

On the melancholy beauty of concrete

Katrin Terstegen

1. Ruins of the twentieth century

Crumbling stones, cracked plaster, toppled columns: time and weather leave their traces on buildings and eventually turn them into ruins. The sight of ruins evokes in us strong emotions of melancholy and nostalgia: decay is a reminder of the temporal nature of life and of our own mortality. Throughout the late eighteenth and nineteenth centuries, Europe was caught up in a fascination with ruins, and this morbid obsession with decay led to the construction of fake ruins, commissioned by wealthy patrons to complement their romantic landscape gardens¹. Ruins remind us of the powerful force of nature; a nature that will eventually subjugate us, or, as Georg Simmel put it, “What has led the building upward is human will; what gives it its present appearance is the brute, downward-dragging, corroding, crumbling power of nature”². The ruins of our times are not romantic castles and ancient temples. Today, warehouses and factories stand as uncanny yet proud monuments of a long-gone era. They are the ruins of the twentieth century³.

2. A material of the twentieth century

The twentieth century witnessed the comeback of a long-lost material: concrete. Concrete had been forgotten by history for more than a thousand years⁴, and when it reemerged, it did so with full force: transformed from a material that performed well under compression, it was now able to take on tension⁵, and this changed the course of architecture. The trajectory of concrete traces the history of twentieth century architecture: concrete was the material par excellence of Modernism, exemplified by Le Corbusier’s *Maison Dom-ino*⁶, and it paved the way for architect-engineers such as Félix Candela and Pier Luigi Nervi⁷ who made full use of the material’s plastic qualities, shaping an aesthetics of sculptural engineering. Late Modernism brought attention to the surface and to an honest expression of materiality, and “béton brut”⁸ was celebrated in its rawness and imperfection. Yet, it was precisely this raw and rough materiality that brought concrete and the architecture of the *New Brutalism*⁹ to their knees. Concrete fell into disgrace and was seen as an ally to crime, neglect, and decay¹⁰. Another decade or so later, tired of Postmodernism’s complex take on history and truth, people began to search for authenticity and found it in the honest expression of materials and the natural process of aging¹¹, and construction¹²: concrete yet again. And while the adoration of its tectonic and surface qualities continues, concrete has, with our increased understanding of its environmental impact, once again fallen out of favor. Concrete is now the most disputed building material¹³. Nevertheless, it is also still the most widely used material in construction. Concrete was the material of the twentieth century, and the ruins of the twentieth century are made of concrete.

3. Born old. The peculiar nature of concrete¹⁴

Concrete is different than other materials. Unlike wood and stone, it is not directly extracted from nature and has no natural place to return to. Concrete is a man-made material, mixed from natural ingredients that are, through a chemical process, transformed into a synthetic new. One could say that wood and stone are the apples and potatoes of materials, concrete is the bread¹⁵. Concrete is formless, a mixture that can be cast into anything but that has no inherent form on its own. Its very existence is dependent upon *formwork*, a temporary encasement that forever leaves its traces on concrete’s surface: an imprinted memory of things long gone. Unlike plastics and other synthetic materials, concrete does not aspire to be perfect. The very moment concrete comes into this world, it is marked with blemishes and inconsistencies; within days, the first fine cracks appear¹⁶. Concrete is born old¹⁷; aging is built into concrete’s DNA.

4. Melancholy and optimism

Perhaps that’s why concrete is a fundamentally melancholic material: because it is always slightly worn and weathered, like someone who has been around long enough to witness the passage of time. It continues to age but without ever losing its original character. This is what it might mean to “age well”: to stay true to one’s inherent qualities, no matter whether met with love or loathing. Concrete is strong and persistent, indestructible¹⁸. Long after we are gone, the ruins of the twentieth century, stripped to their bones and freed from their function¹⁹, persist in a state of stoic perseverance, open to whatever comes next. And just like the ruins of the twentieth century, concrete stands for resistance: against the destructive forces of nature and the fickle whims of taste. This quiet strength, its surrender to age, and its patience in the face of one thousand years in oblivion gives concrete an air of melancholy. But just like ruins are reminders of things that endure, concrete’s tenacity brings up a feeling that re-directs the nostalgic look forward: optimism²⁰.

¹ Wealthy and educated patrons, after returning from their European Grand Tour, wanted to duplicate the ancient ruins they saw in Italy and commissioned architects to design ruins from scratch. Examples include Sham Castle in Bath, England (1762); Wimpole Folly in Wimpole, Cambridgeshire, England (1768-72); Ruinenberg, Park Sanssouci, Potsdam, Germany (1748)

² In: Georg Simmel, "Die Ruine", 1911 (translation by David Kettler)

³ French photographer Yves Marchand, who together with Romain Meffre photographed derelict buildings in Detroit, published in the 2010 book "Ruins of Detroit", finds a notion of justice in the decline of industrial structures: "Industry is about exploiting nature. Seeing nature growing back in those buildings, there's a certain sense of morality or irony within the ruins when they are reclaimed." (<https://www.bbc.com/culture/article/20140304-ruin-lust-pompeii-to-detroit>)

⁴ Concrete was widely used during the Roman Empire, which brought forth the Pantheon, the largest unreinforced concrete dome. After the decline of the Roman Empire, concrete went into oblivion for almost 1,500 years

⁵ Thanks to the invention of rebar by French gardener Joseph Monier who experimented with iron-wire reinforcement for his cement and concrete tubs and basins and patented the idea in 1867. In Monier's designs the basic principle of reinforced-concrete structural members was already clearly established (<https://www.britannica.com/biography/Joseph-Monier>)

⁶ The "father of modern concrete" was Auguste Perret, Le Corbusier's mentor. His pioneering buildings include the apartment building at 25 rue Benjamin Franklin, Paris (1903), and the Church of Notre Dame du Raincy (1922-23)

⁷ Examples include Robert Maillard's Salginatobelbrücke in Graubünden, Switzerland (1930); Félix Candela's Bacardí-Mexico Bottling Plant in Mexico City (1958-60), and Gio Ponti's & Pier Luigi Nervi's Palazzo del Lavoro in Turin, Italy (1959-1961)

⁸ *Béton brut*, "raw concrete", is concrete left unfinished after being cast. The term was used by Le Corbusier to describe the unfinished concrete at his Unité d'Habitation in Marseille (1945)

⁹ Reynar Banham coined the term *New Brutalism* in 1955 for a new trend toward material honesty and bare or raw ("brut") materials, including concrete and exposed brick. It became synonymous for inhumane and 'brutal' architecture. <https://www.architectural-review.com/archive/the-new-brutalism-by-reyner-banham>

¹⁰ Exposed concrete was frequently used in Britain's post-war housing projects, many of which became social hotspots, and so the architecture of the *New Brutalism* was associated with marginalization, poverty, and crime but also with monotony. London resident and film maker Ian Fleming was so disturbed by the trend that he named the villain in one of his James Bond movies after one of the Brutalist architects, Ernő Goldfinger.

¹¹ Herzog & de Meuron's building for Ricola in Mulhouse-Brunstatt, France (1993) is deliberately devoid of rain gutters, letting rainwater run down the concrete exterior walls and gradually stain the facade

¹² This commitment to honesty in architecture and in the language of materials and construction is widespread in Switzerland. Protagonists here include Peter Zumthor and Peter Märkli, among many others

¹³ An example of the public debate surrounding the use of concrete is "Bauen ohne Beton", an initiative at the architecture department of the Universität Stuttgart. <https://www.novembertalks-festival.com/stuttgart>

¹⁴ For further elaboration on the nature of concrete, see the essay "On the metaphysics of exposed concrete" by Andrea Deplazes in: "Constructing Architecture Materials Processes Structures. A handbook", Birkhäuser

¹⁵ Given the issues surrounding concrete's "embedded energy", we might switch from a high carb diet to plant-based food

¹⁶ Almost "perfect" concrete can be achieved but is the exception

¹⁷ David Leatherbarrow sees the deterioration of a finish that results from weathering as the continuous metamorphosis of a building that is already embedded in its beginnings. See Mohsen Mostafavi, David Leatherbarrow: "On Weathering. The Life of Buildings in Time". The MIT Press 1993

¹⁸ An example are the bunkers from WWII which are difficult to destroy

¹⁹ The most sustainable buildings are those that can be endlessly re-purposed for any function

²⁰ In the hope to turn concrete, which already performs well from an environmental perspective because of its thermal mass, into a more sustainable material from its production perspective