





RAPHAEL HEFTI

ARTISTRY AND

ALCHEMY

The Swiss artist Raphael Hefti is known for taking the everyday materials that surround us and invoking a hidden beauty that lies within. This champion of the ordinary thinks nothing of pushing materials to extremes, whether it's through temperature, radiation or combustion. His quest to create and understand process has fuelled his career and success as an artist.

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“IT MIGHT TAKE UP TO 12 HOURS FOR SUCH A PRINT. YOU ARE IN TOTAL DARKNESS AND YOU ARE DOING THIS DANCE AROUND THE PAPER. THE WHOLE THING THEN BECOMES A RECORDING OF A PERSON’S PRIVATE PERFORMANCE.”

Raphael Hefti

A large metal block, exposed to radiation for five years, has just been delivered to Raphael Hefti’s industrial-scale art studio overlooking Lake Zurich. Stretched and crenellated by deep ravines, this new work sits like something extraterrestrial on the artist’s studio floor. Hefti’s latest sculpture perfectly illustrates how his fascination with process has led him to experiment with everyday materials in most unusual ways and how by doing so he reveals unexpected beauty. In this case the creative spark was curiosity. He wanted to know what one of his works might look like long after he dies and after it had been exposed to 1,000 years of sunlight.

“My starting point was to find a way to simulate that,” Hefti explains. A German firm specialising in X-ray techniques that simulate the ageing effect of light on automobile parts and paints used in the car industry provided the answer. Of course, they had never been asked to simulate 1,000 years of exposure before, but they were equally curious about the outcome.

The idea of irradiating something for five years as the start of a creative process is not out of the ordinary for Hefti. In his latest installation he used molten steel, in another he exposed different alloys to extremes of heat and cooling. His chosen media are eclectic, including photography, sculpture, and film-making.

Hefti is one of Switzerland’s most innovative and exciting talents, and his works have been exhibited widely, including at the Liverpool Biennial Festival of Contemporary Art (2016), Migros Museum of Contemporary Art, Zurich (2016), Fondation Vincent Van Gogh, Arles (2015), Centre d’Art Contemporain de Genève (2015), Nottingham Contemporary (2014), CAPC Musée d’Art Contemporain Bordeaux (2013), Camden Art Centre, London (2012), SALTS, Basel (2012), and Kunsthalle Basel (2011). In 2012 he won the Swiss Art Awards prize. He works and lives both in London and Zurich.

Hefti’s background, in part, has spurred his fascination with transforming industrial mater-

ials and processes into an aesthetic. Born in the Swiss town of Biel in 1978, he grew up just as the watchmaking town was being badly hit by the economic upheavals caused by the arrival of quartz watches from Japan in the 1970s and early 80s. He describes it as the sort of place where people either leave to go to university or find an apprenticeship. Hefti opted for the latter, setting him on a course that would eventually take him to the Ecole Cantonale d’Art de Lausanne and then on to the Slade School of Fine Art in London.

He says four years of apprenticeship in electronics and engineering gave him a valuable understanding of the engineered world around him. “I had a technical education, with the apprenticeship giving me an overview of different technical fields. You may have an idea about how different technical devices work, like a radio or TV, but suddenly this gives you the inside information, so you know how it really works and it gives you a ‘wow effect’ where you understand everything. But from that point you have to focus on the detail, which I was not so interested in.”

FROM ENGINEERING TO ART

Hefti decided to break away into the creative world. Initially he turned to photography, which is why light and its sources often play a part in his artwork. While reading about materials historically used in pyrotechnics he came across a spore from a moss plant found in the forests of northern Europe. The dried spores of the Lycopodium plant are used in homeopathic medicine. However, its pollen content also makes it combustible, giving the plant its alternative name: witches’ powder. “I was spending a lot of time harvesting those spores until I discovered you can actually just buy them,” Hefti says. The time he spent harvesting the spores and also breathing them in led to hair loss. “Even my eyebrows were gone.”

To demonstrate the incendiary power of witches’ powder, Hefti scatters a handful over a

flame to watch it ignite in an orange flare. “It burns because the powder is so thin. But if you have it on a flat surface, it makes a gentle flame which doesn’t create so much heat. I thought there might be a way of combining this latest material with the idea of ‘misusing’ photographic paper.”

The result is a photogram, an image made without a camera where the artist places an object on light-sensitive paper and then exposes it to reveal the image. A technique used by early modernists, Hefti has taken it a step further – he gently exposes a 15-metre canvas of photographic paper in a darkened room by scattering the lit powder in what he describes as a private dance. “You shake the paper and that produces the movement of the powder which exposes the paper,” he explains. “It might take up to 12 hours for such a print. You are in total darkness and you are doing this dance around the paper. The whole thing then becomes a recording of a person’s private performance.”

PROCESS AND AESTHETICS

The ‘Lycopodium’ photograms are somewhere between an astronomical phenomenon in deep space, a firework display, and viruses under a microscope. These vibrant, violent dances of colour can never be anticipated. But for Hefti, controlling the outcome is less important than how he got there. The drive is to create an as-yet unimagined alchemy between material and process to produce a unique aesthetic. A process that often means taking a technique used by industry and pushing or distorting it to the point of misuse, just to see what will happen.

One example is a work called ‘Subtraction as Addition’ that was exhibited in Camden, north London. It uses a specially treated form of anti-reflective glass that galleries use to protect art works. The coating gives the reflected light a different wavelength so that the viewer cannot see it. It is also found on reading glasses.

While Hefti was getting new glasses he asked about the process of making them and



Raphael Hefti in his studio



Research for the piece 'LIVE METALS' created for Art Basel Statements 2015



Raphael Hefti's studio with several pieces from the 'Lycopodium' collection

what would happen if multiple layers of coating were used. Neither optician nor supplier knew the answer so Hefti persuaded the manufacturer to sell him glass that had been treated with a number of layers. Later he discovered that the machinery used for this process was not always fully utilised. It allowed him to use it to push the boundaries with ever-increasing numbers of layers. "Suddenly, after five layers, it went from being transparent to being crazily colourful."

Hefti had succeeded in making the invisible reflected light visible again. He then discovered that the coating reacts according to the type of light source it is exposed to, whether artificial light, daylight, natural light, morning or evening light. At the Camden gallery, where light flooded into the exhibition space, the huge glass pane sculptures with their pink, blue, and gold hues evolved through the day as their optical characteristics changed. "The light shines through the glass, so in the morning the colours would appear totally different, so there was always movement, and in the exhibition we had eight windows, so people came in and had an interaction with the works." Again, it is the use of light that reveals the

photographer's eye at work. "Even today when I look at works I see them through the eye of a photographer, but I am more interested in 3D and the concept of making those works," Hefti says. "The nice thing for me is that there is no other job or life where you can actually be as free in the way you want to work. There is no other world than the art world where, being an artist, you can jump from one thought to the other and then combine them." This fusion gives his work its signature. A conversation with an industrial technician, a material scientist, or even an optician is allowed to evolve with time and then combine with material and process to shed functionality and so subvert the original science.

PUSHING METALS TO THEIR LIMITS

While at the Nottingham Contemporary, Hefti visited the Rolls Royce jet engine factory in Nottingham. It was here, talking with the company's engineers, that another work was conceived. To understand how metal will behave in the challenging conditions created by a jet engine, materials are often tested to destruction.



Research for the permanent work 'Art on the Underground - London'

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VIDEO
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When pushed to such extremities, alloys can take on quite beautiful colours. Hefti devised a system for recording different extreme events involving various rates of heating and cooling and, with his system in place, he visited different factories to explore what happens when things go wrong in an industrial process and recorded the results.

Later, by recreating the recorded process very precisely on metal rods comprised of different alloys, he was able to create both a library and an aesthetic of what happens to metals when pushed too far. Vibrating them during the process let extraordinary rainbow-like patterns emerge. “You take a rod about one metre long and then replay the mistakes,” Hefti says. “For example, this titanium is an example of where they went too far with the heat treatment and suddenly it became crazily iridescent and very reactive to light.” At the Nottingham Contemporary these rainbow-tarnished rods were then suspended between floor and ceiling to create a forest of revealed micro-crystalline structures in all their beauty.

“The nice thing about metals is that we are surrounded by them every day, with different alloys, and every decade it gets more complex and also a lot of treatment is hidden so you have no idea what kind of heat treatment was applied to the parts you have in front of you.”

Many of Hefti’s works are about process. He points to an exposed edge of ‘Subtraction as Abstraction’. “You can tell here there is a fading

of colours. Quite often in works of mine there are hints that tell you how it was made.” Despite these clues, it may take a sophisticated knowledge of industrial processes to work it out. Hefti’s recent show at the Liverpool Biennial film festival involved a process called thermite welding, typically used to smoothly join high-speed rail tracks. By using a portable crucible, a powdered mixture of iron oxide, aluminium, and magnesium can be turned into molten steel by a process called aluminothermic reaction.

In Liverpool, 100 tonnes of sand were used to produce a channel through which the molten steel was poured at 2,500 degrees Celsius and then filmed using an ultra-high-definition 4k camera to document the process. The result is a spectacular depiction of heat as the digital and the industrial are brought together to create the work.

Time is the last piece of the puzzle in Hefti’s creative alchemy. “Certain art works and certain processes take time, and it is nice to have this time. Perhaps today the art world is the only place where a certain project can take the time it needs ‘to become’.” It took five years to irradiate the metal bar that simulates 1,000 years of light exposure. It can take years for an idea to germinate, grow, and reach the point of execution. The result may sit there for a while longer until it starts to shape into an installation. Meanwhile, Hefti may move onto another project only to return when the time is right.



2014, a detail of the piece ‘Various threaded poles of determinate length potentially altering their determinacy’