Fotograf Gallery

RELEASED ATOMS

Vojtěch Radakulan
Martin Netočný
Anaïs Tondeur

22. 1. – 11. 4. 2023

As soon as it was realized that atomic nuclei were as yet untapped sources of energy, efforts were made to harness and exploit this resource. Research on atomic power plants advanced in the 1950s under the shadow of the fear of nuclear war, and eventually this newly discovered source of power began to be used for peaceful purposes.

Even 85 years after we split uranium nuclei for the first time, modernist ideals and their effects still influence how we conduct our daily lives. Nuclear power accounts for a sizeable portion of the Czech Republic's energy mix (40% in 2021), the fixation with nuclear disasters attracts viewers to streaming services, and hydro dams located next to cooling towers profoundly alter our landscape.

The exhibition Released Atoms, which draws inspiration from an avant-garde fascination with the visibility and use of the invisible, exposes the hopes and worries linked with atomic energy and aims to find the roots of our current relationship with the nucleus through an examination of recent history.

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Released Atoms, a book that discusses *"what lies behind the discovery of the atomic bomb, what the scientific character of this invention is, what its significance is, and what possibilities it opens up,"* was published in Prague in 1947. Its author, Vilém Santholzer, who was then employed by the Ministry of Health, strived to make radiation visible in fog chambers in the 1920s, spent a brief period of time working in Otto Hahn and Lise Meitner's lab, and maintained connections with the Prague and Brno avant-garde. Taken for scientific purposes, his photographs were published in the magazine *Pásmo*, and captured the visuality of modern times along with reproductions of contemporary sculptures, paintings, buildings, and machines.

This interest in scientific photography was emblematic of the avant-garde milieu in the 1920s. It represented a means of departing from the existing artistic tradition. Their unique eye enabled avant-gardists to capture the extraorinary visual impact of radiographs and photography of radiation, as well as depict reality in novel ways and unveil its hitherto hidden levels.

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The avant-garde fascination with "making visible" is brought to light thanks to thanks to *Active Others* by **MARTIN NETOČNÝ**. For the exhibition, Netočný has taken original photographs from the pages of a selection of historical books and magazines, and in his series Moholy-Nagy's rayograms* meet radiographs, imprints of radioactivity in photographic layers, and photographs capturing radiation visualised in a fog chamber.

> The scientific study of X-rays and radioactivity has remained strongly linked to photography, which was at the centre of their discoveries. Konrad Wilhelm Röntgen created the first radiograph at the end of 1885; the X-rays, invisible to the human eye, left traces on the photographic plate and revealed the internal structure of Röntgen's wife Anna Bertha Ludwig's hand. Henri Becquerel began investigating uranium salts—luminous-like tubes emitting X-rays—on the basis of this revelation, and in 1886, with the help of photography, he discoved radioactivity.

Netočný combined scientific photos and Moholy-Nagy's rayograms together with sights found in books from the early 1980s. As a result, **images of wild pigs and edible and dangerous mushrooms serve as a background for the presentation of alpha rays and the interiors of animals and shells**. The seemingly random encounter was initiated by Netočný's visit to the State Institute of Radiation Protection, where they have among other things long mon-

* Rayogram (more commonly photogram) is a photographic technique in which the image is created without the use of a camera. The objects to be captured are placed directly on/above photographic paper, which is then exposed, developed, and stabilized. The term rayogram does not refer to X-rays but rather to Man Ray, who (like László Moholy-Nagy) used this technique extensively. I have chosen to use this term primarily in reference to the exhibited series by Anaïs Tondeur and because rayograms are visually very similar to radiograms.

itored the radionuclide level of water and food. **The largest quantities of these particles, which are undetectable to the human eye, are found in samples of mushrooms and animal corpeses.** In the second part of *Active Others*, Netočný focuses, in small-scale photographs, on the details of the lead shielding of measuring instruments. The instruments translate sense-imperceptible radioactivity into approachable graphs and numbers, while the lead isolates the samples from the surrounding environment, minimizing measurement inaccuracy.

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The Chernobyl Herbarium by **ANAÏS TONDEUR** is also linked to the origins of scientific photography and the subject of radioactivity. Since 2011 she has exposed irradiated plants growing in the Exclusion zone on light-sensitive paper and through this process **addresses the issue of visibility on several levels. She is mainly interested in subtly capturing the tragedy as something that is inherently uncapturable**. Through the plant bodies, she considers *"the nuclear catastrophe in its etymological sense as an overturning, a disruption, of which Chernobyl is the sign"*.

The Chernobyl Herbarium currently contains 36 rayograms, one for each year that has passed since the Chernobyl disaster. Additionally, 2019 saw current events creep into the **visualization of time passing**: the Covid-19 pandemic prevented Tondeur from reaching a new plant, and so she used the second fragment of the series as a negative to create a new print. In 2022, she covered the light-sensitive layer with irradiated soil as Russian soldiers began to dig trenches in the radioactive soil of the Exclusion zone.

The images presented in the exhibition are pigment print reproductions of the original rayograms, which are themselves preserved in a lead box because of radiation. The works in the exhibition thus represents the inaccessible rayograms which serve as representations of the contained area.

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The mid-1980s runs through the exhibition like an imaginary dividing line. All of the prints documented by Netočný were published before the Chernobyl accident and, with one exception, reflect the modernist optimism that comes with exploring uncharted territory and grasping its potential. On the other hand, *The Chernobyl Herbarium* is critical of the project and underlines its drawbacks and risks. **The practical applications** of the plan for the peaceful use of atomic energy are then explored by **VOJTĚCH RADAKULAN**. His two pieces centre on the two **Czech nuclear power plants** that were built at the turn of the 1970s and 1980s and then were put into operation with a greater or lesser time lag.

In the older project called *Nebula Core* Radakulan is gradually approaching Temelín.

The atomic power plant lights up our bulbs and recharges our equipment, despite the fact that we frequently have a hazy understanding of how it operates. The view from the outside offers several different perspectives – **the atomic core can appear as a toxic and potentially hazardous resource, a supernatural and incomprehensible force, or an object of almost religious devotion**. The artist eventually enters the plant and, through the visitor centre, even take us into its bowels – the reactor itself, depicted for us in 3D models.

The Green Stone is based on the story of the former kulak Plíšek and his atomic stove.

> Mr. Plíšek took the reports about atomic heating seriously and decided to launch his own atomic stove even before the Dalešice valley was flooded and the Dukovany power plant was launched. He is alleged to have acquired the pitchblende (uranium and radium ore) at the transshipment site close to Okříšky, as did those who filled their cellars with it to prevent potatoes from sprouting and to make it easier to navigate in the dark. Plíšek properly melted the stove, loaded it with coal, then coke, and finally pitchblende. In the morning, when when the stove was still blazing he congratulated himself on his cunningness.
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> There are even rumours that, prior to the plant's construction, the Austrian Greens measured increased radioactive fallout in the region. Our narrator could not confirm whether this was actually the case or to what extent Mr. Plíšek's released atoms contributed to it.

Based on this story and other narrations about the flooded mill at the bottom of the Dalešice dam, where pink currants were said to grow, Radakulan built an interactive installation. Through our interaction with the inanimate green stone, we answer a series of questions and our decisions influence the landscape of our sto ry, **a playful exaggeration embodies here the ambivalence of the entire project of the peaceful use of atomic energy**. Will the stone remain hidden underground, the atoms in the pitchblende and the sprouts in the potatoes, or will we reject the cold, flood the valley, and let the old mill with gardens full of currants disappear underwater?

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The photographs and installations by Netočný, Tondeur, and Radakulan are related the modernist release of an atom's latent energy and its application to the creation of a better future. A future that we are living today and that doesn't seem so bright. The artworks exhibited don't just look back in time; rather, by examining recent history, they connect above all to the present and, in a way, to the question of what kind of past we will one day represent.

List of works:
Martin Netočný, Active Others, 2023
Photo © Matin Netočný–Institute of Art History, Czech Academy of Sciences
digital prints

Vojtěch Radakulan, Nebula Core, 2016
3D animated video, installation

Vojtěch Radakulan, Zelený kámen (Green Stone), 2023
3D animated interactive game, installation

Anaïs Tondeur, Chernobyl Herbarium, 2011–ongoing
36 rayograms, pigment print on paper

The story about the atomic stove of the former kulak Plíšek was told by Zdeněk Kratochvíl.

Acknowledgement: Cristina Ferraiuolo, Markéta Kinterová, Zdeněk a Marie Kratochvílovi, Jan Maštera, Vojtěch Märc, Tereza Rudolf, Michal Sloboda (Státní ústav radiační ochrany, v. v. i.), Petr Tureček

David, Janek, Josef, Ondřej, Václav a Milena

Curated by: Viktorie Vítů
Production: Pavel Matěj
Technical production: Jakub Prašivka, Jakub Tulinger
Marketing, communication: Jan Hladonk
Social media: Tereza Vacková
Director of Fotograf: Markéta Kinterová
Fundraisign & executive manager: Marie Rozmánková
Proofreading: Reena Sattar

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Accompanying program
30. 3., 18:00 – guided tour with Viktorie Vítů
1. 4., 14:00 – workshop for kids: fotograms and radiograms

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