

JUAN LUIS TRILLO DE LEYVA*
JOSE ALBA DORADO**

TRANSFERS

PRZENIESIENIA

A b s t r a c t

The concrete repeats the natural process of stone formation, thousands of years summarized in days. Transfers of surface images, such as fossils, are instantaneous; stone and concrete become a means that translates to the future the images of a place and a past time.

The sculptor Eduardo Chillida has contributed to the transmutation and transfer of concrete.

Keywords: concrete, transfers, transmutation, sculptures, Chillida

S t r e s z c z e n i e

Beton odzwierciedla naturalny proces kształtowania się kamienia, streszczając tysiące lat w kilku dniach. Przeniesienia takich obrazów z powierzchni jak skamieniałości są natychmiastowe; kamień i beton stają się środkiem, który przenosi obrazy miejsca i minionego czasu w przyszłość. Rzeźbiarz Eduardo Chillida miał swój udział w przemianach i przeniesieniach betonu.

Slowa kluczowe: beton, przeniesienia, przemiana, rzeźby, Chillida

Nature is our more direct reference, everything we do to imitation. In general, the technology of the materials, manufacture and handling, reiterates the way in which the matter is formed in the natural environments. In the production of concrete, we repeat rapidly the natural process of constitution of the stone, thousands of years summarized in a few days. In both cases, in the natural process and in the artificial, the water is the unifying element that allows the transmutation of the matter.

In these processes, there is an expansion on hold that in nature is supported by the pressure of the interior of the earth, the origin of the shape, density and hardness of each stone. To simulate the natural conditions of this underground scenery and abysmal, the manufacture of concrete requires a plug-in architecture: the formwork. A fleeting construction will be inhabited by a plastic mass report that was hidden from our eyes to become the stone with which we build. After the formwork produces a kind of metamorphosis like that of many insects that are transformed into adults or pupae by hiding behind an organic architecture that will then be scrapped, of these buds or formwork natural the most exploited and known is that produced by the silk worm, formed by a single thread.

* Prof. Juan Luis Trillo de Leyva, EscuelaTecnica Superior de Arquitectura de Sevilla.

** Assoc. Prof. José Alba Dorado, Department of Graphic Expression, University of Seville.

It seems that the concept of transmutation or metamorphosis is associated to masking, to the imperceptible; a kind of modesty wraps around change that, as in the games of magic, requires for its realization of the hidden of the phenomenon. In the inorganic matter the great material changes happen in deep layers of the earth, under great pressure and outside of our observation. The caterpillars are hidden to their final metamorphosis in the interior of a cocoon, room or space opaque created by themselves. The concrete requires of the formwork, normally of wood, which while gives form to the workpiece, hides the exothermic reaction that occurs in its interior. Even the metamorphosis literary are associated to this preservation of the mystery. Ovidio describes in detail the two states of the mutations of the classics gods, the before and after, hiding the narration of the intermediate stages, even Kafka in his *Metamorphosis* uses the sleep at night to situate ourselves already before Gregor Samsa becomes an insect, without us any reason that justifies the mutation suffered, in general all transmutation avoids being disclosed, as also happens with any artistic activity.

The concrete, in architecture, thinks and is projected using the stability of the stone, but it is built with a plastic mass that requires a formwork, as a provisional container. Unlike other materials that are assembled or stacked in construction with their final form, concrete demands the existence of a double project, the appearance of architecture as raw stone and the formwork temporary which will allow us to implement it during the building, creating a hidden vacuum that is subtracted to the living space and visible.

When the water evaporates, disappears, the stone appears and it observes the initial transfers, fingerprints printed on its surface as it prints the wood of the formwork. In the manufacture of glass is the fire that performs the solidification of the silicates, transformed into a new transparent material, as happens in the interior of the earth. In this case a difference of concrete is the pressure of air, "blowing", which gives form to the vessels. Fire and water are two of the four fundamental elements described by the pre-Socratic Greeks that govern the transformation of all the materials of nature. The hardening of the concrete operates as the low tide that leaves the traces of the waters on the sand. The water to evaporate, as happens in the dry river beds of the rivers, leaves printed on the matter forms of current or other objects in contact with it.

The transfers more known in the natural stone are fossils, traces of animals that lived millions of years ago, while in the concrete are common the veins and the knots of the wood of the formwork, transfers that generate architectural textures. All of them, both the natural generated by organic elements as those transferred by panels of the formwork, are snapshots, representation in images of a certain moment, photographs that freeze a specific time, such as insects trapped inside amber. Stone and concrete are converted in this way into a sensitive matter, in a way that moves to the future the images of a place and a past time. Stable witnesses of a bygone period.

The margin of the extraordinary contributions of engineers in the development of concrete through the large infrastructure, and to all scientists and specialists who investigate and improve the construction materials, there is another guild, which passes unnoticed for critics of the architecture, not for architects, which provide interesting experiences for the development of concrete technology, are the plastic artists. The artists of the twentieth century have devoted a large part of their time to the transmutation of matter and related concepts. Thus, the modern and contemporary art replaces the mediaeval alchemy, as a field of speculation on matter and form. Especially important for the future of Spanish architecture in the second half of the twentieth century was the sculptor Eduardo Chillida, whose work has contributed

to the transmutation of matter, of concrete as a basic element in the development of modern architecture.

Eduardo Chillida built spaces, he opened hollows and windows in the matter, discovering the empty, to be placed in the limits of the forms. This has often been associated with his work in architecture, he himself has been defined as the “Architect of emptiness” and there is no denying that about the use of three-dimensional parts, although the elements that Chillida works are essentially “proto-architectural”, they are placed in a prior stadium and they do not have as their goal the building if not articulate its, to work with the earth and the emptiness, get a different dimension from iron, wood, alabaster, concrete or ceramics.

The sculptor plays in the evolution of his work this abbreviated process of formation of the matter that we have described for concrete. In his *drawings of oxidation* he uses water as an excipient, as mediator between the paper and the iron oxide that he uses as a colorant. The formwork also has its counterpart in this process, in the form of templates that guarantee the blank spaces in the drawing. These transfers of physical character would have to add the concepts that form part of the specific objectives of the artist in each work. The “oxides” are shaded solids that define limits, almost always using a dual element that stress encounters geometric, as two hands that are narrowed or the slight touch of the finger of God and Adam in the painting by Michelangelo in the Sistine Chapel of the Vatican. Representations tensioned a moment lost in time.

Continuing with this same process we find ourselves with the series that Chillida called *gravitations*, a term that could define itself only in architecture. To describe it will be better than to quote the explanation that the author makes the same:

“Born unexpectedly. One day while I was working as any other day. I never liked the glue. The fact to paste the roles not seemed to me to be the ideal, but it has never occurred to me that it might be made in many ways. Suddenly I thought: Why not instead of pasting these two papers with glue I join them somehow? Can I sew with rope or whatever? I started thinking about it, making tests immediately. In addition, I realized the consequences that had. In the place where before was the glue I introduce space. How are you going to compare the space with the queue!”.

In these sculptures, the essence is an absence (glue) that generates sheets of intervening spaces that are translated in the shadows that appear on its limits. To sustain this subtle architecture stacked Chillida needs to have a complex hidden structure of wires and rods, which we could assimilate back to the formwork of concrete. Again, the duality, parchments craft overlapping that generate shadows between them and that they maintain their stability thanks to the force of gravity.

The original materials in the works of Chillida were always those related with its environment in the Basque Country, materials such as stone, wood or steel, in which the relationship between space and matter is completely different, depending on the material that you choose. He converses with the matter as a passive element, it is an element that needs to be transformed from a point of view plastic to get a beauty of argument based on the material. Massif elements, solid and heavy, they acquire a spiritual character.

The concrete appears in his work in an advanced stage giving you the large scale and the encounter with the natural landscape. In 1972, at the age of 48 years, Eduardo Chillida made his first work in concrete, it was the third sculpture of a family called “*Lugar de encuentros*”:

“For me, in the concrete when I do a formwork and see the interior space, that feeling of expansion, that pressure that is going to be produced, to go from the inside to the outside is



III. Eduardo Chillida during the construction of “Elogio del horizonte” (Gijón, 1990)

a great thing. I imagine that this is the same process that the stone has had. Because the stone has also been made; volcanic stones are like concrete, with a different time.”

Concrete is the stone created by man, artificial, extracted from the ground and mixed at his whim, “*a shattered stone and reorganized by man*”, where it is marked with the imprint of the time of its formation.

From that moment he began to build viewpoints of the landscape, doors to the field, shelter from the wind. The most prominent are *Lugar de encuentros III* (Madrid, 1972) (popularly known as the *La sirenavarada*); *El peine de los vientos* (San Sebastián, 1976), *Elogio del agua* (Barcelona, 1987), *Elogio del horizonte* (Gijón, 1990) and the *Monumento a la tolerancia* (Sevilla, 1992). All related directly with a place and a landscape specifically with the presence of water. The water and stone as the basis of the form and matter.

The size of these sculptures of concrete makes them nearer to architecture and allows the author to think of refined architectures, open spaces, viewpoints of long distances, temples of silence..., which he inserts in landscapes with water, again the duality, where it emphasizes the dialogue with the horizon. The transfer in these monuments, which also occurs with the footprints of their formwork, acquires a new dimension in the permanent conversation between sculpture and the horizon.

In one of his largest concretesculptures, *Elogio del horizonte* in Gijón, he intentionally shows an imperfectconcrete, with large pores and with a colour aged and rusty, obtained through an intensive research on the material, on components, additives, formwork, etc., to give that intentional outcome. It is not usual concrete, such as that used in building or in infrastructure, but that research is carried out on new components to achieve an aspect. Is performed with an arid of gravel and red sand, chips of smelling, water and cement by aluminosis. Thanks to the sand a reddish colouris achieved like the rocks of the environment, using the chips of smelling adds a series of oxides that increase the colour on the surface. Through the cement by aluminosis that disintegrates rapidly in time and a large amount of water in the dosage is manages to create many pores that provide an aspect aged and facilitate the entry of moisture, sediments that accelerate the oxidation of the chips of smelling.

In this work of Gijón, the author had to create several scale models, until he produced a 1:1 scale, in expanded polystyrene, from which he manufactured the formwork.

The *Elogio del horizonte* is presented to the visitor as something that arises from the land at the top of the hill of Santa Catalina, a rest of the eroded rocks the place that points to a space and encloses a place where men gather to see the horizon, the magic circle of Stonehenge gravitates into all these large habitable and convex sculptures. The concrete as material contains that character border between what is essence of man: the artificial and what is the essence of nature.

A return to the origin hidden from the formation of the stone stands out for its singularity formal the *Elogio del agua* (Barcelona, 1987). A kind of hand of concrete that hung by tensusit is reflected on a sheet of water. In this case it is hoped the reflex, the pond speculates, the culmination of the work; again, two hands, real and reflected, which tightened the space that separates them, crossing even different media: air and water. A modern version of the Greek myth of Narcissus and their reflection in the lake.

In this series of *elogios* and *monumentos* that converse with the landscape through concrete, which will conclude with the proposal of excavation on the mountain, Tindaya in Fuerteventura in the Canary Islands. In Tindaya, Chillida does not put the work in a place, but that his emptiness determines that place, a place for which he has searched throughout his life

through their works, from which there are to see that so beautiful that said Kierkegaard, “*It is not but to find the place from which you have to watch*”. The interior of the mountain, like the interiors of the hands which has drawn, are spaces that make us see convergence between the space and time, the limits, their interrelationship and the human scale. With Tindaya unite the efforts of the people who work in the mountain by removing material and giving it the added value of entering the vacuum as a space to bring people together, the fundamental concept of the sculpture of the twentieth century. Where not only that which can unite or add to the work is valued, but that what is removed materially must have a utility. Using current technology to recover the material that is destroyed in the works, where the materials of demolition can be classified and reused for example for the concrete that can be used in the same work.

The last great monument in concrete that has not yet been built is the tribute to the Japanese painter Katsushika Hokusai, author of *The Great Wave off Kanagawa*. This tribute shows us the admiration that Chillida felt toward the painter and justifies to a large extent the shape of these pieces of landscape, of these circulars shelters of the water and the wind. In the *Homenaje a Hokusai*, Chillida is trying to establish a relationship tensioned with the Mount Fuji, generating a barrier made of large stones of concrete environment to a central piece of steel 18 tons, an analogy evident from the volcano and a direct reference to the magic circle of Stonehenge.

As he liked to say to Eduardo Chillida, as conclusion everything is summarized in the control of speeds and different times.