

## **Carlo Borer: Objects from Virtual Space**

*By Peter Lodermeier*

The objects by Swiss artist Carlo Borer stand in space like messengers from another reality. Their discreet strangeness is felt increasingly the longer you look at them, though, since their forms stubbornly deny any sort of comparison. Despite their rounded contours these works do not make an organic impression in the sense of biomorphic natural growth – for this, the curves change direction too abruptly, the lines are too unpredictable, the cuts and angles between the individual surfaces are not functional enough. The peculiar geometry of these structures of gleaming chrome or rusty steel, stands unclassified somewhere between the poles of natural charm and technoid construction. Many of these objects circle around themselves, some form a system of closed rings or loops that intersect at different points. Their formally closed nature also makes them seem hermetically sealed in an emotional way, neither understandable by pure reason nor intuitively approachable. Borer acknowledges that some of his works have a certain “psychedelic quality” due to this irresolvable mysteriousness. Which is to say, that the clearly defined form dissolves, transforming itself into something new. In this context, Borer points to Kafka's story, "The Metamorphosis". He is interested in the moment where the original form is still recognizable, but at the same time another one is just beginning to develop. The term "psychedelic" refers to the metamorphosis, or the dreamlike feeling the form triggers in the viewer, and takes into account that Borer always keeps an eye to aesthetic processes that certainly bear similarities with musical compositions.

Since with the exception of a few works, Borer leaves his sculptures untitled, he foregoes specifically determining their effect or guiding the viewer's imagination in a certain direction. One reason for the confusing formal quality of his objects lies in their origins in virtual space, a factor which Borer consciously celebrates. Hence, their forms are neither oriented to natural models nor do they result from the confrontation with the tradition of abstract sculpture. Likewise, they do not arise from dealing with steel as a material or the methods of working with it. For Carlo Borer the forms develop primarily from the specific possibilities presented by computer technology, and which he purposely tests to their limits. With a few exceptions he creates all of his objects with the aid of special CAD (Computer-Aided-Design) programs, some developed especially for him.

Unlike traditional sculpture, Borer's works do not depart from closed volume and compact mass. Instead, lines and surfaces in space are the essential creative elements of his works. Surfaces turning in on themselves and hard edges form a stark contrast within their forms. In this respect, the artist deals with two basic creative variations. The first is drawing freely in space, whereby each line always refers to a second track. In this way surfaces come about that move through space in open or closed surfaces (the so-called two guide sweep surfaces), which are later imbued with plastic volume. Often these are works moving as waves or loops. Sometimes they are incompletely “rolled-up” surfaces, pierced through at times with numerous perforations. By means of these, the individual surfaces of the spatial structures may be calculated and “unfolded”, i.e. they may thus be projected onto two dimensions in a way that the individual surfaces can be cut out of a sheet of steel using a laser. The

complete sculpture is then assembled from these individual sheets. This also applies to the second basic possibility of inventing forms at the computer. In this instance, however, Borer takes a defined geometric solid as a point of departure and cuts segments out of it using negative geometric forms. The initial forms – which Borer also refers to as “mother forms” – are symmetrically rotatable bodies, for the most part cones or blunt cones.

Long before he developed his first sculptures constructed with the help of computer programs in 1998, Borer had been fascinated by the particular aesthetics of rotation forms. First he tried them out on colored objects made of polyester, later it was aluminum sculptures he used in playing through the symmetry of rotation. What interests the artist about rotating forms is an aesthetically effective moment from which a viewer can scarcely escape, namely its potential dynamics. Despite their actual immobility, the sculptural rotation forms inevitably create in the viewer an imaginary notion of a slow, or racing, rotary motion around a central axis. Borer’s earlier works have often been studded with rivets or even spikes, giving them a combative, highly energetic, if not aggressive, character. We associate with them the notion of huge spinning-tops, flywheels, cogwheels, and other machine parts. The cones and part cones are of special significance among the rotating bodies because their “perspective” narrowing lends them an additional dynamic element, an impulse towards the tip. The first object Borer made of steel sheeting for public spaces in 1991 on the basis of a cone measures 6 meters in diameter and reminds us of an missile that has been partially rammed into the ground, a stranded spaceship, or an archaeological find from a heavily industrial epoch of a world that no longer exists, and whose meaning we are unable to grasp. The imagined motion of the objects is an ongoing motif for Carlo Borer. Even with his extremely rare cubic forms, such as in the series “Sinking Cities” (1997), imaginary movement plays an important role, as the cuboid, diagonally cut forms seem to sink into the wall or the floor. It indicates that even the most stable positions are insecure and changeable.

The special formal quality of the part cone continues to interest Carlo Borer in his new works as well. It is one of the elementary characteristics of his art, a lasting formal obsession. But we need to look at these sculptures very closely from all sides in order to realize that their pseudo-organic round forms are actually based on part cones. These have been cut so radically, however, that it is the linear structures which dominate visually, pushing the geometric form that he used as a starting point into the background. Carlo Borer shows interest over and over again in such ambivalences between the construction principles and the perception of his works. During a conversation the artist reminded me that the experience of ambivalences corresponds precisely to the way we perceive and understand the world. Using rational models we are able to understand a lot, exploring further areas of knowledge from there. But at the same time, both in science and in our everyday dealings with things, we are wholly aware of the fact that we will never comprehend the complete truth, but rather only our ideas and notions which have been adapted to and shaped by our experience. Inevitably there lingers in our knowledge a blurry or an obscure remains of things we cannot understand. This fact constitutes the core of Borer’s work. For him the task of art is to lend visible expression to the unknown, that is to say, to the inscrutable experience of the world that does not fit in our conceptual framework. For this reason, Borer emphasizes that *virtual reality* is not really anything new, but rather does exactly what

the brain has been trying to do since the beginning of its evolution: to create a notion of the world. We simulate it, which we accomplish very well by constantly checking it against reality. And this is precisely the reason why the experience of real sculpture is so important: We measure ourselves and our notions against real objects.

Due to this ambivalence of practical experience and incomprehensibility, it is essential to Borer's artistic concept that his works always allow us to recognize a high level of craftsmanship and technical effort without any recognizable purpose – including any figurative readability or symbolization of them. (We must think here of Immanuel Kant's famous definition of beauty as "purposiveness without a purpose"). Out of this purpose-free craftsman-type precision and the opposition between the clearly structured form of the work and the lack of any functional designation as well as a genesis of the form that could be derived from experience, there arises the special aesthetic effect, the fascinating and confusing strangeness of Borer's works.

For the artist the development of forms in the virtual space of the computer is anything but a mere end in itself. He is not only concerned with exploring the characteristics of virtual spaces. The computer is above all an implement affording possibilities which would never have been achievable with other tools. What is decisive is the transfer of these designs into a sensual, material reality that we may experience. This process may be compared to translating from one language to another. It makes possible a new type of description and definition of sculptural forms that we may sensually experience. Herein lies Borer's challenge as an artist and craftsman: to transfer a purely mathematical definition of forms into concrete material existence, for this is where two completely different types of existence clash in a three-dimensional structure, something which cannot take place without friction and contradictions. (Actually there are even three stages of existence here: First the virtual design is transferred to the two-dimensionality of the steel sheets and only then is it transferred into real space). This translation work demands a high degree of expert knowledge, experience with the material, care, and precision. All the while one needs the ingenuity it takes to solve unexpected problems that arise when transferring the virtual into real space. The assembly and welding of the laser-cut steel sheets into complex three-dimensional objects and the subsequent surface treatment are extremely labor intensive and call for the help of assistants. Designing the works and carrying them out with perfect craftsmanship are of equal importance to the artist. Borer's fascination for the technical realization of daring, unusually complex designs becomes clear, for example, when we learn that for several years he dealt with the production of spherically-shaped coffee machines made of stainless steel. He was not merely the designer who developed and constructed the machine for some company, but rather he manufactured a great number of these machines himself in an arduous development and production process. In order to achieve the desired effect, technical perfection is imperative.

Just as sculpture cannot exist only as a virtual construction, neither can it be viewed as mere abstraction. Carlo Borer's works are sculptures of experience and as such, they refer to space and the concrete spatial situation of the viewer. They are fundamentally multi-perspective and must be approached visually from all possible angles by walking around them. We may only properly

experience their complicated geometry if we follow their outlines and if we have grasped the interplay between material forms and perspectives as well as the changing relationships between the forms with their unexpected curves and angles. This is why Borer only very rarely works in small formats, since these allow for an overview and, to some extent, a “precipitous” grasp of the forms. It is absolutely vital to him that the objects remain in reference to human proportions, that they are large enough to potentially harbor the body of the viewer inside or to cover him up. It is also remarkable that several of his works have been carried out in two versions that differ by way of their material: on the one hand, in shiny chrome steel, which always has the tendency to stand out optically against the ambient space and as an ideal, virtual, form appears remotely withdrawn; and on the other hand in rusting steel, with a much more “down-to-earth” effect due to its warm color and the irregularities in the patina of the rust.

In addition to his steel sculptures there is yet a small number of works among Carlo Borer’s oeuvres that he groups under the ironic title “Noreadymades”. These works differ greatly concerning material and appearance but they all share a common feature: They are composed of materials the artist has randomly found, which he has inserted into a new context especially constructed for them. The process entails integrating used and worn-out materials into an overall form in such a way that it looks like the entire object is merely a ready-made, a detail that has been detached from a greater functional connection. The theme of “purposiveness without a purpose” is carried to an extreme in these works. We see the concept of the “Noreadymades” most clearly in the “Shampoos”. The three steel cones have been densely studded with blue plastic fibers of the kind we know from carwashes. From their worn ends, we can tell they have been used. The variously formed attachments to the circular bases of the highly-polished objects suggest a technical function: They make the sculptures seem like tools that could be placed into a larger machine. In this way, Borer imitates procedures and attitudes of our civilization, which apparently make it possible to regard it from the outside for a moment, something which is, of course, impossible, since we always do our thinking with a relic of evolution, our brain, and are inevitably influenced by our education and cultural socialization. To an extraordinary degree, these works reckon with the viewer’s imagination and precisely for this reason, leads it astray. We cannot help but try to imagine a possible practical use, imagining that the cones turn round and round as cleaning instruments. The truth is, however, that this is an imaginary construct. The plastic fiber threads do come from a carwash, but they have been meticulously inserted in the stainless-steel cones especially made for this work and are not at all pieces that were found. Each object has around 2000 boreholes to hold the fiber threads. The linchpin forms that look like they should be attached to a giant machine are completely purpose-free mock-ups. The surface of the metal polished to a sheen, anyway stands in contrast to the triviality of the worn-out plastic material, reducing the customary logic of the ready-made to absurdity.

Entirely similar, albeit using completely different material, is the way Ensemble 343 functions (also in three parts), which consists of a combination of wood and copper. The hollow blunt cones that seem rather rustic have been made of wooden slats, which reveal traces of heavy use, and are held together at the ends and in the middle by a type of barrel hoop. The inner surface of the hollow body is

covered with shimmering copper sheeting so that one is then again tempted to consider the sculptures as found objects and imagine their possible use. The coarse execution of the wooden frame with the highly visible “noses” and drip traces of the intentionally carelessly applied glue cause us to rather think of an agrarian context, such as tools of wine production. But here again this is a false lead: The barrel construction was made of old wood pallets, the copper sheets subsequently mounted with the utmost of care. Aesthetically the objects rely, for the most part, on the contrast of the materials, the warm, immaterial, shimmering light of the copper in the inside of the aesthetically modest wooden structure. It is easy to make diverse associations by means of this contrast, even to the point of imagery of the dualism of body and mind. Borer himself refers to the “platonic character” of the perforation of the copper, which “runs through the object like an idea” - these are various worlds that mutually penetrate or surround one another. This remark may easily be applied to all of Borer’s works: His concern is always to show what happens when a formal idea takes on visible and palpably material form, and how, in doing so, the seemingly opposites mix.

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