Bringing back the past: An exploration of the different ways to bring back destroyed built heritage sites in 21st century Europe

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Chapter 1 – Introduction

The Mostar Bridge, the Berlin Palace, and most recently, the Notre Dame. Heritage sites located in Europe all have one thing in common. Due to the results of war and natural disasters, they all lost their former glory. But they also form great examples of destroyed and damaged heritage sites that were given a second life through rebuilding. In Europe, built heritage landscapes, the landscapes created and influenced by human interaction that hold great value for the landscape's surroundings and communities, face many threads in the present day. Climate change, besides speeding up the process of physical and chemical weathering of ancient construction materials, also contributes to the increasing occurrence of natural disasters on European grounds, such as forest fires, landslides, earthquakes, and floods (Sesana et al., 2021, p. 2). A natural disaster can pose a threat to building heritage sites by damaging the materials it is made up of, a fire can burn away a wooden structure and the force of water can break apart existing materials and structures, but it can also damage the side through the surroundings, for example damaging the soil can lead to the sinking of the site or it can cause landslides. Besides climate change, European countries, especially in Eastern Europe, have experienced several wars. For example, the Yugoslav wars led to the damaging and destruction of a wide range of heritage sites in former Yugoslavia, most notably in present-day Bosnia and Herzegovina. The currently ongoing war in Ukraine is a current example of war forming a threat to heritage sites. With entire towns being bombed, there is no way of determining the state of the country's history and heritage. The Russo-Ukrainian war is also a good example that protecting heritage sites is often not an achievable goal during an ongoing war, as there are different priorities. Heritage sites in conflict areas are constantly under threat, whether it is through a direct attack, or as a form of collateral damage where the migration of people due to the war leads to heritage sites not being taken care of anymore, which then again leads to decay (Weiss & Connelly, 2019, p. 4). Though it is often attempted by governmental bodies and heritage organisations to protect heritage sites from decaying and being destroyed, this is not always possible. In these cases, in order to preserve the heritage values that go with the site, you can opt to reconstruct the site, keeping important factors like the communal, historical, and aesthetic value alive, but for example also the practical functions like tourism and thus money it brings in. Bringing back the destroyed heritage site through rebuilding can also function as a form of memorial, so people can commemorate those who have been lost in the incident causing the destruction (Giblin, 2017, p. 106).

Rebuilding a built heritage site or landscape can also help revive a set of other values and functionalities that came with the original site, as well as add new functions and values post-conflict or post-disaster.

Humanity has a long history of interacting with landscapes. When a landscape is altered or formed by this human interaction, we can call this a built landscape. In the case that what is created on or in this landscape becomes of great historical value, and of great value to other parties involved, we can speak of a built heritage site, or in a broader context a built heritage landscape. A structure or landscape that is created by humans, and that is important enough to the related communities to be deemed heritage. As mentioned before, these landscapes and sites are under increasing threat due to the consequences of war and natural disasters. In this thesis it will be discussed how these sites can be brought back. To refer to this in the rest of this thesis the term ‘rebuilding’ will be used to talk about bringing back a landscape or site in the broadest sense, so without talking about a specific form of rebuilding.

1.1 Research questions

This thesis aims to give an answer to the discussion on how to rebuild built heritage sites in Europe after they have been destroyed by either conflict or natural disasters. This has led to the formation of the main research question ‘In what ways and to what degree can built heritage sites in Europe, severely damaged or destroyed by conflict or natural disasters in the 21st century, be brought back?’. In this case, we are talking about examples of heritage sites that have either been destroyed fully beyond recognition, or heritage sites that have been severely damaged in a way that the damaged part is significant enough that its contribution to the structure is vital for the aesthetic, functionality, or related values. If the damage is minimal, it can be repaired without the need for a discussion of whether the repairs will stay true to the original design. With rebuilding, the approach chosen will determine whether an integral part of the site will change as well. With the reoccurring conflicts on European ground, the Russo-Ukrainian war currently being the most recent and relevant example, and the growing threats of natural disasters caused by climate change, the topic of the preservation of heritage sites becomes increasingly relevant. But as in a lot of cases heritage sites cannot be protected from disasters, thinking ahead of how to deal with the aftermath of destroyed heritage is just as important.

There are many ways of dealing with a destroyed heritage site. From leaving the ruin as it is, to building a completely new and modern structure at the site, and everything in between,

there is an almost endless variety of options. These options will be explored with the sub-question ‘What different gradations are there on the scale of rebuilding a destroyed heritage site?’. We will look at this spectrum of options to identify the possibilities for each type of situation.

In order to get clarity on the best way of rebuilding the destroyed heritage site for each situation, a set of factors has to be introduced. These factors can indicate what the priorities are for the site and its surroundings. Think about its historical value, its importance to the surrounding community, and its functionality. These factors will be further explored and determined with the sub-question ‘What factors can be distinguished to determine what form of rebuilding of a heritage landscape is most suitable?’. The aspects of the heritage site that have priority greatly influence the way the site is brought back, and where on the earlier mentioned scale the construction will place. This means that these factors and the way that a heritage landscape is brought back are strongly connected. Every case is different and every stakeholder has their own wishes in these reconstruction processes. It is important to choose a plan for the destroyed site that will make it fit within the purpose and plans of the surrounding areas, so as to make it more sustainable for the future.

This brings us to the last sub-question ‘In what ways can European-built heritage sites be brought back in the future, based on cases of targets of natural disasters outside of Europe, and targets of conflict areas in twentieth-century Europe?’. By looking at the way people have handled the aftermath of natural disasters outside of Europe, we can see the effect that their strategies have had on the targeted area. Especially since natural disasters are increasingly more common in Europe as a result of climate change, it can be good to compare the situation in Europe to that in other places in the world. This way we can determine what ways of rebuilding a heritage landscape is not only suitable but also feasible. Something similar can be done with heritage sites that have been destroyed on European grounds during the Second World War. Many of these sites have been brought back in some way, and comparing those cases to heritage sites in conflict areas in the 21st century could give us valuable information on how to deal with the aftermath. By comparing reports and academic literature on both topics, we could get an insight into the prospects of recent cases of heritage destruction in Europe, and we can get inspiration on how to restore these sites to preserve their heritage value for the future.

So this thesis will aim the following research question and sub-questions:

In what ways and to what degree can built-heritage sites in Europe, severely damaged or destroyed by conflict or natural disasters in the 21st century, be brought back?

- What different gradations are there on the scale of rebuilding a destroyed heritage site?
- What factors can be distinguished to determine what form of rebuilding of a heritage landscape is most suitable?
- In what ways can European-built heritage sites be brought back in the future, based on cases of targets of natural disasters outside of Europe, and targets of conflict areas in twentieth-century Europe?

1.2 Approach

To further explore the themes mentioned in the research questions, I will be developing a scale containing the different gradations of rebuilding a heritage landscape. The two extremes on both sites are the destroyed site being left as a ruin on one side and a completely new structure unrelated to the original building on the other. Even though there are countless approaches to rebuilding between these two extremes, this thesis will focus on three approaches on the scale. The first is to renovate what material is left and to rebuild the rest as close to the original as possible. The second is to rebuild it with parts of the structure being similar to the original, but with an adaptation for various reasons, e.g., to make it fit in with the surrounding area, to make it more functional, or to make a political or artistic statement. The third and last approach we will focus on is the construction of a structure that does not follow the original outline of the destroyed site, but that is inspired by an aspect of the original, like the historical building style.

I will also be creating my own list of factors that destroyed heritage sites can be connected to that help determine where on the scale the reconstruction of the site is located. The scale and this list of criteria and factors will be further explained and explored through a series of six case studies. Each of the three approaches on the scale mentioned earlier will be explored through two case studies each on a destroyed heritage site in Europe that has been brought back in the past twenty years. These case studies can give clarity on the different ways that a heritage site can be reconstructed, and on how the list of criteria and factors function in real cases.

This thesis will start with a theoretical framework focusing on two works that discuss approaches to rebuilding destroyed heritage sites. After this, the methodology will use the ideas discussed in the two works discussed in the theoretical framework to create scales showcasing their view on the different approaches to rebuilding. These scales will be the foundation of a new scale with the three approaches to rebuilding that this thesis will discuss. The methodology will explain what these different approaches to rebuilding entail. It will also contain the list of factors and their definition that will be used to indicate which rebuilding approach is suitable for what case. We then move on to three chapters, each dedicated to a rebuilding approach and explained through two case studies of rebuilt heritage sites in twenty-first-century Europe that fit the corresponding approach. The thesis will end with a final conclusion answering the research questions stated in this introduction and a discussion chapter stating the relevance of this thesis in the present-day heritage management sector.

Chapter 2 – Theoretical Framework

2.1 Bosma and Wagenaar

In their book 'Een geruisloze doorbraak', Bosma and Wagenaar (Bosma & Wagenaar, 1995) discuss the 'wederopbouw' of the Netherlands after the Second World War. This entails the reconstruction and rebuilding of the Netherlands physically, but also economically and socially. This theoretical framework will discuss the way their ideas relate to the rebuilding of built landscapes. Bosma and Wagenaar discuss the effect of the Second World War on the state of Dutch cities and architecture, and how these cities were reconstructed after being severely damaged or even fully destroyed. They share their analysis of this period of reconstruction, starting with determining in what way a landscape or construction will be brought back. They share that you have to start off by determining several factors for each site. First, the history of the architectural style is necessary to know, as it will have to be decided whether or not the new city or construction will be built back in its original pre-war style. Secondly, you will have to look at the history of the destroyed site. This history comprises both the history of the site before destruction, as well as the destruction itself and the context surrounding it. According to Bosma and Wagenaar, by putting these two factors together, the architectural style and history, as well as the pre-and post-destruction history of the site, you can put in perspective what contextual parts of the site you want to preserve, highlight, or leave out when reconstructing (Bosma & Wagenaar, 1995, p. 12). The authors also comment on some other factors that determine in what form the destroyed sites would be rebuilt. Besides the historical and aesthetic value of the new structure, you also have to take into account the future of the site. This is a chance to incorporate solutions to structural issues with the site into the new plan. The economic structure of the site is an important factor. Whether it is about tourism or the presence of stores and companies, it is important to make sure that there is enough room for previously existing or new economic structures to exist. An inflow of money is important to these structures, whether it is to create or maintain an advanced economic network in a damaged city, or to bring in money through tourism to properly maintain a heritage site. Bosma and Wagenaar also note that it is important to organize the reconstruction plan around the existing social structures. To make sure that the people living at and around the site can continue or rebuild a comfortable lifestyle. This entails housing but also lost workplaces and community buildings (Bosma & Wagenaar, 1995, p. 15).

Bosma and Wagenaar note four idealistic concepts that can be used to categorize and understand the different ways in which sites and structures are rebuilt (Bosma & Wagenaar, 1995, p. 14).

The first concept is called ‘historical enclaves’. This means that a site is left unchanged, so to say frozen in time. An example of this would be to leave the ruins of a destroyed heritage site as it is. It can still be promoted for tourist purposes, but the site itself is not changed or restored. (Bosma & Wagenaar, 1995, pp. 14-15). An example of this is Pompeii, which was the victim of a volcanic eruption in 79 AD. The city has been left as it was and remains uninhabited till today. In 1943, the ancient city was bombed as part of an attack by the Alliances during the Second World War. This went by largely unnoticed and the city was again left untouched as a victim of natural disaster and conflict. A couple of buildings have been rebuilt in the last century, but the majority of the city still looks as it did right after the eruption and attack, and has been deemed a UNESCO World Heritage site with the main point of attraction being a post-disaster landscape (Pollard, 2020, p. 1).

The second concept is called ‘traditionalist city repair’. This refers to a form of rebuilding where the original structure or city is not precisely copied but is used as a basis for the rebuilding, but with adjustments that make it its own structure with its own value as well as the historical value of the original structure. An example of this can be a city that is rebuilt very similar to what it looked like before destruction, for example, the architectural style, but with an adjustment to improve the traffic flow or liveability of the city. Another example could be a building which contains the basic structure of the original site, but with some additions or adjustments to make an artistic or political statement (Bosma & Wagenaar, 1995, p. 15). An example of this is the city hall in Utrecht, the Netherlands. The city hall was renovated in 2000. The goal of this renovation was to show the history of the building, by including some of the original parts of the building, and to incorporate modern architectural elements to the building. This way a large part of the original structure remained, but there were visible changes to the exterior. The interior was also changed to improve the functionality of the building (Gemeente Utrecht, n.d.).

The third concept is referred to as ‘modernist city repair’. For this type of rebuilding, the only inspiration that has been drawn from the original site is the outline of the city or structure. The structure being built inside these contours doesn’t have to follow the original building style either. A new structure is built on the exact location of a destroyed site, in this way being a direct replacement for this structure, but not being a direct copy. The building could also

continue on with the same function as the original, for example as the city hall or museum. An example would be if a palace gets destroyed, and the replacement would follow a different architectural style but with the same contours as the original palace. Another example would be if a city is destroyed and the new city is redesigned but with the same layout and street structure as before the destruction (Bosma & Wagenaar, 1995, p. 15). An example of this is the city palace in Potsdam, Germany. The site had been destroyed in a bombing during the Second World War and was rebuilt half a century later. In the new design, the original outline of the building had been preserved, but the architectural style and function of the building had been changed to fit the new purpose of the structure and the budget and time restrictions the rebuilding faced (Cusack, 2010).

The last concept is called the 'blank drawing sheet'. In this case, the new design completely lets go of the original site and a new city or structure is built that has no correlation to what had been there in the past. An example would be a city that had been destroyed by for example a bombing, fire, or earthquake, and for which a new city design is made with no direct inspiration drawn from the past, in a new architectural style (Bosma & Wagenaar, 1995, p. 15). An example that fits well with the work by Bosma and Wagenaar is the city of Rotterdam in the Netherlands. The city centre had largely been destroyed during a bombing in the Second World War in 1940. After all of the rubble of the destroyed buildings was cleared, it had been decided to demolish the remaining buildings, with the exception of a handful of buildings with great historic value, and to build a completely new city centre that holds no correlation to the pre-war design (Robben, 2021, pp. 328-331).

Bosma and Wagenaar (1995) will be useful for this thesis as their defining of different forms of rebuilding a destroyed site will form the foundation for the scale of gradations of rebuilding that this thesis discusses. Though the categories will not be used exactly in the same way as in their work, Bosma and Wagenaar have greatly influenced the development of the concepts developed and discussed in this thesis. Besides the forms of rebuilding, the different factors that influence the decision of which form to use that the authors discuss are also of great importance for the list of factors developed in this thesis, which, together with the scale of gradations of rebuilding, will be further discussed in chapter 3.

2.2 Bold, Larkham and Pickard

Bold, Larkham and Pickard discuss in their book 'Authentic Reconstruction: Authenticity, Architecture and the Built Heritage' (2017) the different ways of rebuilding a heritage site after it has been destroyed by either war or a natural disaster (Bold et al., 2017, p. 1). First of all, they comment on what aspects of post-disaster recovery have priority. The survivors are the first priority. Getting them to safety, with shelter and the necessary resources comes first. This also means that if parts of destroyed buildings have to be cleared off of the street in order to get aid to the survivors, this will happen, regardless of the fact that this hinders the rebuilding process and could further destroy a heritage site. After the survivors' immediate needs are met, the focus is relocated to enable them to regain a comfortable lifestyle. Only after this is ensured, is the reconstruction of destroyed buildings and heritage sites gets dealt with (Bold et al., 2017, p. 1).

Bold et al., also note that the decision to repair what has been destroyed is often easily made. What is not clear on the other hand is how this has to be done. The authors note that generally there are two extremes within the different ways of rebuilding that can be found in most literature discussing the topic. The first extreme is to rebuild in a historicist style. This entails that the building is recreated as close as possible to the original structure, using the material that is still left after the destruction and renovating it, and adding new material that is similar to the original material used to fill the gaps of the structure for which no original material is left. The main reason for choosing this way of rebuilding is that it ensures that the original values of identity and history that are connected to the structure remain. The second extreme discussed is to completely remove the remains post-destruction and to build a new structure at the site that has no direct relation with the original structure. The main motivation given for this is to remove traces of the past that would not want to be remembered or that are not deemed as deserving of rebuilding and in this way ensure the possibility of a new beginning (Bold et al., 2017, p. 3).

Bold et al. suggest a third approach, an alternative to the two extremes. Referred to by the authors as 'historicist reconstruction', this alternative includes rebuilding the destroyed site in the style of the original structure, though not exactly replicating it. By adding some elements and details in a different, more modern, style, it helps the newly rebuilt structure to fit in within its modern setting and surroundings, while still preserving its historical value (Bold et al., 2017, pp. 3, 7). Historicist reconstruction helps with the feeling of continuity after a disaster. Because it is largely based on the original site, it sends the message that things are

returning to normal and that the culture, traditions, and values associated with the site are still alive, while also improving on functionality or making the site fit in its environment (Bold et al., 2017, pp. 7-8).

The question remains how to decide what approach to rebuilding is suitable for each situation? Though it is important to have guidelines and standard procedures, it is also important to look at each case on its own, and to create a tailor-made approach for each specific situation (Barakat, 2007, as cited in Bold et al., 2017, p. 3). Each case has different factors and values to incorporate into the rebuilding plans. For example, it could be important that the historical significance is incorporated and remembered, but the community around the site and the economic network it used to be a part of need to be taken into account as well, as well as the economic network it used to be a part of. And for each case, there are different aspects to incorporate into the planning, to ensure its value is restored in full. It is not just the buildings and materials that are restored when rebuilding a heritage site. It is also the concept, the image of the site that needs to be restored, which is important not only to be incorporated into the rebuilding plans but also to be considered when choosing how to rebuild the site in the first place (Burra, 2013, as cited in Bold et al., 2017, p. 14).

The work of Bold et al. (2017) is useful for this thesis as it discusses two important topics that this thesis will build upon. First of all the authors give their take on the different approaches to rebuilding, which will, just like the model discussed in Bosma and Wagenaar (1995), be used as a foundation and inspiration for the model and scale explained in this thesis in chapter 3. The authors also give their insights into the process of choosing what approach to rebuilding to choose. Their writing on the involvement of the related values in the process is useful for the development of my list of factors that will be used to explain and validate the choice of approach in the rebuilding process. These values discussed are the basis of these factors as they form the driving factors behind the rebuilding process.

Chapter 3 – methodology

3.1 Approaches to rebuilding

This thesis explores the different approaches to rebuilding a destroyed heritage site. In order to do this, a scale has been developed that illustrates the different gradations of incorporating the original building materials and historical style of the original structure. First, two scales will be given based on the works discussed in the theoretical framework. These scales will show the approaches to rebuilding post-conflict and post-disaster that Wagenaar (1995) and Bold et al. (2017) have laid out in their works. These two scales form the foundation for a third scale that will be presented. This third scale is inspired by these works but stands on its own. It is this scale that will be used throughout the rest of this thesis, and it is these approaches that this thesis defends as being useful within the sector of heritage management.

This thesis has built upon the categories of approaches discussed in the works of Bosma and Wagenaar (1995) and Bold et al. (2017). Both works set their own extremes on both ends of the scale. Bosma and Wagenaar (1995) discussed two other approaches which are located in between the two extremes, while Bold et al. (2017) talked about one alternative approach. Figures 3.1 and 3.2 illustrate the scales designed according to their works.

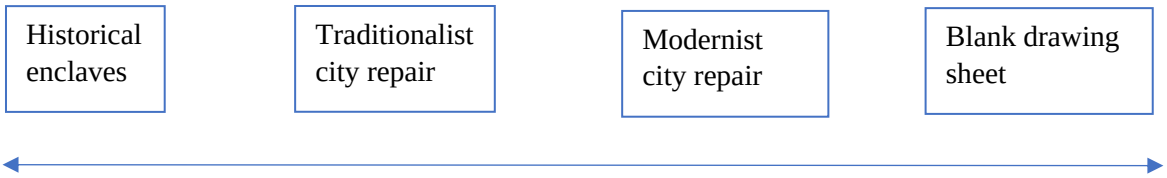

Figure 3.1. Scale of approaches to rebuilding according to Bosma and Wagenaar (2017). Figure made by author.

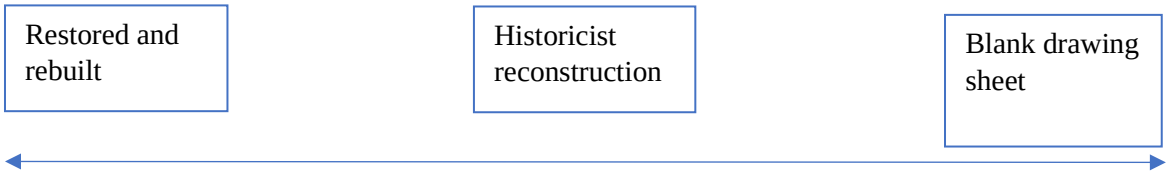

Figure 3.2. Scale of approaches to rebuilding according to Bold et al. (2017). Figure made by author.

Using the scales in Figures 3.1 and 3.2 as the foundation, I have developed a new scale to clarify the approaches to rebuilding this thesis attempts to demonstrate. In this scale, shown in Figure 3.3, two extremes have been set, similar to the scale of Bosma and Wagenaar (2017). On the one hand, you have 'historical enclaves', meaning to leave the heritage site as it is post-destruction. On the other hand, you have 'blank drawing sheet', meaning to rebuild a completely new construction unrelated to the original heritage site, also known as the tabula rasa approach. In between these two extremes, three different approaches have been added that offer alternative ways of rebuilding the landscape, with different gradations of incorporating the original design.

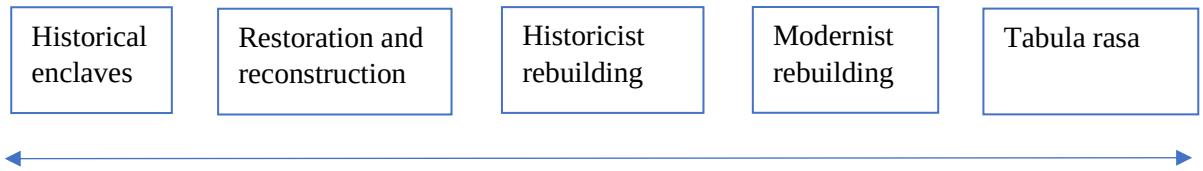

Figure 3.3. Scale of approaches to rebuilding discussed in this thesis. Figure made by author.

'Restoration and reconstruction' refers to the act of restoring as much of the original material as possible and using new material similar to the original materials used to rebuild the parts of the structure that cannot be restored with the original material. The rebuilding in this category stays as close to the original as possible, making use of the original designs and building plans where possible, to make it look exactly like the site pre-disaster, in this way enabling a sense of continuity, and preserving the values connected to the site before the disaster in full. There is no incorporation of modern elements and interpretations, in this way leaving no room for reminders or representation of the disaster that caused the damage.

'Historicist rebuilding' is an approach to rebuilding where the new design is highly similar to the original structure, but has some new elements or modifications. In the case of a city, this could mean that the structures are similar to how they looked pre-destruction, but with a modification in the layout to make the inflow of traffic more efficient. It could also mean the addition of a modern element to the historic architectural style of the rebuilt structure to make an artistic or political statement. This approach to rebuilding enables the site to keep its connection with the original site, but by adding something new and modern it does not disregard the event that led to the destruction, and it can improve the functionality of the site.

It can be used as a remembrance of the disaster or a related event, but it can also be used to solve systematic issues at the site, or it can be used to change the ambience of the environment the structure is located in.

'Modernist rebuilding' is the approach to rebuilding on this scale that strays away the furthest from the original site. Sites rebuilt with this approach take inspiration from one of the elements of the original structure but form a new plan for the rest of the design. An example of this is a building where the outline of the original building is used, but where the architectural style itself and the design of the building within this outline differ. The same could be seen in a city where the style and design of the buildings in the city differ from the pre-disaster city, but where the original layout of the streets is used in the new design. It can also be the other way around, where a structure or city follows a different layout, but is built in an architectural style inspired by the style of the original. The effect this approach has is that a generally new and modern structure can be introduced that can signify change, but that might also fit better in the surrounding area. However, by adding an element of the original site, it does commemorate what was once there.

3.2 Determining factors

In order to decide what approach to rebuilding is the most suitable for each case, it is important to make clear what the goal is of the rebuilding process. What needs to be preserved? And what needs to be changed? In order to clarify this for each case, I have developed a list of factors that influence the way a building could or should be rebuilt. These factors range from functional practicalities to social and identity-related values, and by choosing which factors are relevant for a destroyed heritage site, it can be determined how much of the original site should stay true to the original and how much should be altered. Every case will have different factors from the list in Table 3.1 that are relevant. The combination of these factors will help determine what elements should be preserved and changed during the rebuilding process. Based on this a suitable rebuilding approach from the scale in Figure 3.3 could be appointed. By using this system, it will be ensured that relevant elements are taken into account and incorporated.

Factor	Significance
Historical value	The rebuilding ensures that the historical value of the site is reflected in the new rebuilt site.
Community value	The rebuilding makes sure that the previously existing community that formed around or because of the destroyed heritage site has their needs met regarding the site. Or the rebuilding enables a new community to form because of the heritage site with the necessary commodities.
Economic flow	The rebuilding enables the economic flows, so the in and outflow of money that either existed pre-disaster or is newly created, can function within its economic network again. This can mean the reopening of stores and restaurants or the inflow of money through tourism after (re)opening the site as a tourist attraction.
Functionality	The rebuilding enables the site and its surroundings to improve in practical aspects. E.g. improving traffic flow or enabling more visitors to enter the site.
Liveability	The rebuilding makes sure that the area surrounding the site remains or is once again made to be comfortable to live in.
Tradition	The rebuilding preserves the traditions that are connected to the site. The rebuilding plans incorporate the functional and symbolic needs of traditional practices related to the pre-disaster site.
Religious value	The rebuilding ensures that both the religious value and functionality of the site are preserved. This means that the symbolism of the religious connotation of the site must be brought back and that the necessary commodities are present to perform religious ceremonies and practices.
Political sensitivity	The rebuilding ensures either the incorporation or the avoidance of related political topics. This could mean the incorporation of a reference to a political dispute that led to the deconstruction. It could also mean the avoidance of architectural or symbolic references to a politically sensitive event in the past.

Table 3.1. List of factors contributing to the choice of rebuilding approach. Table made by author.

3.3 Case studies

The scale and list of factors developed for this thesis will be further shown and explained through a set of case studies. The case studies have been divided into three chapters, each chapter covering a different focal point on the scale as explained before. Each chapter will discuss a set of two case studies. The case studies are examples of these gradations of rebuilding heritage sites of which the building process took place in the twenty-first century,

within the continent of Europe. The case studies focus specifically on examples of this century to see what the plans and processes currently look like. As the case studies are examples of the last twenty-three years, there has not always been academic literature published on it. This is why the majority of the sources used are non-academic sources, but instead mostly news articles, articles published by heritage organizations and stakeholders, and information given by the involved parties such as the government and architects. In the following three chapters, we are going through the six case studies one by one. Each case study is meant to explain the previously mentioned scale's focal points that it correlates to and to show how and that the list of factors created functions as a way of determining where on the scale a project should be. So all in all, the case studies function as a way of explaining as well as validating the scale and corresponding factors created and explained in this thesis, and how they are of use to the field of European heritage studies in these challenging times of conflict and climate change.

Chapter 4 – Restoration and reconstruction

Restoration and reconstruction is the approach to rebuilding where as a first step as much of the remaining structure and material is preserved and restored. After this, the missing parts of the site are filled with new material that is comparable to the original materials used, and the rebuilding of the missing parts is done according to a plan that is as accurate as possible according to the original, often supported by the original building plans of the site. In this chapter two case studies are discussed to further explore this rebuilding approach. Both sites will first be explained through a short overview of the event that led up to its destruction, and the choices that have been made for the rebuilding plans. Each case study will also be connected to the corresponding factors to help explain why this rebuilding approach is a suitable choice.

4.1 Case study: Frauenkirche, Dresden, Germany

In former East Germany, Dresden is a city with a long history of rebuilding. The city was a target of firebombing during the Second World War, on the 13th of February 1945. This destroyed most of the city centre and surrounding areas (Dresden city, n.d.). In the centre, a church named the Frauenkirche is located. Most of the city centre was rebuilt in the years after the war. The Frauenkirche on the other hand was not rebuilt until much later. The remains of the destroyed church were left as they were and deemed a monument in remembrance of the firebombing (Vyawahare, n.d.). It wasn't until the 1990s that the rebuilding process of the church was set in motion. In 1992, the plans were approved and architects and designers were appointed. This was followed by the removal of all the debris that was still on site as it had remained untouched since 1945. After this, the rebuilding could finally start in 1994. The rebuilding process of the church finished in 2005, which is when the church was finally reopened after sixty years (Stiftung Frauenkirche Dresden, n.d.).

While planning and designing the rebuilding, the goal was to make the new structure true to the original. This took some research and planning as the church had been in ruins for almost fifty years. They looked into the shape and outline of the original church, which could not be seen anymore post-destruction. To do this, sources from before the destruction that contained documentation of the design and construction of the church were used. Examples of this are old floorplans, building plans, and photographs. Based on this documentation, a 3D model was created incorporating both the original layout and structural design of the church, as well

as its original Baroque architectural style. This model became the basis of the rebuilding plans. The rebuilding of the church followed the model of the old church as well as possible to make the church match the original visually, but using modern techniques to improve the structural integrity (Stiftung Frauenkirche Dresden, n.d.).

The approach to the rebuilding of the Frauenkirche, according to the scale developed in this thesis, is Restoration and reconstruction. As you can see in Figure 4.1, part of the original structure had been preserved. The material that was not too damaged was reused. In total a third of the stones used in the rebuilding process were stones from the original church (DW staff, 2005). The cellars, also known as the lower church, were still largely preserved. The cellars were renovated, by adding material to support the walls in damaged areas. In the cellars, there were also some new additions like a new floor, heating and ventilation system and a new electrical circuit (Stiftung Frauenkirche Dresden, n.d). For the rest of the building, new limestone was used that matched the visuals of the original church, as the original was made out of limestone as well (Stiftung Frauenkirche Dresden, n.d.). The goal of the rebuilding was to recreate the church as it once was and was thus rebuilt as accurately to the original as possible. This makes it qualify for the approach of 'restoration and reconstruction. To determine why this particular approach to rebuilding is suitable for this situation, we need to look at the factors that we can link to this site. First of all, the historical value of the site is important. The church had a long history in the city centre of Dresden and reflected the baroque building style that the city had before the bombing. By rebuilding the church, a piece of history would be brought back as well. This means that it is important that when rebuilding this church, the aspects that reflect this historical value are incorporated into the designs. This includes the building style, architectural details, and arguably the location of the church. Secondly, the role that the church plays in its neighbouring environment is important. The former state of the church, where it was left in ruins as a monument in remembrance of the bombing, had a big influence on the overall ambience and look of the area. By rebuilding the church, it helps the surrounding areas look less like a remainder of the war, and more like a well taken care of and well-designed historical city. A third factor is religious value. The site is a church, which means it automatically is paired with a religious community as well as religious symbolism in the design and a set of traditions. As the church had been left in ruins for several decades, there were no active communities or practices in the church anymore, but it would be able to function like an active part of the Christian community in Dresden again once rebuilt. Lastly, the church in its rebuilt form is an important part of tourism in Dresden.

This is why the factor of economic flow is of importance as well. Dresden is a popular destination for tourists in Germany, hosting one million visitors a year, who on average stay for two days including an overnight stay (Dresden city, 2022), and the church is one of the major structures in the city centre, attracts a lot of tourists. Though admission to the church is free, and donations and money earned with events go to the maintenance of the church, and thus the city does not earn much money with it, it still attracts lots of tourists to come visit the city in general, which is a vital part of the economic network in Dresden (Stiftung Frauenkirche Dresden, n.d.).

What we can take away from these factors that can be connected to the Frauenkirche, is that these factors mostly want to ensure the preservation of previously existing communities and values, and the return of the historical and architecturally astonishing view that the city once had before the second world war. There are not many motivations for any big changes or modern elements to be incorporated. The combination of these two things, wanting to bring back what was once there as it was, and the lack of ambition for something new, makes the site suitable for the approach of 'restoration and reconstruction. Because it has been rebuilt with this approach, the wants of the inhabitants of Dresden have been met, as well as the goal of the government to rebuild the destroyed remains of the war, while also re-establishing the church's related communities and values (Furlong, 2004).

Figure 4.1. The Frauenkirche at the start of the rebuilding process, after the debris removal. Source: Stiftung Frauenkirche Dresden.

Figure 4.2. The Frauenkirche before the bombing and reconstruction (left) and after reconstruction (right). Source: Wenzel, 2007.

4.2 Case study: Notre-Dame, Paris, France

The Notre Dame is a cathedral located in the centre of Paris, France. On April 15 2019, a fire broke out on the roof that destroyed and damaged large parts of the church (Friends of Notre-Dame de Paris, n.d.). The cathedral was not fully destroyed. The spire of the roof was gone due to the fire (see Figure 4.2), one of the towers was damaged by the fire but not fully destroyed, and parts of the inside of the church were damaged by the water used to extinguish the fire (Friends of Notre-Dame de Paris, n.d.). In the case of the Notre-Dame, the plans to restore and rebuild the cathedral were made very soon after the incident, within a couple of months. After the plans had been made and approved, and the cathedral had been cleared of all debris and structures hindering the rebuilding, the process could be started. Some restoration work is needed. This is mostly artwork, smaller artefacts, and details that could have been found decorating the outside structure of the cathedral (Friends of Notre-Dame de Paris, n.d.). The rest of the cathedral that has been destroyed in the fire has to be rebuilt. The architects in charge of the rebuilding and the National Heritage and Architecture Commission

have decided and approved that the cathedral will be rebuilt true to the original pre-disaster state (Friends of Notre-Dame de Paris, n.d.).

The approach that the rebuilding of the Notre-Dame has chosen can be put on our scale in the category ‘restoration and reconstruction’. As explained before, the process has two parts, restoring the artworks and smaller details that have been damaged, and rebuilding the parts of the cathedral that are too badly damaged to be restored. This approach to rebuilding is close to the side of the scale that rebuilds the new structure as close as possible to the original. This aligns with the plans for the Notre-Dame as well, making it a good fit for this approach. Let’s look at the factors we can link to this case study. First of all, historical value. The Notre Dame was built in the 12th century A.D. and is an important part of Paris’ historical landscape (Friends of Notre-Dame de Paris, n.d.). By rebuilding it true to what it once looked like, it can continue to showcase its historical relevance through its architectural style, artworks, and decorations filled with historical references and symbolism. Secondly, the rebuilding should incorporate the religious values and community of the cathedral. It is one of the most significant cathedrals in not only Paris but possibly the whole world, with the pope even being invited to its reopening (De Sury, 2023). It is important that such a significant structure is preserved for the Catholic communities in and outside of Paris. The cathedral was, before the fire, still actively used for practices. This makes the rebuilding of the cathedral even more vital, as it is necessary for these Catholic practices and traditions to continue on in this particular site. The third and last factor is the economic flow of the Notre-Dame. Being one of the symbols of Paris and one of the most visited tourist sites in the city, the Notre-Dame is vital for bringing in tourists and is thus a vital part of the economic network in the city. The cathedral attracted 12 million tourists a year in 2017, making it one of the most visited tourist destinations in Paris (Statista Research Department, 2023). Tourism is an important source of income for the city itself, as well as for non-state-owned businesses, for example, hotels and restaurants, which are largely dependent on tourists. When connecting the factors we can link to Notre Dame and the approach that has been chosen for the rebuilding of the cathedral, we can see that the focus has been on preservation and restoration. To bring back the visuals of the cathedral as they were, and to make sure that the related communities and economy can go back to how it was before the fire. By rebuilding Notre Dame by restoring and reconstructing, you enable all of these aspects to remain or return to how it was before disaster struck.

Figure 4.3. The roof of the Notre-Dame after the firefighters had stopped the fire. Source: Friends of Notre-Dame de Paris.

Chapter 5 – Historicist rebuilding

Historicist rebuilding is the approach to rebuilding where a large part of the design is based on the original historic design but with the addition of a modern element. This can be to improve functionality or to make it fit into its surroundings, but it can also be to make an artistic or political statement. This chapter will discuss two case studies where the historicist rebuilding approach has been chosen to revive the buildings post-disaster. The case studies are the Aladza mosque in Foca, Bosnia and Herzegovina, where the new design reflects the disaster and makes a political statement by incorporating a remembrance of the war and the bombing, and Teatro La Fenice in Venice, Italy, which was rebuilt after a fire with adjustments to the design to improve functionality.

5.1 Aladza mosque, Foca, Bosnia and Herzegovina

The Aladza mosque was originally built in 1550 and can be found in the city of Foca in Bosnia and Herzegovina. It is one of the most well-known mosques in Bosnia and Herzegovina, and it is especially famous for being the first mosque in the country built in its Ottoman classical architectural style (Lakic, 2019). During the Bosnian War, the mosque was destroyed on August 2, 1992, after an attack by Bosnian Serb troops. The reconstruction work on the mosque started twenty years after the attack, in 2012 (Lakic, 2019). After the Bosnian War, many measures and attempts have been made to bring Foca back to the city it once was, especially in the sense of community and making the city feel like it belongs to its residents again. Rebuilding the mosque and other destroyed sites in the city has the goal of bringing back old residents who fled the city and creating a new start for Foca (Reuters, 2019). The reconstruction planning started with gathering information on what the mosque had looked like before its destruction. This was done through researching pre-destruction documentation like drawings and photographs (Idrizbegovic Zgonic, 2011, p. 409). There was also original material from the mosque that had been blown away and buried during the attack and thus had to be located and excavated first. These sources of information enabled the general design of the old mosque to be made, for as far as the information goes. Some of the original material found was reused in the new structure, but lots of material was too damaged and too small to be reused. These fragments are interesting as they reveal a lot about the original building, and are remains of the first Ottoman-style building in the country (Idrizbegovic Zgonic, 2011, p. 411). The material that could not be used in the rebuilding process is displayed in front of the mosque as a memorial to the incident and its destruction, as can be seen in Figure 5.1 (Lakic,

2019). In the rebuilding, besides the original material, the majority of the material used is new. This new material is similar to the original material used, this means the same type of stone and wood as used when first constructed (Idrizbegovic Zgonic, 2011, p. 411). The building techniques used in the rebuilding process also mimic the techniques used for the original structure, though it must be noted that there are definite differences as craftsmanship has changed over the centuries. The building techniques used to be passed on from generation to generation, and are difficult to uncover and copy precisely in the present day which leads to differences in the way it has been constructed, though the attempt and intention is there to stay close to the original (Idrizbegovic Zgonic, 2011, p. 413). The rebuilding was meant to be as genuine as possible to the original, though due to lack of information, remaining materials, and knowledge on techniques, there are definite differences to the original (Lakic, 2019).

The reconstruction of the Aladza Mosque fits best in our scale in the category 'Historicist rebuilding'. This category suggests the rebuilding to be largely based on the original structure but with some new, modern elements added for different purposes like practicality, political or artistic statements, or to make the rebuilt structure blend in better with the environment. The aim of the rebuilding of this mosque was to make it as genuine as possible in relation to the original. There was a serious attempt at creating a design based on historical records that would be an exact match to the original mosque. However, the people involved in the rebuilding process have also admitted that there are parts in the design that are uncertain and that do not match the original exactly, making it close to the original, while still slightly new. This does not necessarily classify the site in the category of historicist rebuilding, as the goal was to reconstruct the building as accurately as possible. The element of this rebuilt site that makes it a good fit in this approach to rebuilding is the choice of showcasing the stones that were used in the original mosque but that couldn't be re-used outside the mosque. These remains have been placed and showcased there on purpose as a reminder of the incident, and of the greater context around it, this being the Bosnian War and the ethnic tensions in the country (Lakic, 2019). This is an intentional addition to the rebuilding that gives an extra dimension to the mosque. By rebuilding the mosque itself it shows that the town's heritage and community will continue to exist and that the Muslim community is allowed to, and will continue to be a part of society. It gives a sense of continuity and revival. By showcasing the old mosques' remains, it asks as a reminder of a different part of history and shows that the incident will not be forgotten or overlooked. Factors relevant to this case are historical value, religious value, political sensitivity, and community value. The historical value is important to

protect mostly due to its unique position as the oldest example of an Ottoman-style mosque in Bosnia and Herzegovina. As it is still actively serving as a mosque it is also important to consider its religious value. It should still be able to serve as a mosque after the rebuilding and should thus be suitable to host religious practices. It is also important to look at the community value of the mask. This could be interpreted in several ways as there are several communities involved with the mosque. For example, to the Muslim community, the mosque is very important as it used to, and now can once again, function as the centre of their community as the mosque is the centre of their religious practices, and religion is the core value of the community. The community value of the city as a whole is important to take into consideration as well, as the rebuilding of the mosque is seen by the entire city as a way of reviving their city after the war, and is seen as a form of hope for the future of the city and its old and new inhabitants. Lastly, the political sensitivity of the mosque and its history is important to take into account as well. The mosque was destroyed in an attack during a war that was largely based on ethnic and religious differences. These same ethnic and religious differences can be found in the city today but with a whole different dynamic. In the case of the rebuilding of this mosque, the political history has been incorporated by adding the remains of the destroyed mosque around the mosque instead of getting rid of it. It acts as a reminder of the past and the societal issues that led to the incident, and it acts as a way of showing that they acknowledge what has happened but do not accept the destruction of their heritage.

Figure 5.1 and 5.2. The Aladza mosque before the bombing (left) and after its reconstruction (right). Source: Pandzic, 2016; Reuters, 2019.

Figure 5.3. Stones from the original mosque are showcased as a reminder of the Bosnian War. Source: Reuters (2019, May 5), The National.

5.2 Teatro La Fenice, Venice, Italy

In Venice, Italy, a theatre can be found named La Fenice. The theatre built at the end of the eighteenth century has a challenging past that does justice to its name. In 1836 a fire broke out that destroyed most of the theatre. It was rebuilt but history repeated in 1996 when another fire broke out, fully destroying the theatre. It was rebuilt once again and has been home to many concerts and events since its reopening in 2003 (Venice Museum, n.d.). The rebuilding of the theatre aimed towards an accurate reconstruction of the original theatre, with some improvements. The first architect who was in charge of designing the rebuilding process, Aldo Rossi used the motto 'com'era, dov'era' which translates to 'as it was, where it was' (All about Venice, n.d.). The original intent of the rebuilding was to make the theatre as similar as possible to the original. When the theatre reopened in 2003 the visitors did note that the new theatre was very different from the theatre that got destroyed in the 1990s. It turned out Rossi did not look at the design of the twentieth-century theatre, but he rebuilt the theatre according to the designs of the theatre that was built in the eighteenth century (All about Venice, n.d.). The improvements introduced in the rebuilding can mostly be found in practicalities. First of all, the roof has been changed from wood to steel, a precaution to prevent another fire in the future. The rest of the auditorium does contain large amounts of wood, similar to the old theatre as this is important for the acoustics. New equipment has been installed, using the rebuilding as an opportunity to upgrade the sound system. The layout of the theatre has changed as well, as a new rehearsal room has been added (Hooper, 2003). Lastly, an old entrance of the theatre had been restored for the first time since the previous fire in the nineteenth century, as seen in Figure 5.2. This entrance allowed visitors to enter the theatre from a gondola, an iconic feature of Venice (All about Venice, n.d.)

The theatre is categorized on our scale as 'Historicist rebuilding'. There were two elements to the rebuilding: to bring back the aesthetic of the original theatre and to add some new elements to improve the theatre in terms of functionality. This makes it a good fit for 'historicist rebuilding', a rebuilding approach that mostly follows the original design but with some modern additions or modifications. The factors we can link to this case are historical value, economic flow, and functionality. La Fenice is one of the most famous theatres in Italy and has a long history. One of the main priorities in the rebuilding process for the architects and the people of Venice was to preserve this history, in this case, by rebuilding the theatre according to the design of the original theatre from the eighteenth century (All about Venice, n.d.). Economic flow is also important to incorporate in the planning, as the theatre is one of

the most visited places in Venice having hosted over 160,000 visitors in 2019 (Citta' di Venezia assessorato al turismo, 2020, p.138). For both tourists and the inhabitants of Venice, the theatre is a well-loved destination and plays an important part in the economic network of Venice. To maintain this economic role it plays it is important that in the rebuilding design, the visitors are taken into account. This means that there needs to be plenty of facilities to host the visitors, the building needs to, once again, showcase its rich history, and have the technology to host high-quality concerts and events. This brings us to the third factor, functionality. The rebuilding is a good opportunity for some improvements in the functionality of the building, like extra practice spaces and new sound equipment (Hooper, 2003). The factors showcase a need to preserve both the history and function of the theatre. By choosing this approach, the rich history of the theatre can be preserved and showcased, while it can fully function in its purpose as a concert hall.

Figure 5.4. The restored canal-side entrance of La Fenice. Source: All about Venice.

Thesis Chapter 6 – Modernist rebuilding

Modernist rebuilding is the approach to rebuilding where the majority of the new design differs from the original historic design, but where some aspects of the original are incorporated in as a remembrance of what was once there. This can be in the form of a similar outline, similar architectural style, or the incorporation of symbolic details. This approach will be further explained through the next two case studies that each took a new direction within their design, without fully letting go of the past.

6.1 Potsdam City Palace, Potsdam, Germany

The Potsdam City Palace was originally built in 1752 and can be found in Potsdam, Germany. It functioned as the royal palace and was the most important building in the city. During the Second World War, the palace was severely damaged, and in 1959 it was decided to demolish the remains of the destroyed site (Potsdam Sanssouci, n.d.). A year later the demolishing was completed. It wasn't until the end of the twentieth century that talks began about the rebuilding of the palace. In 2005 it was finally decided to rebuild the site, with the actual rebuilding starting in 2011 and finishing in 2014 (Potsdam Sanssouci, n.d.). The new structure is not an exact replica of the old city palace. The new structure has been built following the original outline of the palace, as a reminder of the site that had once been there. The outside of the building is built in a style inspired by the Baroque architectural style of the old city palace, but the finer details were left out to save on the costs (Cusack, 2010). The inside of the building has been rebuilt in a new, modern take, with occasional inspiration taken from the old Baroque interior as seen in Figures 6.1 and 6.2 (Cusack, 2010). The function of the former palace has changed as well, as it is now used as the seat of the Brandenburg Parliament, Brandenburg being the state that Potsdam is located in (Potsdam, n.d.).

The rebuilding approach used for the Potsdam City Palace fits on our scale in the category 'Modernist Rebuilding'. The idea of modernist rebuilding is that it builds a new structure that is not a precise replica of the original, but that takes inspiration from the original structure. In this case, this can be seen in the choice to follow the original outline of the old palace. The choice of building the new structure in a style inspired by the original Baroque style, without exactly copying the design is also a good example of this approach. The choice to rebuild the interior in a new, unrelated design shows that it wasn't meant to be an exact reconstruction,

but the choice of getting inspiration for the interior design from the original interior fits within the idea of historical inspiration once again (Cusack, 2010). Some factors we can link to this rebuilding project are historical value and functionality. The reason for rebuilding was to bring back an important part of the city's architectural and political history. Rebuilding the structure in the same place with the same outline, sends the message of continuity, while the changes in the design give recognition to the events that happened in the past century and the troubled history of the site. The changes in the interior are meant to improve the functionality of the building. As the City Palace is now used as the seat of the Brandenburg Parliament, a new interior layout and some new features are needed to make the site a suitable workplace (Potsdam, n.d.). The combination of wanting to rebuild a structure that showcases the city's history, the history of the city before the war and the war itself, but that functions as a government building as well, makes it suitable for a 'modernist rebuilding' approach. It builds a new structure that gives recognition to the changes in the city in the past century and that functions well as a workplace, but that incorporates elements of its older history as well as a reminder of what was once there.

Figures 6.1 and 6.2. The interior of the old palace (left) and the design for the rebuilding (right). Source: Cusack, 2010.

6.2 New Frankfurt old town, Frankfurt, Germany

The New Frankfurt Old Town is the name of an area covering 7000 m2 in the centre of Frankfurt. The area was destroyed in the Second World War and started being rebuilt in 2012 in a project under the name DomRömer Quarter. Dom refers to the cathedral located there, and the Römer is the main square, meaning the rebuilt area stretches from the cathedral to the

main square in the city centre (DomRömer Frankfurt, n.d.). The rebuilding of the exterior of the buildings that were inspired by the historic town finished at the end of 2017 (Frankfurt Tourismus, 2016, p. 2). Frankfurt's old town was known for its medieval wooden architecture and was the centre of the city economically, politically, and socially (Frankfurt Tourismus, 2016, p. 1). The rebuilding project is a combination of rebuilding historic buildings, as well as new structures in a historically inspired architectural style. The historical blueprints of the city have been used to gain an understanding of what the old town used to look like (Frankfurt Tourismus, 2016, p. 1). Using traditional building techniques and materials similar to the ones used historically, the old town has been restored to be vibrant and lively once again in its characteristic medieval wooden architectural style as seen in Figure 6.3. The rebuilding plan consisted of rebuilding fifteen historical townhouses, as well as twenty new buildings containing apartments, shops, and restaurants all built in an architectural style inspired by the old town, creating a coherent visual throughout the new old town (Frankfurt Tourismus, 2016, pp. 1-2).

The rebuilding of the new Frankfurt Old Town can be seen as having a 'modernist rebuilding' approach. The area is not a replication of what had once been there before the war, but instead, it contains a lot of new elements including entirely new buildings. What makes it belong in this approach to rebuilding is that the inspiration does come from the original old town. Some buildings are rebuilt as closely as possible to historic buildings from before the destruction. The layout of the area is also inspired by the blueprints of the old town (Frankfurt Tourismus, 2016, p. 1). The newly added structures may not have any origin in the original old town, but they are built in an architectural style inspired by the historical old town. Some factors we can link to this rebuilding project are first of all historical value. The original architectural style was characteristic of the city and was a good example of what German cities dating from the Middle Ages looked like (Frankfurt Tourismus, 2016, p. 1). By rebuilding in this style, this historic feature of German cities, and specifically Frankfurt, can be showcased again. Even though not all buildings built in this style are authentic, rebuilding in this style is a form of preservation of the architectural style, and of reviving the original aesthetic of the city. Secondly, the liveability of the area had to be taken into account. When designing the rebuilding plans it was important to make sure that the new Old Town would be a suitable and pleasant place for people to live in, seeing that it was a living area to begin with. This was achieved by incorporating living spaces, shops, and accommodations for leisure activities, as well as making sure the space is built in an aesthetically pleasing style,

and designed in a way that encourages human interaction and community forming (DomRömer Frankfurt, n.d.). The third factor is economic flow. The design needs to enable the economic networks that were present in the area before the rebuilding to continue. This is done by creating space for shops and restaurants. The rebuilding in a historically inspired style also stimulates tourism, which can give an extra boost to the businesses in the area. The last factor is community value. After the war, the city had been rebuilt but in a different style and design than before the war. This means that before the rebuilding there had been entire neighbourhoods with people who had formed communities. It is important that the newly rebuilt Old Town still allows for these communities to continue to exist and for new communities to be formed. This has been done by adding plenty of living spaces to the area, to house the inhabitants, and by adding enough spaces to encourage people to meet up (Frankfurt Tourismus, 2016, p. 2). As we can conclude from these factors, there are two important elements that need to be incorporated into the rebuilding plans. First of all, to bring back the visuals and certain elements of the Old Town of Frankfurt from before the Second World War. Secondly, the rebuilding needs to make sure that the dynamics of the area that has been formed after the destruction and before the rebuilding can remain. This means creating a city with historical elements and references, that still continues to be a liveable city that takes its inhabitants, and social and economic structures into account.

Figure 6.3. The buildings in the new Frankfurt old town, rebuilt in the medieval wooden style. Source: Stouhi, 2022, ArchDaily.

Chapter 7 – Conclusion

7.1 Summarizing formulas for reconstruction

So, in what ways and to what degree can built heritage sites in Europe, destroyed by conflict or natural disasters in the 21st century, be brought back? We started with this question at the start of this thesis and have attempted to formulate an answer to this. We will now revise all that has been discussed to formulate a coherent answer to this.

There are many theories regarding rebuilding, and especially what the different ways of rebuilding are. There seems to be a general consensus that the scale starts with two extremes within the field of rebuilding. Not everyone formulates these two extremes the same way, but the two extremes always represent on the one hand a form of rebuilding that preserves as much of the original site as possible. This could be done by choosing not to rebuild and to leave the site as a ruin and deem it a monument in remembrance of the disaster, or it could be done by renovating the remains of the site and rebuilding what has been destroyed as accurately as possible to create a new structure that is preferably indistinguishable from the original. On the other side of the scale, we can find an extreme that is as far away from the original site as possible. This can be achieved by removing all remains of the destroyed site and building a new structure on that location that has no relation whatsoever to the original site. In between these two extremes, there are an endless amount of rebuilding approaches that could be added. Some of these approaches that can commonly be seen in twenty-first-century Europe are first of all, the reconstruction of the heritage site, the reconstruction being as accurate as possible according to the historical documentation that is available. Secondly, the rebuilding of the site for the most part will be according to the original, with the addition of a new element to modernise it, make a statement, or improve the functionality of the site. Lastly, there is the possibility of rebuilding a site that mostly differs from the original site but takes inspiration from one or more features and characteristics of the original site, as a reference to what had once been there. So to answer the question of what different approaches there are to rebuilding we could say that there is an endless amount of approaches that could be used, depending on the needs of the specific case. Depending on how much of the original site you want to preserve, and how many new and modern elements you want to add, there are many possibilities to choose from. Though the rebuilding examples in Europe can be broadly categorized in a couple of approaches, there are many variations within these categories, adjusted to the needs of each specific case. In order to determine which of these approaches is

the most suitable for each case, there needs to be an establishment of all of the factors that come into play for this particular site. Choosing what needs to be preserved and what needs to be changed is necessary for determining how much of the original structure is rebuilt, and thus what approach is suitable. Some factors that can influence this range from historical and community value to functionality, liveability, and economic structures, as well as how religion, traditions, and politics are connected to the site.

There are many different ways of rebuilding a heritage site after destruction. The difference between these approaches is the gradation of incorporation of the design and elements of the original site. Every case calls for a different approach as different elements want to be preserved and altered depending on many factors ranging from its history, political connotations, and the different stakeholders involved.

To conclude, let's return to the research questions introduced in the introduction. First of all let's look at the sub-questions, which together will help formulate an answer to the main research questions.

'What different gradations are there on the scale of rebuilding a destroyed heritage site?'. As discussed before, there is no set amount of approaches within the discussion around rebuilding. There are endless approaches depending on who states them. This thesis has looked at three of these options spread out over the scale between 'historical enclaves' and 'tabula rasa'. These approaches are restoration and reconstruction, historical rebuilding, and modernist rebuilding. Each approach incorporates the original design of the site to some degree, depending on what is wanted to be preserved and altered for each case.

'What factors can be distinguished to determine what form of rebuilding of a heritage landscape is most suitable?'. To explain and justify why a certain rebuilding approach is suitable for a site, this thesis argues that there are factors that can be connected to the site that encapsulate the most important aspects of the site that need to be preserved or altered. The factors discussed in this thesis are historical value, community value, economic flow, functionality, liveability, tradition, religious value, and political sensitivity. Each of these factors is representative of an aspect that is deemed important to be incorporated into the design of the rebuilt site.

'In what ways can European built-heritage sites be brought back in the future, based on cases of targets of natural disasters outside of Europe, and targets of conflict areas in twentieth-century Europe?'. This question has been partially answered in this thesis, but further research is needed to further develop an answer that discusses this topic to its full extent. As seen in the theoretical framework, the discussion of rebuilding, as well as cases of rebuilding were

already present and active in the twentieth century. The theories and designs that originate from the last century and before have formed the basis of how we approach rebuilding today. There are also many examples of rebuilding outside of Europe, which could give us more insight into how rebuilding in Europe could be developed in the future. Though this thesis does not focus on this topic, it could be argued that European rebuilding practices in the past centuries have formed the foundation of rebuilding in present-day Europe and that rebuilding approaches outside of Europe will be the future of rebuilding in Europe, as much can be learned from how other regions handle the problem and as other countries may have more experience with dealing with the aftermath of certain disasters like natural disasters, which are only now becoming more frequent in certain parts of Europe.

This brings us to the main research question 'In what ways and to what degree can built heritage sites in Europe, severely damaged or destroyed by conflict or natural disasters in the 21st century, be brought back?'. Built heritage sites in Europe can be rebuilt after destruction by conflict or natural disaster. In what way and to what degree is something to determine case by case and depends greatly on how much is wanted to be preserved by the authorities and the involved communities. There are many approaches to rebuilding that can be taken to incorporate anything from all of its historic symbolism and value to none of it and everything in between. It is important to note that in the case of a destroyed heritage site 'brought back' does not mean it will be the same structure as it once was. As it is rebuilt it will always be a new structure, but by incorporating elements copied or inspired by the original structure, related values and symbolism can be brought back, which is what is often seen as the source of value and importance of a heritage site.

7.2 Future research

There is still a lot to be discussed and researched on the topic of rebuilding. For future research, it would be a useful addition to compare the way heritage sites are rebuilt in Europe in the twenty-first century, to different examples of rebuilding from previous centuries and to examples of rebuilding outside of Europe. There are many examples of rebuilt heritage sites from before the twenty-first century that could shed light on different approaches that were used, but also on how rebuilding has evolved over time. After the two World Wars in the twentieth century, many heritage sites were left in pieces. The sudden call for rebuilding everywhere in the continent led to a major growth in techniques and research done on the topic. But also before the twentieth century there are recorded cases of rebuilding that could

teach us a lot about how the opinions on rebuilding and heritage preservation have evolved, as well as what building techniques and rebuilding approaches were used, what changed and what we can see continue into later times. Comparing rebuilding cases from twenty-first-century Europe with cases outside of Europe is interesting as well. In the Middle East, we can see examples of rebuilding in active war zones, which can give us more insights into preserving and rebuilding heritage sites while in conflict, as most of Europe's examples of rebuilding take place after the war has ended. Places like Southeast Asia, the Caribbean and Coastal America can teach us more about rebuilding after the destruction of heritage sites after a natural disaster. With the growing consequences of climate change, Europe is starting to see an alarmingly rapid growth in natural disasters that target European grounds. By looking at case studies in countries that have a longer history with natural disasters and that have more experience with rebuilding heritage sites targeted by natural disasters, we can learn more about how to deal with future comparable cases in Europe. There are even countries that have developed the techniques and technologies to incorporate into the design of buildings to make them more resistant to natural disasters, for example in Japan where the structures of houses are made to move with the ground during an earthquake, to prevent the structure from getting damaged. By learning from technologies and cases like these overseas, we could incorporate similar techniques in the rebuilding of European heritage sites to make them more resilient against future disasters.

Chapter 8 – Discussion

We have discussed several possible approaches to take when wanting to rebuild a destroyed heritage site, but how useful will these approaches be in the future? For a rebuilding plan to be useful, we will still need to have a heritage site that has been damaged or destroyed. This generally has two causes: conflict or natural disaster. Unfortunately, there are no signs that there will come an end to armed conflict. Especially with the Ukrainian war, the effects of conflict on heritage and how to deal with it has become an ever more relevant topic of discussion within Europe. But the effectiveness and relevance of rebuilding is not limited to just Europe. Conflict, whether it is armed or not, forms a threat to heritage sites all over the world, from political conflict in South America to the escalating armed conflict in the Middle East. The other major cause of heritage destruction is natural disasters. Among the increasing problems caused by climate change, is the growing threat of natural disasters all over the world. From forest fires to floods to earthquakes, the entire world is being taunted by the effects of these disasters. Unfortunately, climate change will most likely only increase in problems that it brings and will not be solved in the near future. This means that for both conflict and natural disasters there will most likely only be an increase in cases of heritage sites being destroyed. This means that thinking about how to deal with the aftermath of these disasters, like researching ways to rebuild the sites, is especially relevant. Especially in Europe, a growing want for the preservation of our heritage is rising. With the want to preserve our heritage but our heritage being increasingly exposed to threats, we need to take action. Though preference will always go to the prevention of the destruction of heritage, this is not always possible. In these cases, rebuilding becomes a viable option for the return of our heritage sites. As each heritage site is different, there will be different things to incorporate into the rebuilding process. This means that there needs to be a variety of rebuilding approaches to choose from, to ensure the rebuilding preserves everything that needs to be. This is why it is important to do research on these different approaches, and to create models with approaches and their characteristic features and determining factors, like the one presented in this thesis.

Abstract

This thesis explores the different ways and gradations of rebuilding, as a way of bringing back a heritage site that has been destroyed by either conflict or natural disaster. With the increasing impact of war and climate change on heritage sites in Europe, it is important to look into the different ways of dealing with the aftermath of a disaster, in this case specifically after the site has been damaged beyond the stage ability of repair. With rebuilding being one of the solutions for dealing with the destruction of heritage sites, more focus should be on the development and exploration of the different ways to rebuild a heritage site, and what makes a certain approach suitable for each case. This thesis proposes such a model that could help determine what approach is most suitable for a destructed heritage site, based on what elements of the site wished to be preserved or altered. Based on the works of Bosma and Wagenaar (1995) and Bold et al. (2017), a new scale has been developed with the different gradations of incorporating historical accuracy in the rebuilding design, together with a set of determining factors that can determine which approach to rebuilding to use for each heritage site. This model is explained further through a series of six case studies of heritage sites in Europe that have been rebuilt this past century.

Bibliography

Barakat, S. (2007). Postwar reconstruction and the recovery of cultural heritage: Critical lessons from the last fifteen years, in N. Stanley-Price (ed), *Cultural heritage in postwar recovery*, Rome: ICCROM, 26-39.

Bold, J., Larkham, P., & Pickard, R. (2017). *Authentic reconstruction: Authenticity, architecture and the built heritage*. Bloomsbury.

Bosma, & Wagenaar, C. (1995). *Een geruisloze doorbraak : De geschiedenis van architectuur en stedebouw tijdens de bezetting en de wederopbouw van Nederland*. NAi Uitgevers.

Burra (2013), *The Burra charter: The Australia ICOMOS charter for places of cultural significance,* Sydney: Australia ICOMOS.

Citta' di Venezia assessorato al turismo (2020). *Yearbook of tourism data 2019*. Venice Town Hall Multimedia Production Centre.

Giblin, J. (2017). Reconstructing post-conflict heritage in Rwanda. In P. Newson & R. Young (Eds.), *Post-conflict archaeology and cultural heritage: rebuilding knowledge, memory and community from war-damaged material culture* (pp. 106-120). Routledge.

Idrizbegovic Zgonic, A. (2011). Total reconstruction: A case study of Aladza mosque. *Technics Technologies Education Management*, 6(2), 408-414.

Pollard, N. (2020). *Bombing pompeii : world heritage and military necessity*. University of Michigan Press.

Robben, A. C. (2021). Metonyms of destruction: Death, ruination, and the bombing of Rotterdam in the Second World War. *Journal of Material Culture*, *26*(3), 324–343. https://doi.org/10.1177/13591835211016488

Sesana, Gagnon, A. S., Ciantelli, C., Cassar, J., & Hughes, J. J. (2021). Climate change impacts on cultural heritage: A literature review. *Wiley Interdisciplinary Reviews. Climate Change*, 12(4), e710–n/a. https://doi.org/10.1002/wcc.710

Weiss, T. G. & Connelly, N. (2019). Protecting cultural heritage in war zones. *Third World Quarterly*, 40(1), 1–17. https://doi.org/10.1080/01436597.2018.1535894

Wenzel, F. (2007). *Berichte vom Wiederaufbau der Frauenkirche zu Dresden*. KIT Scientific Publishing.

Web sources

All about Venice (n.d.). *La Fenice*. https://allaboutvenice.com/teatro-la-fenice/

Cusack, A. (2010, April 5). *Potsdam's City Palace to be Resurrected*. Andrew Cusack. https://www.andrewcusack.com/2010/potsdam-palace/

De Sury, C. (2023, December 11). *Macron to invite pope to Notre Dame's December 2024 reopening*. National Catholic Reporter. https://www.ncronline.org/news/macron-invite-pope-notre-dames-december-2024-reopening

DomRömer Frankfurt (n.d.). *English Information*. https://www.domroemer.de/english-information

Dresden city (2022, December 31). *Tourism*. https://www.dresden.de/en/city/statistics/Tourism.php

Dresden city (n.d.). *13th February – Anniversary of the destruction of Dresden*. https://www.dresden.de/en/city/07/13th-of-February.php

DW Staff (2005, October 29). *Landmark Dresden church completes rise from the ashes*. Deutsche Welle. https://www.dw.com/en/landmark-dresden-church-completes-rise-from-the-ashes/a-1758986

Frankfurt tourismus (2016, October 27). *Frankfurt's "new old town" – The Domrömer Quarter*. https://www.frankfurt-tourismus.de/en/Media/Presse/Press-archives/Frankfurt-s-new-old-town-The-DomRoemer-Quarter

Friends of Notre-Dame de Paris (n.d.). *Notre-Dame cathedral fire.* https://www.friendsofnotredamedeparis.org/notre-dame-cathedral/fire/

Friends of Notre-Dame de Paris (n.d.). *Notre-Dame cathedral reconstruction*. https://www.friendsofnotredamedeparis.org/notre-dame-cathedral/reconstruction/

Friends of Notre-Dame de Paris (n.d.). *Notre-Dame cathedral restoration*. https://www.friendsofnotredamedeparis.org/notre-dame-cathedral/restoration/

Friends of Notre-Dame de Paris (n.d.). *The builders.* https://www.friendsofnotredamedeparis.org/notre-dame-cathedral/history/the-builders/

Furlong, R. (2004, June 22). *Dresden ruins finally restored*. BBC News. http://news.bbc.co.uk/2/hi/europe/3830135.stm

Gemeente Utrecht (n.d.). *Historie van het stadhuis*. https://www.utrecht.nl/wonen-en-leven/vrije-tijd/stadhuis/historie/

Hooper, J. (2003, December 6). *Operatic phoenix rises from the ashes*. The Guardian. https://www.theguardian.com/world/2003/dec/06/arts.italy

Lakic, M. (2019, 4 May). *Bosnia reopens historic war-ravaged mosque*. Balkan Insight. https://balkaninsight.com/2019/05/04/bosnia-reopens-historic-war-ravaged-mosque/

Pandzic, S. (2016, June 12). *The Aladza Mosque in Bosnia and Herzegovina was built in Ottoman Style*. Mvslim. https://mvslim.com/the-aladza-mosque-masterpiece-of-ottoman-art/

Potsdam (n.d.). *City Palace – Landtag of Brandenburg*. https://en.potsdam.de/content/city-palace-landtag-brandenburg

Potsdam Sanssouci (n.d.). *Potsdam City Palace at the Alter Markt*. https://www.potsdam-sanssouci.com/en/potsdam-sightseeing-sights/potsdam-city-palace-at-the-alter-markt/

Reuters (2019, May 5). *War-ravaged Bosnian mosque reopens in move towards reconciliation*. The National. https://www.thenationalnews.com/world/europe/war-ravaged-bosnian-mosque-reopens-in-move-towards-reconciliation-1.857285

Reuters (2019, May 7). *War-ravaged Bosnian mosque reopens in move toward reconciliation*. Arab news. https://www.arabnews.com/node/1493686/offbeat

Statista Research Department (2023, January 2). *Visitors attendance at Parisian cultural sites 2017*. Statista. https://www.statista.com/statistics/991935/cultural-sites-attendance-paris-france/

Stiftung Frauenkirche Dresden (n.d.). *Construction chronicle: Important stages of reconstruction.* https://www.frauenkirche-dresden.de/rebuilding-chronicle

Stiftung Frauenkirche Dresden (n.d.). *Technological challenges*. https://www.frauenkirche-dresden.de/challenges

Stiftung Frauenkirche Dresden (n.d.). *Welcome!* https://www.frauenkirche-dresden.de/welcome

Stouhi, D. (2022, August 26). *The story behind Frankfurt's new old town and how the community revived its medieval identity*. ArchDaily. https://www.archdaily.com/987963/the-story-behind-frankfurts-new-old-town-and-how-the-community-revived-its-medieval-identity

Venice museum (n.d.). *The Fenice Theater*. https://www.venice-museum.com/the-fenice-theater.php

Vyawahare, S. (n.d.). R*ebuilding the city: Dresden*. Rethinking the future. https://www.re-thinkingthefuture.com/city-and-architecture/a4058-rebuilding-the-city-dresden/