

Her Name is Prometheus

Yelena Popova's 'Townlets' (2018) is many things. It is an artwork, a performance, a game and a competition. 'Townlets' stages the dynamic of creation and destruction that defines human history. A set of curved shapes and rods cut from yellow-and-black striped foam, 'Townlets' is an adaptation of the medieval Russian folk game of *Gorodki*, in which players build structures and then attempt to topple them with a wooden puck. Popova has imagined examples of such structures in a series of unique woodblock prints, in which the precarious equilibrium of the structures is palpable. The game's aesthetic makes reference to the visual culture of nuclear technology. When flat-packed, the full set of 'Townlets' shapes resembles the schematic drawing of an atom of plutonium, while its colour scheme is appropriated from the international warning symbol for radiation. As a sculpture at rest, 'Townlets' might seem innocent and fun, but when it is activated through play, it also operates as an allegory for a cycle of human achievement and destruction.

Popova's interest in nuclear culture has a personal angle; she grew up in the town of Ozyorsk, the birthplace of the post-WWII Soviet nuclear weapons program. Alongside her research and work in this area, Popova continues to paint in a style rooted in the modernist formal language that evolved alongside nuclear technology. In their arrangement of curvilinear shapes balancing on top of one another, her paintings, which she creates freehand but with machine precision, share a sense of play and equilibrium with 'Townlets'. When she paints, Popova privileges process over product, pursuing a rigorous discipline in which mental and physical activity meet in a gesture that involves rhythm and dance-like repetitive movements.

In developing 'Townlets', Popova was guided by a specific question: 'How do you take a diagram of the active material in the Bomb – which represents the highest point of competition between two nations – and turn it into something non-competitive?' With 'Townlets', Popova invites people to transgress gallery etiquette by handling – and playing with – the art. Artists are used to thorough physical engagement with their work, but inviting an audience to touch it breaks a taboo, which, in the case of 'Townlets', marks the first step towards having fun in an environment that tends to be highly regulated. Popova asks us to embrace our nature as 'Homo Ludens', or 'playing humans', a characterisation of our species proposed by the Dutch historian and cultural theorist Johan Huizinga in his 1938 book 'Homo Ludens'. Huizinga argues that play is a primary and necessary condition for the generation of culture. Further realizing the work's potential, Popova recently took 'Townlets' to a swimming pool, where it became a floating sculptural set for a proposed synchronized-swimming performance entitled 'Her Name is Prometheus'.

Reimagining games and sport as non-conflictual activities – as Townlets does – might be one way to develop an alternative model of progress, replacing combat with collaboration. The Danish Situationist Asger Jorn's three-sided football, which is played by three teams on a hexagonal field with three goals, is another example of such an approach. The winner is the team that concedes the fewest goals, rather than the one that scores the most. Working against the traditional bipolar structure of the game, three-sided

football facilitates a distributed sense of competition, in which a given team collaborates now with one opposing side, now with another.

* * *

On a terrace behind the British library, energized by the late summer sun, Popova weaves together a narrative of the ancient and modern myths that inspired these recent works. Her story draws arabesques over the nuclear physicist Lise Meitner, sweeping around the scientist and spy Klaus Fuchs, and gliding far back to the ancient Greek Titan Prometheus, whose gift of fire to humans, in defiance of the Gods, enabled progress and civilization on Earth. For his disobedience Prometheus was sentenced to eternal torment, bound to a rock and made prey to a vulture, which daily fed on his liver. Prometheus, whose name means 'forethought', has come to symbolize humankind's striving for knowledge, especially in the sciences. But his story also signals the dangers of unintended consequences arising from the ceaseless push for scientific advancement.

As for the mere mortals in Popova's tale: Lise Meitner, born in Vienna in 1878, was passionate about science as a child, keeping a notebook of her research activities under her pillow. After moving to Berlin to pursue a scientific career, in 1926 she became the first woman in Germany to achieve the grade of Professor of Physics. She led the small research group that discovered the nuclear fission of uranium, arguably the most influential scientific breakthrough of the 20th century, which gave rise to the twin pursuits of nuclear energy and nuclear weapons. When Meitner was invited to be part of the Manhattan Project, the joint effort led by the United States and Canada that resulted in the first nuclear weapons, she declared 'I will have nothing to do with the bomb!', seeing that the endeavour would result in disaster. With that kind of forethought, her name could have been Prometheus. Yet, as in the original myth, higher forces than Meitner's would have their way and her pacifist resistance would ultimately lose out.

Between 2016 and 2017, Popova spent a year as artist in residence at Girton College, Cambridge, the first women's college in the UK, founded in 1869. During this time she created 'For Mind,

Body and Spirit' (2017), her first jacquard woven tapestry, in which a series of small and large brightly coloured and patterned circles are framed by a rectangle. Together, the shapes evoke the circle and square that define human proportions in Leonardo Da Vinci's Vitruvian Man. Popova has used a version of the Girton tapestry to upholster a chair, retrieved from the College, and dedicated to Lise Meitner. I like to visualise Meitner sitting in the chair and taking a moment to reflect on the fate of humankind and her complex historical legacy. Popova's latest tapestry, 'One neutron too many (U238>PU239)' (2018), is based on diagrams of the relatively weak uranium used in nuclear fuel and the highly-radioactive plutonium used in nuclear weapons, which differ by just one neutron, a seemingly minute disparity that has major potential consequences for our species. With its multiple rays and waves appearing to emanate from the central circles, it evokes the intensity of its subject: plutonium can have a half-life of up to 373,000 years, which far exceeds the history of human civilization.

Klaus Fuchs, the second nuclear scientist in Popova's tale, responded to the Manhattan Project's invitation with a yes. Born in 1911, Fuchs was taunted at school for being a 'red fox' on account of his father's Communist views. A young communist himself, Fuchs fled Germany in 1933, arriving in the UK, where he completed his studies in theoretical physics and applied for citizenship. When the Second World War broke out, he was interned in prisoner of war camps, but continued to work and to publish his research throughout his internment. On his return to Britain in 1941, Fuchs began working on the British atomic bomb project. In 1943, Fuchs travelled to the United States to work on the Manhattan Project. During this time, in a Promethean gesture, he handed information about his research to the Soviet Union, and in 1950 he was convicted of breaking the Official Secrets Act and detained for nine years in HM Prison Wakefield. During his imprisonment, Fuchs's advanced knowledge and abilities meant that he was kept under surveillance by the FBI and consulted by British researchers including Sir William Penny, the head of the British H-Bomb project.

Popova sees Fuchs's actions as the expression of a tendency common to researchers in all fields: the desire to share new

knowledge with international colleagues in the interest of progress. Fuchs said yes to the nuclear project, playing his part in the devastation of Hiroshima and Nagasaki, and in the long-term consequences of nuclear armament across the globe. There is a bitter paradox at the heart of nuclear science: humans have harnessed the promethean potential of atomic energy to cause unbearable atrocities and division, yet nothing unites the world in horror quite like a nuclear attack or accident. Popova has applied to formally commemorate Fuchs's incarceration in the UK with a historic blue plaque, which she would like to see installed above the entrance to HM Prison Wakefield. She has imagined this tribute in the gallery with her version of a blue plaque. It's her way of beginning to address some of the thorny moral issues around nationalism, scientific progress and human nature, and to remember how we arrived at where we are today, when the friction between East and West is once again aggravated by the issue of spying.

Popova's work revives the stories and ideas of scientists and innovators, animating them in a variety of ways. Some works, such as the 'Lise Meitner' chair and the blue plaque dedicated to Klaus Fuchs, ask us to remember those whose ideas catalysed change, for better and worse. Others, like 'Townlets' and the propositional performance 'Her Name is Prometheus', challenge us to examine our preconceptions and to enjoy new experiences by handling and playing with art. All are part of a tool kit with which the artist continues to explore the major and minor strands of history and progress in order to better understand the present and move forward into an enlightened future.

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Printed on the occasion of the exhibition:

Yelena Popova
Her Name is Prometheus
21 September – 3 November 2018

With thanks to Division of Labour and Arts Council England



Supported using public funding by

**ARTS COUNCIL
ENGLAND**

Proposal

I propose a synchronised swimming* and dance performance, based on the timeless myth of Prometheus and the modern history of nuclear physics.

If Prometheus, the mighty Titan who stole fire from the Gods, had been a woman, the story of scientific progress could have been different. Prometheus would not be a lone genius, but a mighty sisterhood capable of inhaling injustice and breathing fire. Exhausted by their role as a symbol of scientific progress Prometheus attempts to adjust to the Perpetual Uncertainty** of our nuclear age. Ultimately, falling into the cracks of deep time, Prometheus mutates becoming the chemical element Promethium147 in an atomic pacemaker for an aging Homo Deus***. My sculpture *Townlets* depicts an atom of Plutonium, the vicious man-made material that was said to give humankind the power of God. *Townlets* is proposed as a floating set or a collection of bulky props for performers to interact with. Meanwhile, the mounting tonnes of toxic Plutonium present a hazard to the earth's biosphere for the next 8 million years.


Yelena Popova

Artist, born under USSR's nuclear shield

* Synchronised swimming first emerged in the 1890's as water ballet. Today it's celebrated as a sport in which swimmers perform synchronised routines, figures, strokes, tricks and floating formations, either solo, duet or in a team. In 2017 synchronised swimming was renamed 'artistic swimming'. Currently synchronised swimming is the only sport in which men are not allowed to compete in in the Olympic games.

** 'Perpetual Uncertainty: Art in the Nuclear Anthropocene' was the title of a large group exhibition investigating art and radiation curated by Dr Ele Carpenter for Bildmuseet, Umea University, Sweden touring to Z33 House of Contemporary Art, Hasselt, Belgium and Malmo Konstmuseum, Sweden. The exhibition was accompanied by a publication: *The Nuclear Culture Source Book* (Carpenter, 2016). Yelena Popova's artwork was featured in both the book and exhibition.

*** Homo Deus (Human God from Latin) is taken from *Homo Deus: A Brief History of Tomorrow* (2017) by Yuval Noah Harari, which describes the abilities and achievements of Homo Sapiens and attempts to paint an image of the future.



It is dawn, and the morning's air is freshly moist, gestating, anticipating. It absorbs all the sounds and soaks up every tiny motion, flowing heavily and smoothly across the voluptuous horizon. The morning is ripe with desire.

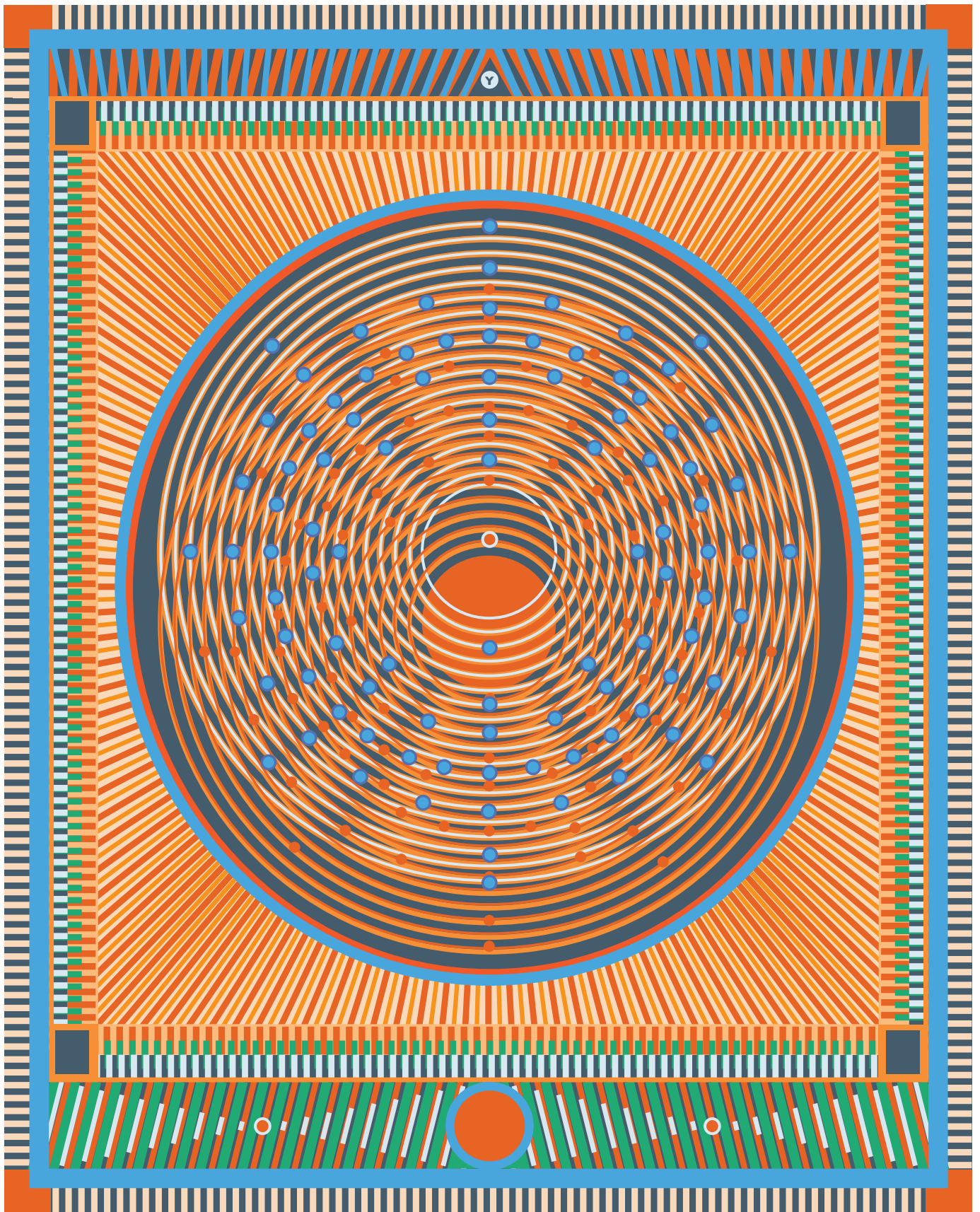
Studious adherents of Ancient Greek cosmology, ardent disciples of Aristotle, we are accustomed to breaking down all matter into four basic elements, seeking and ultimately finding some essential difference in all materials and substances around. But as one looks closer, it becomes apparent there is nothing but water disguised under various forms – this morning's world has come out of and is made up of water, bleeding from the continuous outpour of life: drip, drip, drip.

The water droplets enter the soundscape one by one: we watch them attentively: not as they fall and hit the ground, but as they fly – withdrawing unwillingly from their cloud source, struggling against the gravitational pull, resisting to dribble, protesting against the big splash... Yet, giving up finally and learning quickly to enjoy the plummet, as they fall faster and faster, whirling, turning, spinning, bouncing off playfully as they reach the mother earth – only to fall back into her embrace a nano-second later.

Water is of women: starting from the amniotic fluid that supports life in the womb, to wild springs flowing down mountainous slopes, where the gods are born. Water is the ultimate source of creation, only one step behind from the beginning of the beginning. Water is the ultimate carrier, the dissolver, the destroyer, but also the mother of all. Water is collective, gifting, sharing. Water is of women.

At dawn, an estranged hero Prometheus sets off to question his or her fate prescribed by Hesiod, seeking to evade the flames of progress and pain, searching instead for the watery home – where the mother Oceanid's embrace awaits. Prometheus departs on a journey away from gods, away from humans and their petty needs and selfish goals, discovering and rediscovering the water instead – the absolute feminine, the progenitor of all that is progress and regress, evolution and collapse, transformation and decay. Prometheus sets to reinvent her Fate.

Aliya Say, writer, plant enthusiast and dancing mermaid, 2018



Above: Yelena Popova, *One Too Many (U238>Pu239)*, 2018, design for jaquard woven tapestry

Right: Yelena Popova, *Model Kit*, 2018, painting installation (detail)

Cover image of exhibition: Yelena Popova, *Townlets*, 2018, Gallery floor game / Sculpture, and *Model Kit*, 2018, distemper on canvas

