nineveh, the last capital of the Assyrian Empire.

Besieged by a coalition of Babylonians and Medes, Nimrud was finally conquered in 614 BC. Discovered in 1820 by Claudius Kames Rich (1787-1821), it was excavated by the British Austen Henry Layard (1817-1895), in the years between 1845 and 1847, and later on between 1849 and 1851. The palace reliefs of Ashurnasirpal II's residence are now exposed for the largest part in the British Museum of London. An Iraqi archaeological expedition, led by Muhazim Mahmud Hussein, brought to light the royal underground tombs of the Assyrian

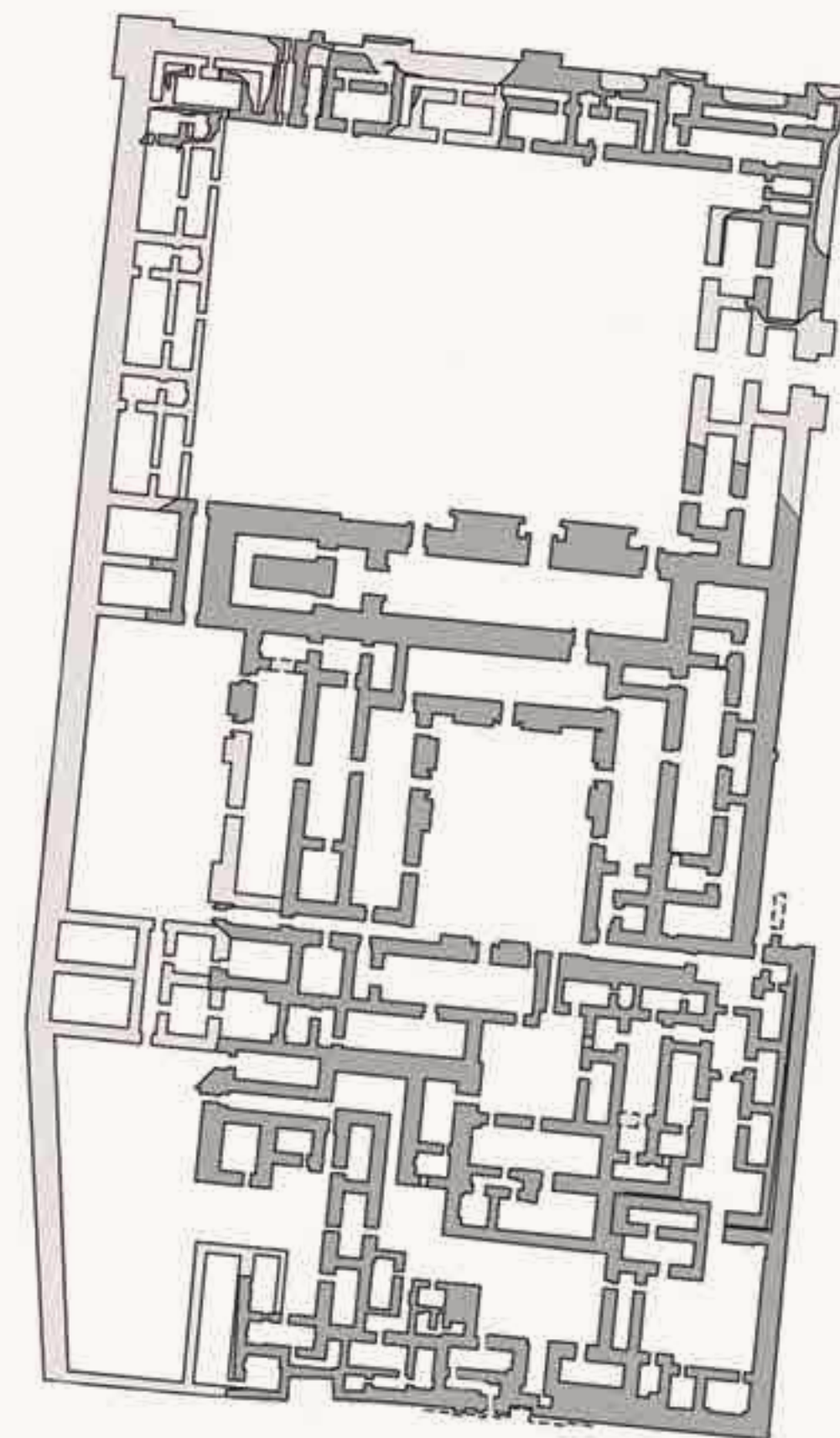


Nimrud, tomb of Queen Yabaya, two bracelets (after P. Matthiae, *La storia dell'arte dell'Oriente antico. I grandi imperi 1000-330 a.C.*, Milano Electa, 1996)

Nimrud, virtual reconstruction of the façade of the Throne Room of the North-West Palace. Courtesy Donald H. Sanders, Learning Sites Inc.

Nimrud, relief depicting King Ashurnasirpal II and his officials. New York, Metropolitan Museum of Art

Nimrud, schematic plan of the North-West Palace (elaboration by Davide Nadali, after D. Kertai, *The Architecture of the Late Assyrian Palaces*, Oxford 2015, Pl. 3)



47





queens with an extraordinary and very rich furniture of gold jewels and artefacts.

The winged human-headed bull is a composite Mesopotamian deity, with a bull's (or sometimes a lion's) body and human head: in the Mesopotamian society, and in the Assyrian one in particular it was a protective spirit and it was placed near the main entrances to the towns and to the palaces. The human-headed bull of Nimrud originally decorated the outer wall of the throne room of Ashurnasirpal II's North-West Palace, near one of the side gates leading to the reception room. These monumental colossi – which could reach ca 5 m in height, like the Nimrud specimen – were meant to horrify and had to chase evil and hostile forces, preventing their entering the town and the King's residence: their expressive eyes, down-turned to sight anyone entering the palace, certainly aroused a strong emotional impact, between awe and reverence; the monumentality and repetition of these beings along the façade of the large outer court created a suggestive scenario with light and shadow certainly enhanced their power. A cuneiform inscription, corresponding to the first part of the text known as Throne Text, was carved among the bull's legs and celebrated Ashurnasirpal II's titles, his qualities of wisdom and prowess and his heroic military conquests.

Nimrud, North-West Palace,  
human-headed bull,  
before destruction







Nimrud

## LAMASSU. GEOMETRIC MEDIATION. ADDITIONS AND REMOVALS\*

50

Replicating one of the human-headed bulls from Nimrud was a task as complex as it was fascinating. Those who worked closely on the project and its engaging completion call the sculpture by the simple, familiar name of *Lamassu*, a generic term for these positive, protective deities. Indeed, their reputation as lucky charms was invoked more than once – for the first time in centuries – during this project.

The task of replicating the work was made more difficult by the fact that it notoriously no longer exists. In the absence of the original, a mold, or a three-dimensional scan, creating a copy – or a clone, as some would say – and replicating the work of its ancient sculptors was out of the question. Remodeling based on photographs was not what was requested of us; indeed, it would have been disrespectful to this work of art. The scarcity of useful documentation, as well as the tight deadline (*there is never enough time to do such things*) could have easily resulted in a poor version of the *Lamassu*, a souvenir or a trinket, and a far cry from our stated goal to create a scientifically valid replica of the human-headed bull that was located on the right-hand side of the gate to the Northwestern Palace of the city of Nimrud, once known as Kalkhu.

We thus collectively agreed upon the goal to create an artefact that would be as faithful as possible to the original, with the same exterior characteristics, without any forced interpretations or changes to its original aspect, but with one significant difference: we would depict the *Lamassu* as if it had been transferred to Italy and restored according to modern approaches before its destruction. This entailed removing the plasterwork and metal fasteners, consolidating the eroded surfaces, and filling in cracks with neutral-toned plaster<sup>1</sup>.

Finding relevant literature and reference photos entailed a thorough search of archives and the web. The documentation we found, however, was of limited help due to the variety and rather low quality of available images, but our research finally made a breakthrough when we found a large image online and managed to trace the photographer. More cross-checking led to an e-mail address turning into a precious ally<sup>2</sup>: five high-resolution images from November

2008 (the most recent ones we used), taken when the U.S. Air Force's 1st Combat Camera Squadron reconnoitred the site. These photos, taken with a single camera over a brief span of time, augmented those provided by the archaeologists<sup>3</sup>, and became a source of extremely useful information every step of the way.

### Geometry

During this first phase, data processing played a dominant role. Having calibrated all the images to eliminate optical aberrations<sup>4</sup> using ad hoc software, we obtained a photogrammetric image, which we used to draft the first three-dimensional, numerical model of the *Lamassu*. As it lacked details, it could not be used for our final model, but it was useful as a starting base. The geometric model obtained from the point cloud, which lacked correlated measurements, mathematically reproduced the sculpture's proportions. The subsequent scaling steps immediately highlighted certain discrepancies with the measures reported in the literature. By analysing details in the most recent photos, we were able to identify several certain measurements, which allowed us to reconstruct the correct proportion<sup>5</sup>. According to our calculations, the *Lamassu's* measurements are – or rather were – as follows: base 494 cm, depth at chest height 94 cm, depth at the base 85 cm, height of the head 497 cm, and height at the tip of the wing 478 cm.

Visiting European museums housing other *Lamassu* sculptures was quite helpful, and allowed us to check other details and make comparisons that helped us better understand the geometrical sculptures of the ancients<sup>6</sup>. Thanks to exhaustive photographic documentation of these works, we were able to obtain details and portions of the model previously unavailable to us, which after

Head of the Nimrud bull.

Detail of the hand cutting of the polyester blocks







being scaled and overlain on our basic 3D model, allowed us to better define certain aspects related to size and volume.

At this point, the still-incomplete model was reworked using specific digital sculpture software, and through organic polygonal modelling<sup>7</sup> we were able to digitally modify the figure by targeting the triangles of the *mesh*<sup>8</sup> (the ‘skin’ of the 3D model) through constant, painstaking comparisons with the photographic documentation. This allowed us to complete and fine-tune all that was missing from the model. The objective difficulty in this reflected the fact that comparisons necessarily had to be made on a monitor between a large (five meter) 3D model with its own volume and two-dimensional images of a few centimetres each. During that phase, details were overlooked and imprecision was inevitable and sometimes involuntary. This was also the main limit we had set, as we could then delay further fine-tuning to manual work at a later stage.

The 3D model we obtained, with a mesh comprising over 5 million polygons, was then converted into polysurfaces. The ‘sheet’ of the 3D model underwent slight changes, as in all the other steps between one software programme and the next, when differences in visualization and processing are not fully shared between them.

The digital model was broken down into virtual modules, namely parallepipoids, which were in turn *sliced virtually* then reproduced as sintered expanded polystyrene sheets<sup>9</sup>, which could easily be worked using a three-axes milling machine (X Y Z), specifically programmed to ensure the flatness and final delivery of the polyester. The CAD CAM software we used then traced the contour lines on the panels for the CNC milling machine<sup>10</sup>. A computer signal activated the machine, which worked almost like a sculptor to initially remove excess material along contour lines, and then put on the finishing touches to complete each panel as it appeared on the file on the. By using over 200 polyester sheets<sup>11</sup>, each with predefined parametric holes so that they could be aligned and glued together, we obtained 16 blocks comprising partially lightened cores and sculpted relief. The computerized process ended with this phase, and saw the large engineered blocks take shape, with cavities meant to house a metal frame<sup>12</sup> designed to link all the pieces, lower the centre of gravity, and link it to the surrounding architecture<sup>13</sup> through two thin contact points.

#### Removing and adding

The large, three-dimensional puzzle in white, milled polyester we obtained was a far cry from the image of our *Lamassu*. The white reflections made its surface hard to read, but this step was vital in obtaining an analytically valid support, and especially a base for the detailed stone cladding.

But which stone would we use? The original winged bull was made with Mosul marble, a name given at the time to a material that has not been classified



Image provided by a reporter of the American Air Forces, 2008

by science and that was named after the area where it was quarried. In fact, it is a chalky, non-calcareous alabaster, and thus much akin to gypsum, with rather coarse crystals that are sometimes yellowish, but usually greyish, due to the presence of very fine organic substances between the crystals themselves. This is a soft stone that is easily carved, and resistant to arid climates<sup>14</sup>. Given the characteristics of the original, it would have been almost impossible to re-create its variegated aspect<sup>15</sup>, especially since the replica would have to be light, easy to move, and resistant to atmospheric agents. We thus decided to create a mixture of several types of rock<sup>16</sup> mixed in with resin, and that would be identical to the original colour-wise. We would then manually apply it to the surface, centimetre by centimetre, while maintaining its thickness as homogeneous as possible.

The polyester model was thus cleaned of its shavings, and small defects removed. Given the types of utensils used by the machine, its work had to be augmented by highlighting the model’s angles and undercut. The statue’s cracks and fissures were traced on the surface of the model and subsequently carved, along with any other aspect that would have helped faithfully reproduce its appearance. This was done especially by using heated blades and points to re-shape the salient details of the face and limbs of the sculpture. Each block was

treated with a protective hardener, after which the coating phase began, which involved manually applying the ‘shell’, always while carefully checking the available images from every possible angle. Once the blocks were on the ground, they were used as buoys of sorts, as we constantly tried to find the best position from which to apply the stone mixture while checking details on the computer monitor positioned a short distance away. This helped us simulate the photographers’ positions.

The stone mixture was applied using our fingers or metal spatulas. Before it hardened, it was worked with sponges, wooden tools, rubber, and plastic in an attempt to replicate the surface of the sculpture as it appeared in the images related to its last twenty years of life<sup>17</sup>. This was yet meditation, in addition to that affected by the software, the 3D modelling process, the type of materials used, and the manual labour of those who applied

the stone mixture and let it harden. The final definition of the replica reflects all these steps. The definition of details was an important aspect that requires some clarification. None of the available photographs were taken from less than 3 or 4 meters away, and always depict the statue from bottom to top. Even if we enlarge them at maximum resolution, the statue can never be viewed at a 1:1 scale. Additionally, the position of the lights, both in the photos and during the construction phase, and the type of available images affected the level of definition of the details. Because of this, we decided never to exceed the level of detail that was actually visible in our source material.

As an example, we might imagine seeing the *Lamassu* on a windy day, with our eyes half-shut and dust in the air. As we had no close-up images availa-

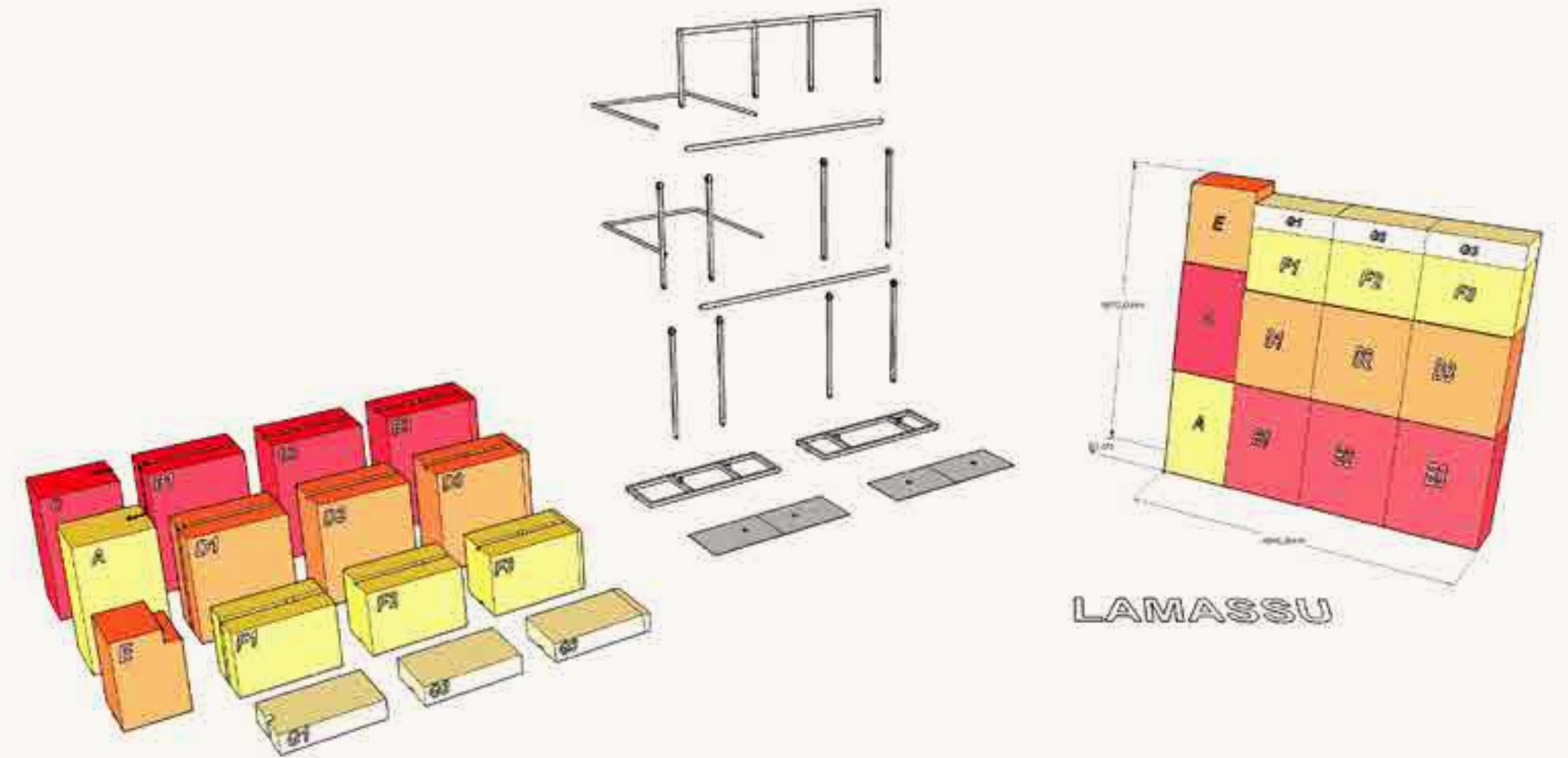
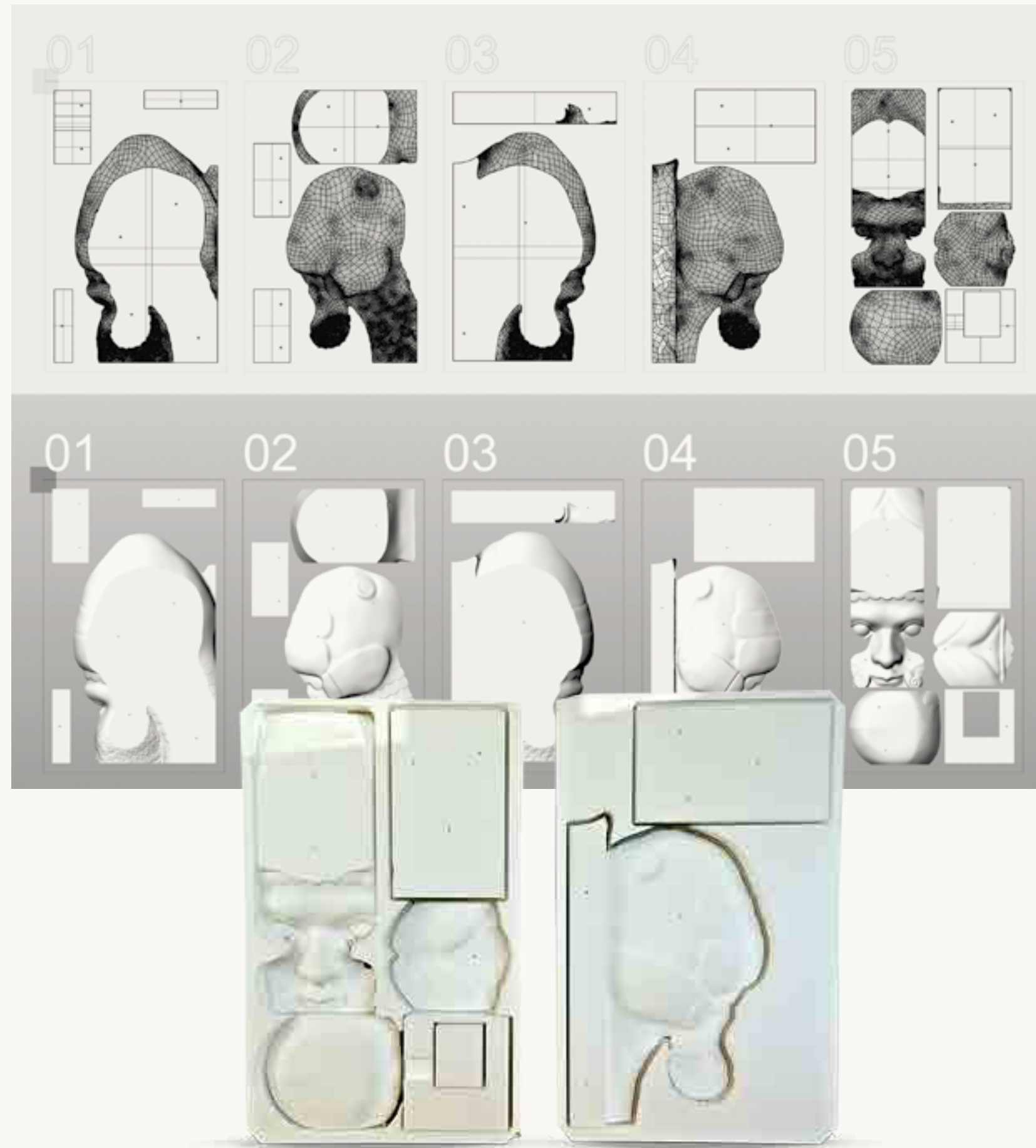


## COMPOSITION OF A SEQUENCE OF MODELS

- 1 Image of the human-headed bull
- 2 Photogrammetric image
- 3 First model
- 4 Model for the refinement of the actual volumes
- 5 Model with integrations of digital sculpture
- 6 Rendering of the model
- 7 Final model







Milling of the Lamassu's head: the first for the sequence of level curves, the second for the rendered files and the third for two of the five panels milled in 1 : 1 scale

Scheme of the Lamassu divided into blocks corresponding to its volume. To the left the engineered blocks, the exploded frame elements and the composed blocks

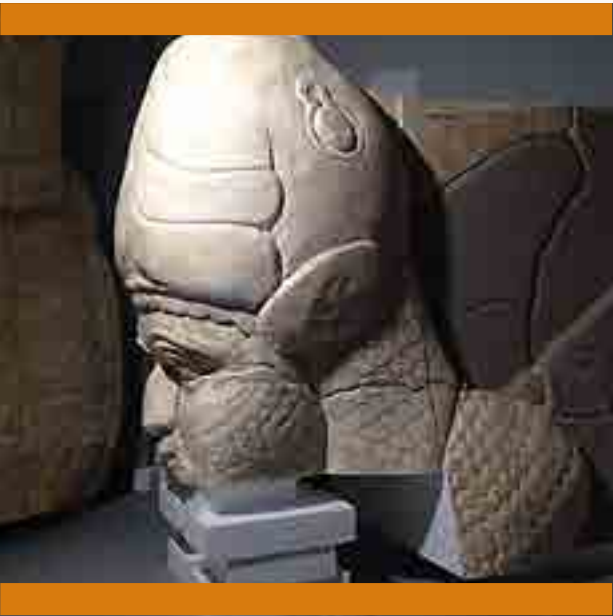




ble, the details, texture, and degree of wear of the model were determined by those who worked on its surface, while its tint and other details were drawn from the memories of those who studied the original sculpture on site and on numerous occasions.

We thus reproduced the sculpture’s salient characteristics. Whenever possible, we tried to replicate the shapes crafted by the original Assyrian sculptures, by studying similar material in London, but without archaeometrically recreating their work. As we said, after replicating the sculpture with its damage and salient characteristics, we then restored it. This allowed us to come up with a version of the *Lamassu* which in fact never existed. Thanks to technology and human expertise, we hope it is as realistic as possible, and not just a mere scenic model.

The difficulty of creating something that is neither the fruit of one’s own idea nor copied from real life meant that this was a particularly challeng-



Preparation phase for the stone revetment, Lamassu’s head

ing task. It imposed a series of binding choices as early as the planning stage. As fascinating as the manual work was, and though it was executed with great passion – I work with ancient and modern sculptures on a daily basis<sup>18</sup> – we still had to assimilate it. Indeed, to simulate a sculpture, we had to work as we do with a statue. We first had to remove digital algorithms and polyester, and then add glue and ground stone. We thus inverted the traditional work of sculptors, and distort the concept that Leon Battista Alberti, following in Pliny’s footsteps, universally defined in his treatise *De Statua*.

Final technical data of the Nimrud *Lamassu*: over 15 m<sup>3</sup>; 64 square meters of surface area; with a total weight of just under 740 kg, including less than 350 kg of polyester, about 97 kg of glue and hardeners, 136 kg of stone, and a 155 kg metal frame. I will not mention the hours of planning, manual labour, and development of the dynamics for handling and assembly<sup>19</sup>.



1. According to the available images, which document a 25-year stretch, the sculpture underwent several interventions over time, especially regarding the plasterwork, while its state of conservation worsened visibly over time.
2. I would like to thank Sergeant JoAnn Makinano of the U.S. Air Force, who kindly provided us with the photographic material from that day.
3. I would like to thank Davide Nadali of the Department of Ancient World Studies, of Sapienza University
4. This is possible only using raw native digital images, and not with images that were originally analog.
5. The length of the base was the only measurement that matched the literature on more than one occasion. One should keep in mind that measurements are difficult to make under certain circumstances, and that one always needs to interpret, to a certain degree, the way these measurements were made.
6. The works we studied in London, while heavily restored and modified, allowed us to understand how they were crafted schematically, almost as if with a compass or pantograph, while rigorously maintaining their proportions.
7. This was a ‘free-form’ job that did not excessively take into account the model’s typology.
8. All of the angles, facets, and apexes that define the shape of a polyedric object in 3D computer graphics.
9. We used 30Kg m<sup>3</sup> polyester.
10. Computer Numerical Control.
11. The core of the blocks comprised 144 polyester sheets, while the surface areas subject to milling comprised as many as 68.
12. The horizontal part of the frame is made of structural steel, while the vertical parts are made of aluminum. The various elements are mechanically connected and assembled as the polyester blocks are assembled one on top of the other.
13. In the case of this exhibition, housed on the second level of the Coliseum, two thin rings link the *Lamassu* to a pillar to protect it from the wind.
14. For identifying and describing the material, and for his helpfulness, I would like to thank Prof. Lorenzo Lazzarini of IUAV University in Venice. It is a calcium sulfate dihydrate (CaSO4X2H2O).
15. Although a type of rock comprising coarse gypsum crystals much like the rock in Mosul is present in certain quarries in the Bologna Apennines of Italy, using it would have required either scalpel work or grinding, which would have resulted in a chalky, monochromatic paste that would have been completely different from a natural effect, and nearly free of inclusions.
16. This was a mixture of grey sandstone, Florentine limestone, and Carrara marble, which had similar reflective and tonal variation property depending on light.
17. Our study of the images showed that the sculpture was treated at least twice. Plasterwork used to join the stone elements together was applied several times, and decay was exponential.
18. The writer and his assistants work on the restoration of sculptures. In this extraordinary case, we engaged in an effort to ‘reconstruct and re-propose’.
19. I would like to thank Dr. Cristina Acidini for trusting in me and for discussing the various phases of the project; and Prof. Frances Pinnock, who together with Dr. Davide Nadali made sure that our sculpture would retain its ‘Assyrian’ identity. I would also like to thank my patient and trusted assistants Merj Nesi, Giovanni Rotondi and Veronica Collina, in addition to Lorenzo Protesti from Promo Design for his infinite helpfulness. JoAnn S. Makinano (of the U.S. Air Force) kindly sent me the most recent photographs of the Lamassu. Finally, I would like to thank my wife Elisa for having welcomed the Lamassu into our family for four months, and my parents for waiting for me all the while.

\* Nicola Salvioli curated, executed and produced the Lamassu reproduction

- *Planning and coordination*  
**Nicola Salvioli**
- Generation of the 3D model, optimization for printing  
Archit. **Lorenzo Sanna**, Florence
- *Digital Sculpting*  
**Riccardo Vella**, Florence
- *CNC milling, division and gluing of the panels*  
**Lorenzo Protesti, Promo Design** s.con. a.r.l., Calenzano (FI)
- *Stone cladding*  
**Nicola Salvioli, Merj Nesi, Giovanni Rotondi**, di **Nicola Salvioli**  
**Restauro Conservazione Documentazione**, Florence
- *Metal frame*  
**New VBC** s.r.l., Novi di Modena (MO)
- *Warehousing and transport from Florence to Rome*  
**ArtDefender** and **Arteria** S.r.l.
- *Photographs and illustrations*  
**Nicola Salvioli** and **Antonio Quattrone**
- *Lamassu Certification*  
**Leonardo Paolinic**





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Archaeological area of Palmyra, Syria.  
© DGAM







## Palmyra

# A GREAT CITY ALONG THE SILK ROAD

60

Within a rich oasis, created by several springs descending from the low mountains around it, human occupation developed since the most ancient times, and the town, whose ancient name was Tadmor, is mentioned in the texts from Mari on the Euphrates, and Kültepe in Anatolia of the beginning of the second millennium BC, as well as in Assyrian texts of the first millennium BC. Yet, the real flourishing of Palmyra is related with the creation of the Roman province of Syria, in particular under Augustus and Tiberius: the town was finally fully integrated in the Roman Empire under Nero's rule. Palmyra became one of the most important caravan cities of the time; controlled by Arab tribes, it was the real hub for the trades between the Mediterranean Sea and the East, with goods coming from India and even China. The wealth of the town is well represented in the elegant architecture of the large roads flanked by columns, of the public monuments – temples, the agora and the beautiful theatre – and of the private houses. The greatest flourishing was reached during the 2<sup>nd</sup> century AD, in Emperor Hadrian's time, when Palmyra produced an amount of art works of the highest level, developing its own style, particularly evident in the statues, decorating public monuments, roads and the typical family tombs. During the second half of the 3<sup>rd</sup> century AD, while the control by the Roman Empire was becoming weaker, Palmyra tried to become independent, under the leadership of King Septimius Odaenathus; at his death, Queen Zenobia seized power, as their son Vaballath was under age. With her military campaigns she even reached Egypt. Zenobia was defeated by Emperor Aurelianus in 272, was brought to Rome in chains, and exhibited in the emperor's triumph in 274. Palmyra was inhabited, and had some role, albeit a secondary one, until the 12<sup>th</sup> century, and was completely abandoned only during the Ottoman Empire; it had another period of lesser flourishing during the 20<sup>th</sup> century, always as an important caravan centre. Palmyra was always visited by travellers, and the first study about its architecture was made by R. Woods and J. Dawkins in 1751. In 1881 Prince Abamelek-Lazarev discovered the slabs with the "Tariff of Palmyra", an official document containing the tax law, with the indication of the taxes to be asked for

all the goods reaching the town: the monument is now kept in the Ermitage Museum of St Petersburg. Regular excavations started in 1902, and went on – albeit with interruptions – until 2010 by archaeological expeditions of different nationalities, including a national Syrian expedition.

The monumental temple dedicated to Bel, the main deity of Palmyra, was built inside a large, approximately square enclosure, whose sides are nearly 200 m long; it was dedicated in the 6<sup>th</sup> day of the month Nisan (= April) of 32 AD, a date probably referring to the Babylonian cults recalling the victory of the God Marduk against chaos, personified by Tiamat. The Temple was later on changed into a church and, probably already in the 8<sup>th</sup> century, in a mosque. It hosted the modern village of Tadmor until 1929. The imposing building – measuring 39.45 m x 13.86 m – is characterized by two cellas, higher than the floor level, called *adyton* south and *adyton* north, both featuring a carved monolithic ceiling; the southern cella had a decoration with floral and geometric motifs around a large central rosette, whereas the northern cella had a more complicated pattern. In fact, in the central round piece of the monolith there is the god Bel, lord of the skies and governor of the stars' motion; he is surrounded by six busts, representing the six planets known at the time – Saturn, Jupiter, Mars, Venus, Mercury and Moon –, and by a belt with the twelve zodiac signs. Bel's Temple is an ideal specimen of the refinement of the Palmyra workshops, and of their capacity to receive and adapt elements from different cultures: mainly artisans from Palmyra were hired to work in the temple, but also Greek artisans worked there. The monolithic ceiling of the north adyton is a wonderful synthesis of the cosmological knowledge of the people of Palmyra, and also, albeit it is very much damaged, of their artistic capacities.

Palmyra, female funerary bust,  
Musco Nazionale d'Arte Orientale, Rome







## Palmyra

# FROM VIRTUAL RECONSTRUCTION TO PHYSICAL COPY THROUGH THE DIGITAL ANASTYLOSIS\*

62

### Premise

*The philological reconstruction of a work that has been destroyed by natural events or war is a complex operation. Although we live in a world where images (which for the most part are now digital) and three-dimensional models (from satellite maps) depict every place on the planet, monuments often lack documentation that is thorough enough to allow for their faithful reconstruction down to the last detail; this is especially true for at-risk areas, even those that are UNESCO World Heritage Sites. For example, there are over two million online images of the Coliseum in Rome, taken from every angle, in addition to drawings and relief models from every era, and no less than 10 three-dimensional architectural models created by universities, foundations, or private individuals. Palmyra, which has been a World Heritage Site since 1980, has been known since the 19th century, when archaeological digs also took place, and documentation of it is thus rather obsolete. In particular, there are only a few relief drawings of the Temple of Bel, published in the books “The ruins of Palmyra, otherwise Tedmor, in the desert” by Robert Wood (1753) and “Le temple de Bél à Palmyre” by Henri Seyrig, Robert Amy and Ernest Will (1975). These are the only two reference works featuring drawings and engravings that describe the temple in detail; in addition, there are the historic photographs taken between 1867 and 1876 by the French photographer Félix Bonfils. The digital reconstruction of the ceiling on the northern Thalamos was based on these sources, which document the state of the monument upon its discovery, and on the photographs taken by G. Degeorge in 1999, the only high-resolution photos of the site.*

It took two technicians over a month to reconstruct the digital model. They had to carry out a careful iconographic analysis of the material they received from the archaeologists, make it philologically coherent, then put it together with enough detail to build the life-size replica. The relevant part of the ceiling of the northern Thalamos – which is 4 meters wide, 1.5 meters deep, and with a maximum height of 1.6 meters – is decorated by a rich array of sculptures, including numerous Greco-Roman capitals, kyma lesbio, acanthus leaves, hu-

man sculptures, and sculptures of mythological animals, some headless, within a broader Greco-Roman architectural structure with decorated architraves.

### Creation of the architraves

The methodology used to carry out the project called for a sequence of procedures (analysis – modeling – construction) to ensure that the replica would be built properly.

The first step is an architectural analysis of the monument itself, through a historical and artistic analysis of its decorative and architectural elements, so as to identify their main characteristics and the style in which they were built.

This is followed by an iconographic analysis of all available images – photographs and historical drawings and engravings – to create a database of the elements necessary to achieve as lifelike as possible a virtual replica. This entails re-modeling the parts that are visible in photographs, and using available data and analyses to re-create the parts that are not.

This follows a methodology that has been successfully tested over the years on similar digital and physical reconstruction projects. First of all, paper material is digitized, then images are vectorized by turning them from raster graphics to two-dimensional vector CADs. The data are then cross-checked, and a two-dimensional file is created that takes into account all deformation and possible interpretations of the drawings and photographs. This makes it possible to obtain coherent maps, cross-sections, and perspective drawings that can be used to draft the 3D model.

Starting from file CAD 2D, which comprises mainly lines, curves, and two-dimensional polygons, another software is used to draft the model, with the lines, curves, and polygons being modified by specific modeling functions to create a three-dimensional model. In order to maintain the original proportions, a specific order is followed from the architecture to decorative details, and the model is fine-tuned for subsequent modifications, beginning with the overall



The outside of the east wall of Bel's Temple, Palmyra, 2009 (courtesy I. Baraldi)



The inside of Bel's Temple, looking towards the North Thalamos, 2009 (courtesy I. Baraldi)



Palmyra, Bel's Temple from above. © DGAM

architecture and ending with the tiniest details. In the case of the Temple of Bel, we also made 3D prints of the decorative elements at the various modeling stages, from the first rough draft to the finished piece, in order to compare the various components and understand them better. Subsequently, the changes to be adopted in the final model are marked on the 3D prints themselves. This makes it possible to follow the evolution of the process step by step, including by constantly revising the draft versions with the help of the archaeologists.

Such an approach is necessary because the final product is a life-size 3D model – not a rendered image, but a tangible object. Additionally, the impossibility to compare the model directly with the original, which has been destroyed, required a new approach to modeling that was as objective as possible despite the initial constraints.

The virtual model looks like a newly-finished sculpture, as it shows no signs or wear or damage, whether natural or man-made. The only exception concerns the figures that decorate the dome, which were severely damaged, and would have made for an unrealistic reconstruction. This choice was made to ensure that the replica would match the original, including the correct architectural and decorative ratios. The replica was then aged manually by a technician who analyzed the photographs and the wear patterns of the stones used to build the temple. By removing some of the materials and adding tints (some parts are blackened by soot and ash), he gave the replica its appearance in 2015, before it was destroyed in August. As we firmly believe in the importance of a 3D database for a monument of such great value, we made a 3D scan of the finished model after the end of all operations and a final revision by experts. This meant that all of the project's work – research, digital reconstruction, and manual reconstruction – came together in a single model to be preserved for future research and other work.

### Creation of the physical copy

Starting with the virtual model – complete down to its decorations – a life-size physical replica was created. As this replica is quite large, the model had to be broken down into about 250 sub-sections to be assembled. Additionally, since the replica needs to be transported and installed in the exhibition venue, it was made using lightweight materials (polyester and polyurethane) coated with a water- and wear-resistant resin.

In order to optimize the process, we decided to apply a number of different digital construction techniques, which exploited the model's data through CNC machines to craft the various components:

#### Hot wire cutting machines

The general architectural model was made using a hot wire cutting machine that automatically shapes the parts exported from the CAD drawings: Starting with a large block of polyester, extruded polystyrene, or similar material, the various elements were cut using a system of pulleys and other mechanism that allow a hot metal wire to run through the material. This system was used to create 140 different elements, with the smallest having sides of 10 cm, and the largest 1.4 meters;

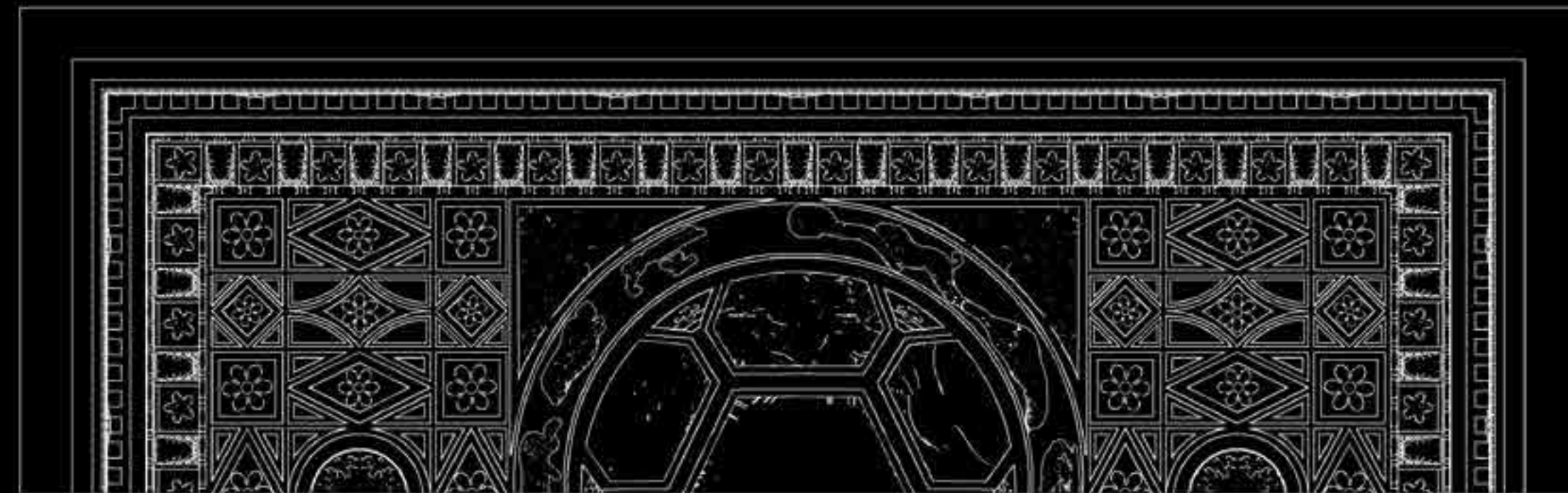
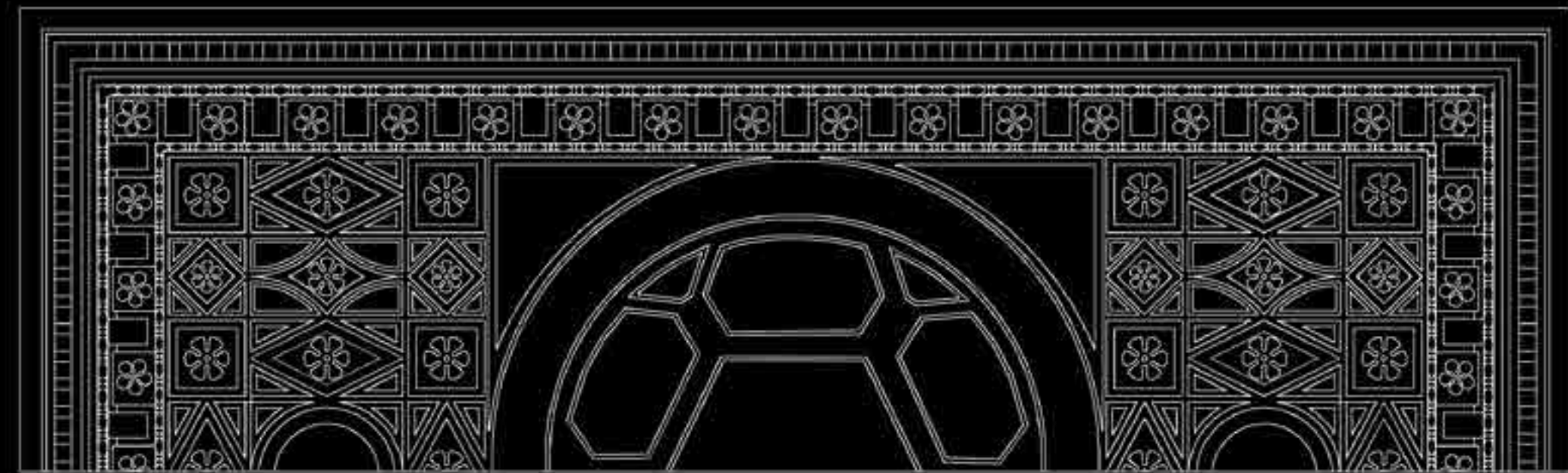
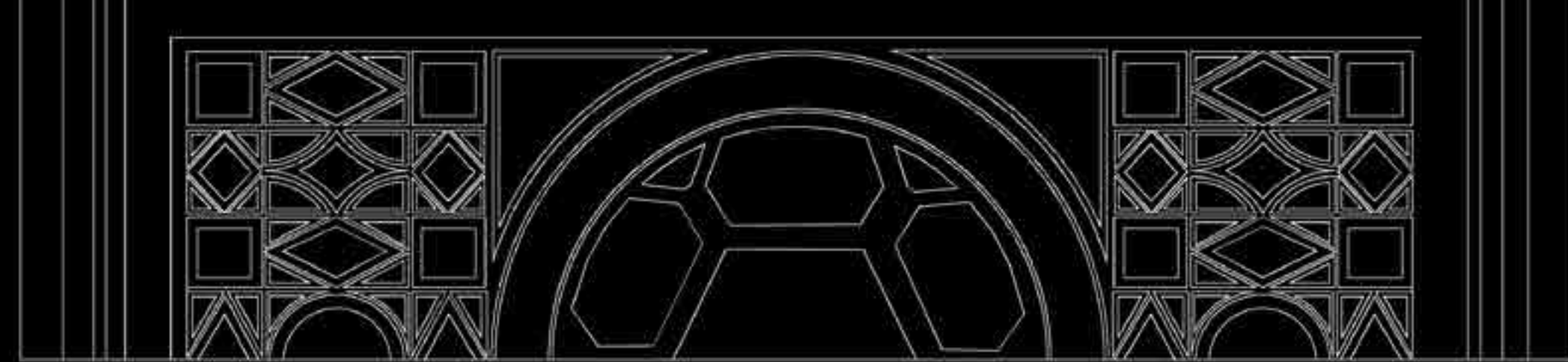
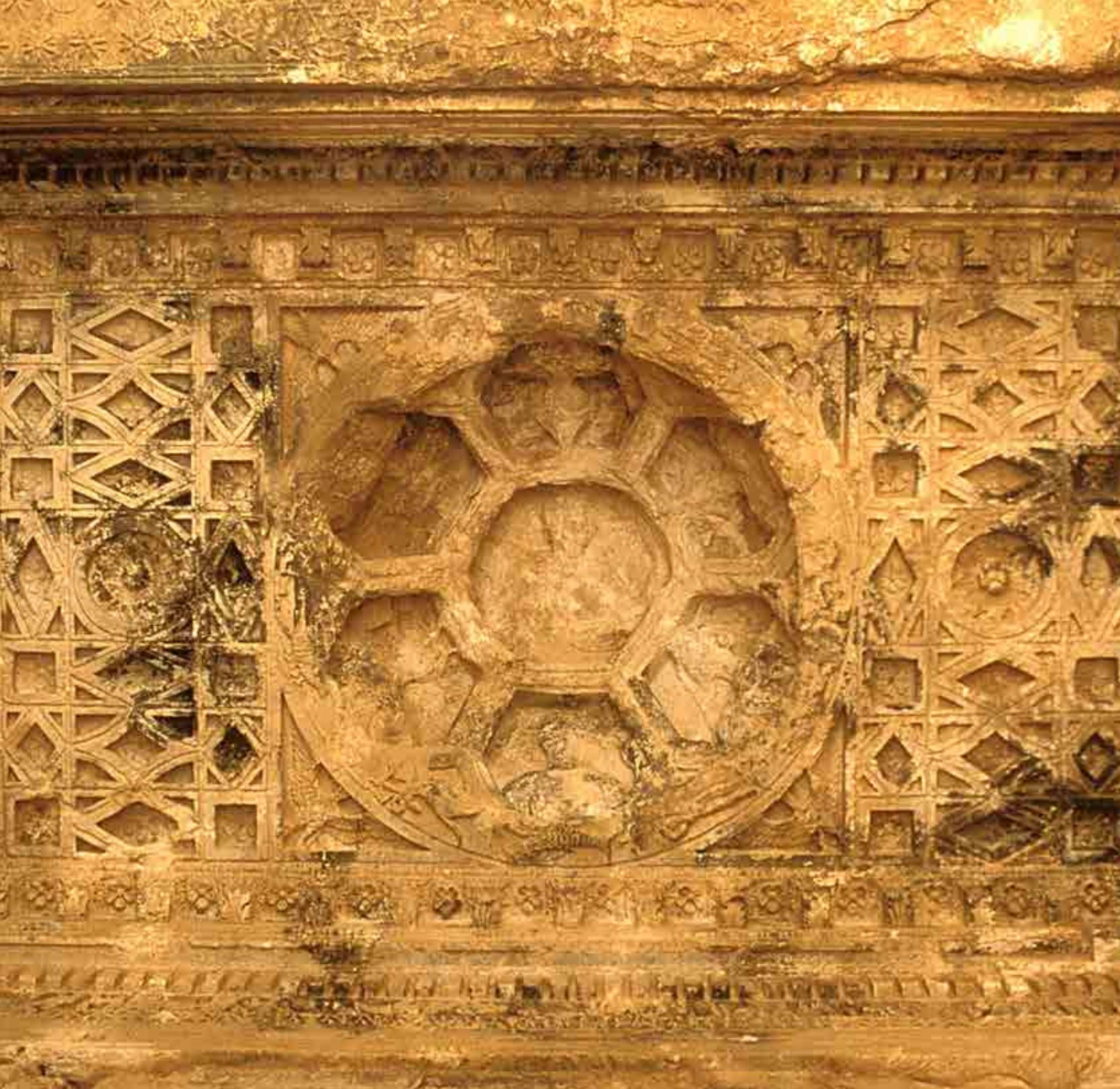
#### On the following pages

Detail of Bel's Temple, 1<sup>st</sup> century AD, Palmyra, Syria; the ceiling of the North Thalamos of the temple.  
© Mondadori Portfolio

2D CAD drawing of the main shapes of the decoration, obtained through vectorization and compensation of the drawings from the volume “Le Temple de Bel à Palmyre”; Henri Seyrig, Robert Amy, Ernest Will (1975)

63









The silicone mold of the elements with the bulls' heads, obtained by the model printed in gypsum powder



Samplings of different kinds of colour finishes, made in real size on a meaningful detail of the model



Beginning of the final phase of the realization of the model

#### *Robotic arm for milling*

The part of the dome decorated with many sculptures was made of 5 parts that were milled using a robotic arm with six degrees of freedom. Starting with the digital model and using the processing software, the machine is programmed and the milling cutters work the way a sculptor would.

The robotic arm makes a first rough cut from the block of polyester, then by automatically changing the cutters, it carves it in more detail.

#### *3D printing system*

The monument is decorated with a series of repetitive, modular sculptures as follows:

11 modular decorations divided into 23 capitals, 25 cinquefoils and 30 six-lobed rosettes of various sizes; 12 modules of acanthus friezes with bull's heads topped with a three-lobed kyma lesbio decoration and one frieze comprising 32 modules of acanthus decorations under a ribbon of biconvex whorls with oval pearls; these biconvex whorls are also present in a ribbon separating the capitals from the flat decorations.

Due to the high number of serial elements to be reproduced, and in order to optimize production times, we decided to use rapid prototyping techniques to create the ceiling decorations separately, then apply them to the base. Having obtained the modules from the overall model, we applied two different 3D printing techniques.

Complex, decoration-rich elements were made using a professional chalk-powder 3D printer, which can deliver a high degree of precision (0.01 mm for each layer)<sup>1</sup>, while simpler elements were made with a thermoplastic FDM printer whose degree of precision is sufficient for simple geometric shapes (0.06 mm for each layer). Once the modular components were printed in 3D, we used a silicone mold to make all necessary copies, which are faithful down to the last detail but made of a lighter material.

#### *Assembly and finish*

Having verified that all the components were present and having completed the dry assembly of the model, we used certified epoxy resins to add all of the parts that were printed and milled using CNC. We thus obtained a complete copy of the ceiling, whose morphology matches that of the temple's ceiling before natural and human-generated wear. In order to make our replica match the appearance of the original right before it was destroyed, we added wear and tear both manually and mechanically to the decorations and some of the architectural parts, using the images we were provided as a model, and in constant contact with the experts from our scientific committee.

Once this phase was finished, we consolidated the decorative elements using a thin layer of synthetic chalk enhanced with oxides and sandstone powder (much like the original) to make the entire replica monolithic and give it a uniform tone. The back and sides were strengthened with a layer of fiberglass.

The final tint of each component was picked from a series of samples by the scientific committee in order to best match the effects of wear from time, wind, temperature changes, and human activities, such as the destruction of parts of the ceiling and soot from bivouacs inside the temple.

After balancing the colours of each component and completing all the various tints using suitable liquid and powdered acrylic and oxide-based pigments, the entire replica was coated with a transparent opaque acrylic protective layer.

The project highlighted the problems associated with safeguarding the memory of historic sites when they are struck by tragic events. The implementation of data collection and archiving projects, including through new technologies, would make it easier to study and share these issues, for both restoration and promotion of historic sites. More specifically, such an approach would limit the subjective interpretation of scholars in cases of replicas and reproduction – which bias is inevitable when consulting photographs and historical data – and ensure certified precision.



The replica described here is the outcome of a major collaborative effort between professionals from various sectors. It would have been impossible without the desire to raise awareness on these issues, and saw the involvement of the project promoters, its scientific committee, and the entire staff of TryeCo 2.0 srl, Alex P.O.P., and Andrea Fantini Studio. Along with us, these companies actively contributed to the project's success.

The real size copy of the part of ceiling of the North Thamos, including all its components

\* TryeCo 2.0 S.r.l. curated, executed and produced Bel's Temple part of ceiling

- *Project coordination*  
**Dr. Archt. Matteo Fabbri**
- *Research, modeling project coordination and 3D print*  
**Dr. Archt. Roberto Meschini**
- *Modeling and 3D print team*  
**Nicola Lodi e Fabio Parenti**
- *Photography, Archives – Press Office*  
**Dr. Federico Balboni e Eng. Mattia Toselli**
- *Technical support*  
**Dr. Arch. Enrico Viaro**
- *Assembly, sculptural retouching and tonalization*  
**Andrea Fantini**
- *Support to the milling*  
**Alex P.O.P. di Antolini A.**

1. 3D printers make three-dimensional objects through the overlap of two-dimensional layers, the thickness of which determines the precision of the final model



## EYES CHASING MEMORY

### As war comes, ancient routes return

Between 2009 and 2010, Studio Azzurro completed the sixth leg of its exploration of the Mediterranean by investigating Syria and finding sites of historical and archaeological interest that Western civilization – with its tendency to turn such sites into museums – sees as outdoor archaeological sites unaffected by everyday life or current history.

The sites themselves seemed like the custodians of a remote – yet persistent, perhaps eternal past – and Europeans, before the shock of recent attacks, perceived the war in Syria as something distant that did not affect them, as if suspended in a sort of middle world, without repercussions. Recent events have forcibly opened our eyes to the fragile balance behind a thousands-year-old civilization, and indeed the fragility of its very survival.

To the unstable landscapes of the first five legs of *Meditazioni Mediterraneo*, we now add scenarios in which the hand of man is more evident, and where the layers of history are visible and full of narrative potential. These scenarios, which seemed to be set in stone in our collective memory, are now proving to be equally unstable, and memory itself is now wavering with them.

We realized that our trip to Syria allowed us to get to know something that was destroyed soon thereafter, but also to meet people and experiences that have now been overwhelmed by the need to escape from their own homeland in order to survive.

Reviving this project after six years encourages us to update it by increasing its attention to the local people: those eyes that we met and filmed, once the custodians of a memory we believed to be shared, have now become the witnesses to its destruction and to a new, boundless violence.

### The installation and its update

The stories in our installation *Eyes chasing memory* were and will be driven by human eyes: the mobile eyes of humans interacting with the fixed, infinite gaze of the statues we encountered along our journey. Large, closed human eyes welcome the visitor, who attracts their attention when approaching them:

the eyes open wide, and soon thereafter the large stone, mosaic, and marble faces vanish. They are replaced by scenarios that move according to the glances of the reawakened narrators. Now, in 2016, next to our original interactive video-installation we are adding a wall comprised of four photographic diptychs depicting desert horizons in the outlines of archaeological sites. By placing their ears next to the wall between one diptych and the next, visitors will be able to listen to ancient Arabic poems in Arabic, Italian, and English.

- *Project Conception* **Fabio Cirifino, Elisa Giardina Papa, Paolo Rosa**
- *Direction* **Paolo Rosa**
- *Photography* **Fabio Cirifino**
- *Video shooting* **Rocco Cirifino**
- *Project coordination and executive production* **Chiara Ligi**
- *Video postproduction* **Mauro Macella**
- *Music* **Tommaso Leddi**
- *Sound wall entries* **Clodagh Brook, Yamini Niloofar, Silvia Pellizzari**
- *Interactive systems* **Marco Barsottini**
- *Software development* **Lorenzo Sarti**
- *Sviluppo software* **Lorenzo Sarti**
- *Technical design project* **Daniele De Palma**  
*in collaboration with* **Silvia Scocco**
- *Central coordination* **Osvalda Centurelli**

Mediterranean Revelations. Eyes chasing memory  
sensitive environment, Genoa Palazzo Ducale,  
2010. © Studio Azzurro.







Detail of the geographic map, M. Checchi, A. Dardano, Asia Minore, Arabia e regioni contermini, Novara, Istituto Geografico de Agostini 1918. Courtesy of the Cartoteca della Società Geografica Italiana. © Gabriel Stabinger

Satellite picture with the location of the archaeological sites of Ebla, Nimrud and Palmyra





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ASSOCIAZIONE  
INCONTRO DI CIVILTÀ

*Project Coordinator*  
Elena Giacomini

*Project support*  
Sara Sow

*Press Office*  
Aldo Torchiaro

*Photos and videos*  
Gabriel Stabinger

*Graphic Design*  
Riccardo Bizzicari

## **Electa**

*Project Coordinators*  
Anna Grandi  
Federico Marri

*Press Office and Communication*  
Monica Brognoli  
Gabriella Gatto  
Luca Del Fra

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Elia Caporossi, Italian Embassy in Beirut  
Patrizia Boglione  
Mohammed AlKhalid  
Ahmed Kzzo  
Donald H Sanders and Learning Sites Inc

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Associazione Incontro di Civiltà  
+39 06 90288228 - segreteria@incontrodiciviltà.it