Abstract
This paper focuses on war landscapes understood not as a simple accumulation of isolated objects, but as part of a complex and stratified system to be reinterpreted by activating a strategic military look again. In particular, it explores in-depth the theme of a large topography of concrete built for the Great War that lie on the Italian borderlands, still partially unknown, and of the definition of intervention scenarios at different scales.

Keywords: Military spaces, warlandscape, fortress

Streszczenie
Niniejszy artykuł poświęcony jest krajobrazom wojennym. Nie są tu one jednak postrzegane jako zwykłe skupisko odosobnionych obiektów architektury, ale jako część skomplikowanego i rozwarstwionego systemu, który zostaje poddany ponownej interpretacji przez reaktywizację strategicznej koncepcji wojskowej. W artykule szczegółowo omówiono rozległą topografię betonowych umocnień z czasów “Wielkiej Wojny”, które, wciąż nie do końca poznane, ciągną się na granicy Włoch, a także określono możliwe scenariusze interwencyjne na różną skalę.

Słowa kluczowe: przestrzenie wojskowe, krajobrazy wojenne, twierdza

1. Concrete, heritage

The rediscovery of concrete architecture reflects the heart of a debate that on the one hand, has progressively contributed to affirming its value as an architecture to preserve and on the other it also notes the concern for the risk of losing many buildings today threatened by obsolescence or technological interventions and destructions that are not respectful of their historical value.
This renewed interest in the architecture of the 1950s, 1960s and 1970s, which entrusted their figure and narrative to concrete – such as morphology, rhythm, composition, and modulation of architectural elements – is not just aesthetic or technical.

Barnabas Calder, seizing the seduction of raw concrete in English architecture in the Seventies\textsuperscript{1}, seems to suggest that this new attention is also the testimony to the cultural climate and social instances that we feel somewhat reflected even in the present time.

We recognize this concrete heritage as a common good, we feel this past as a new paradigm, to try to reinterpret it.

The twentieth-century concrete architecture, considered for a long time horrible by ordinary people, is the first industry specialized in the construction of industrial, military and residential buildings and infrastructures through the renewal of ancient materials and technology. Concrete concerns us, such as the figure of a change of parts of the city and wider contexts which today we look not only in ourselves, but trying to establish possible relationships.

2. Objects, images, aura

“L’architecture, c’est, avec des matières bruts, établir des rapports émouvants”\textsuperscript{2}. With these words Le Corbusier declares his love for the ruin of a material and for the execution as an instrument of poetic invention. From the definition of \textit{brutalism} given by Reyner Banham, Jacques Sbriglio emphasizes that, in the world traumatized by World War II, Le Corbusier’s interest in the polymorphic \textit{transmutation} of concrete is first and foremost a poetic and spiritual choice that compares with a deeper tradition, with the sense of “origin” and “primitive”\textsuperscript{3}.

This contributes to give certain resonance to the architecture of great architects, from Le Corbusier to Scarpa, the “aura” which Walter Benjamin defines the bearer of the creative processes of man and nature\textsuperscript{4}.

The plastic transmutation of concrete refers, as a matter of becoming, to the meaning of the ruins, to the destruction of the old and at the same time to the manifestation of the new. In this sense of time “to the present”, as pieces of lost things that may still be, the spectacle of nature combines with that of vestiges\textsuperscript{5} (5).

Perhaps, from these same emotions, Le Corbusier imagines his architectures such as mountains, built from stone-like concrete, by assembling pieces of castles in ruins which evoke great war machines, presences that predict the future of an absence.

The nature of concrete architecture, free from ornaments, built in contrast to nature, which welcomes the work of different times and nature, and absences’ density of meaning, establishes an indissoluble relationship between different things: the reference to the immensity of war architectures and abandoned sites.

3. Empty spaces, absences

Centuries later, the leonardesque question “cannot beauty and utility be? How does it appear in fortresses and nelli huomeni?” still appears topical.

Since the last thirty years of the nineteenth century, concrete with or without reinforcement replaced stone in military architecture. The forts of the future, as the new fortresses were called, were designed as thick layers of cement, steel, earth, sand, masonry, alternating and overlapping one on the other. Even the old stone strongholds were covered with thick cement hulls. Many of these architectures, made with the most up-to-date technology available, were systematically “jumping” to recover large amounts of iron. The geographic location and layout of these works are fundamental to tactical purposes.

Concrete fortresses occupy dominant positions, by exploiting the natural features of rocky terrain which are excavated to create protected environments.

Can we recognize sensitive issues with respect to the theme of transmutation of matter into these grey forms? Are they detectors of still transmutant absence? Can we learn from these destroyed objects some design processes?

According to Paul Virilio, the concrete war landscapes have an intrinsic beauty, the result of a technological innovation and creativity without author, such as a principle of poetic narration, “start” and “creation” of spaces and emotions. They can give a new life to places, stories and times, in the contemporary age. The discovery of the territory by the war is a precious heritage which has invaluable consequences.

Many of our streets and paths, our own vision, the ability to cross mountains and valleys, come from war plans and projects. Layer and excavation architectures produce sensations that become more intense in the most marginal places where the grey of concrete masses stands out on the natural horizon. The empty spaces and the intervals between the concrete fortresses are compositions available to stimulate multiple looks, by preserving them simultaneously as a place to the memory.

4. Wars, landscapes

In the Northeast Italian regions, the war has built a complex and articulated system of architectures and infrastructures, which for a long time have been eloquent. Today we have a partial image, a succession of fixed points. The great monoliths, the result of transmutation of concrete, are unknown objects. The quality of the war to generate powerful and significant representations has progressively lost strength and, with it, the traces and the residual marks have been obfuscated. This has happened when historical values and events have ceased to be a common heritage.

They still resist fortifications that have preserved the enriched essence of these figures and grey masses, residual traces and signs that fade more and more if they are unable to return the constitutive principle that linked the fortifications to the territories. The resilience of the patrimony of war, its ability to bounce towards the future despite the deformations suffered, the possibility of re-emerging with a decisive role and a new force, has yet to be partially investigated.

The War not only produced ruins and rubble, it built a network of accessible and recognizable sites, by inventing a new topography and represented the landscape. Earth and
III. 1. Concrete’s natures. Unknown objects of the war landscapes
excavation are dominant in the construction of the relationship between the fortifications and landscape. By building architectures and infrastructures, roads, bridges, railways, stations, tunnels, galleries, the war has modelled the ground to make connections, to camouflage defensive works, by modifying the ground deeper and representing the landscape with selected and crosses views, periscopes and galleries. Monitored alpine hills and mountains, that are transformed into observers, allude to a representation of war landscapes such as movie scenes.

What to do about this residual accumulation?
This complex war palimpsest, shown on the map, suggests an architecture-landscape of dynamic points and lines, still unknown, on which to rediscover the sense of what will be from an emotional thought that can capture the intelligence of places. Because a place is not always meaningful if it remains like a residue. A place remains if it puts into action something related to it. We have to imagine relationships that relate different events, themes and times, look more deeply, in everything that builds relationships: the underlying is generated by this.

5. Networks, unveilings

With what paradigms can we uncover this fragile palimpsest of the war architectures’ concrete?

By selecting tracks, identifying relationships, building systems, reactivating the strategic military look, in a continuous movement between scales we can rediscover the attitudes of these military architectures, infrastructures and networks, to measure the territory by enriching nature with artifice.

The research in progress at the University of Trento, focuses on the knowledge and re-invention of the Great War fortified system, on the study of redevelopment interventions at different scales and on the definition of new design scenarios. Fortifications, understood not as isolated objects, but as part of a complex and stratified set, by contemplating the possibility of several actions, combining the instances of conservation with fruition and valorisation.

The re-appropriation of a relational military look – such as physical and perceptual structure to interpret and read the territory in a broad and wide way able to establish relationships between different things – is the fundamental basis of a project that aims to trace the construction of mountainous border areas as the topography of war concrete.

By revealing different traces, stories and times, this project of the memory is not an accumulation device, but a combination of elements with different nature.

Networks, sequences, intervals and times, such as experiences between different elements, constitute the main tactic that can “transmute” these invisible objects within the large stratified framework of the contemporary territories, a meaningful system for re-activating new life cycles in the requalified contexts⁶. At a different scale, as singular objects, concrete fortifications suggest sensitive experiments, minimal operations of recovery, reuse, or simple fruition.

6. New in the old

A realized project, the recovery and enhancement of a fortification belonging to the series of military works built for the Great War along the Italian-Austrian border, is aimed at return a place of war, by respecting and preserving its memory, by returning it as an asset to people living or working in European territories.

It is a great fortification dominating the Friulian plain, from the Isonzo to the Tagliamento Rivers, from the Carnic and Giulie Alps to the Adriatic Sea. Prior to the intervention, it lay in a carelessness and abandoned state, damaged by the earthquake that struck Friuli in 1976, by atmospheric events and man’s hand.

Through a very ambitious European project, the local community has foreseen to devote this structure to a European School of Peace for the discovery and meeting of border peoples.

The main issue to be addressed is how the preservation of the war place could trigger a process of territorial sustainable socioeconomic development and how to preserve the charm of this concrete architecture, by having to adapt it to a new use. The two scales of reflection have led to the identification of different strategies. The territorial scale defines a historical/naturalistic park and through the masterplan it identifies some thematic, historical and naturalistic itineraries. The architectural scale, related to recovery and reuse, identifies the interventions necessary to stop degradation and the new adaptive grafts, as well as the management of events and activities.

By trying to establish a coherent relationship with existing fortifications, by exploring its relationships with history – the rapid construction and abandonment, the looting of every element of iron, the demolitions – which had to remain comprehensible, the project does not reconstruct the gaps of the destroyed or looted parts. It chooses to operate by restoring, with dry construction techniques, missing parts such as cover domes, part of collapsed floors, stairs, to ensure the enjoyment. The treatment of structures and surfaces is strictly necessary to stop the concrete fragility which, hundred years after, has become stone.

Having to deal with the problem of the technical installations and the creation of new spaces necessary for the complete reuse of the artefacts as a school, incompatible with the original architecture conservation, the project defines a new hypogeum space in the fortification area. This hypogeum space, also in concrete, has the character of a modern defensive position.

The difference with the pre-existing is intelligible, for the composition, the figures, the treatment of the face-to-face concrete, partially coloured.

The conception of this excavated space, even though it should be strictly underground and not interfere with the free visuals of the fort architecture, has produced interesting relationships between the under and the above, between what is inside and what is out. Glimpses and paths cut out and select the existing architecture and the landscape, by making the viewers more aware of the place they are observing.

In a reciprocal exchange, to extract even greater wealth from this new contact, by recycling the excavating material, the cement and the rainwater of recovered war cisterns, an open public space is finally upgraded.

Between the recovered fort and the memorial monument built in the 1960s, the new minimal surface, dedicated to commemorative celebrations and musical events, extends the confined space of the fortification. As an added layer, it measures the distance and at the same time seeks a synthesis with the existing one and, in some ways, it makes “popular” an object that, to most people, would have been forever unknown.

References