A Space Mission: Artists reflecting on gravity by its absence

Ale de la Puente
Arcángelo Constantini
Fabiola Torres-Alzaga
Gilberto Esparza
Iván Puig
Juan José Díaz Infante
Marcela Armas
Miguel Alcubierre
Nahum
Tania Candiani
Zero Gravity:
A silent question

When we are born we pass in an instant from the dark to the light, from weightlessness to heaviness; here is our first contact with life. In dreams we remember this primitive state of lightness and so we dream of flying. Our planet and its life are moulded by gravity and yet this force is the weakest in the universe. We find its mysterious presence in our bodies, in our language and we fight against it to grow and to reach the stars.

Matters of Gravity (La Gravedad de los Asuntos) highlights the fundamental principles of humankind. With a lightness to be able to fly together, but with a gravity that inevitably makes us fall again. Every one of us, here on Earth, is attached to a force that goes beyond all comprehension but not beyond our lives.

Two years of reflection and a few seconds in zero gravity, were the origins of a series of artist works that have been completed at the Yuri Gagarin Cosmonaut Training Centre in Star City, Russia. There, on board the iconic Ilyushin 76 MDK, 9 artists and 1 scientist from Mexico were subject to an environment of weightlessness.

A few seconds were enough to experience eternity, to tell a story, to break a paradigm, to liberate a molecule, to have an illusion, to experience movement without references, to create poetry out of falling bodies, to make the useless become useful and to search for the impossible embrace.

Nahum Ale de la Puente
Director

Ale de la Puente
Artistic Director
“The capacity to structure an imaginal machine is not necessarily based on the feasibility of enacting the ideas contained within it, but rather in acting as a compositional point for collective social desires.” - Stevphen Shukaitis, Space is the Non-Place

“We don’t think it is worth all the effort of getting into space just to live by the same rules as on earth. What attracts us to space exploration is the possibility of doing things differently.” - Autonomous Association of Astronauts

Since the beginning of human history, outer space has served as a powerful screen upon which to project our collective social and cultural imaginaries. It is central to the mythologies of civilizations around the globe and to the conceptual landscape of contemporary art and literature, where utopias and dystopias have been envisioned in equal measure. Our expanding universe has proven to be relentlessly mysterious and unknowable, creating a territory of possibility and potential that extends as far as our minds are willing to go.

Despite its power to ignite our collective imagination, the structures for exploring and understanding space too often replicate the limited historic, political and relational possibilities offered here on earth. During the 20th century, space became an ideological battleground for the Cold War, and in the 21st century it offers the fantasy of an endless frontier for the expansion of global capitalism. Most recently space exploration has served as a powerful marker of modernity for developing nations like India and China. Space travel and technology, like much of modern life, has stayed largely rooted in the domains of national security and commercial enterprise. The average person is increasingly estranged from the night sky, and only a very wealthy few will participate in any version of space travel that is currently on the horizon. The present-day exploration of space by nations and corporations has left little room for chaos, meditation or play. There is not much unbridled ecstasy. There are few embraces.

The central question posed by Matters Of Gravity is what happens when, for a few moments in time, we take a calculated risk to let go of the certainties that regulate our daily lives? To answer that question, the Gravity artists underwent a more than two-year-long process of exploration, conversation and research into the science and fiction of space, culminating in a parabolic flight in the fall of 2014. During this flight, the artists repeatedly entered into an orchestrated free-fall that provided them with a momentary release from the weight of their bodies and the rules of gravity that had previously governed their physical beings. They used the experience of this collective free falling as both catalyst and metaphor in a series of experiments, actions and interchanges that together begin to hint at what is possible when we are freed, even momentarily, from the structures and laws of our everyday existence.

Kerry Doyle
Curatorial Advisor
Different Gravities

Almost 25 years ago the artist and choreographer Kitsou was making an exploratory visit to the NASA facility where they operated what they called the ‘vomit comet’, used for training astronauts for zero gravity. She wanted to experience dance in weightlessness, ‘apesanteur’ in French. No way, recounts Dubois. “I was French, a woman and a dancer”. Kitsou Dubois went on to make history, undertaking the first ever parabolic flight by an arts practitioner in 1990 in the French Space Agency’s Caravelle, but her first setback was a stark reminder of how ‘difference’ was resisted by conventional views of the space agencies. The white, North American heterosexual hero, typified by Apollo was still the norm for astronaut training and the only way to get a taste of zero gravity then was to train as an astronaut.

Nearly 25 years on I am talking to Nahum in Mexico City about another kind of difference - the different gravities experienced during a zero gravity flight. He, along with artist and co-director Ale De La Puente, has just organised Matters Of Gravity - the first ever all Latin American zero gravity flight by artists in Russia’s Star City. Nahum points out that the team experienced 40 different gravity changes during the 10 parabola flight – normal gravity, double gravity and zero gravity. Each parabola starts with normal gravity, goes to double gravity, followed by 30 seconds of zero gravity, then double, then normal again. It is interesting. I theorise that the qualities of different gravity became interesting when artists began to use these flights. Before this, the zero gravity flight was looked on as a poor substitute and training programme for the real thing – continuous free-fall zero gravity experienced in orbit.

First, a very brief history of art in zero gravity. After Dubois’s flight, more or less simultaneously two movements began either side of the Atlantic. In Russia, theatre director Dragan Zhivadinov, part of the NSK group, famous for issuing their own Slovenian passports before the breakup of Yugoslavia, pioneered the use of the Russian Ilyushin MDK 76 jet, a massive former tank transporter converted to dive through the air creating an enormous space for weightlessness. Together with artist Marko Peljhan, he created the first ever theatre performance in zero gravity, complete with costumes props and an actual audience floating on theatre seats. I was to experience zero gravity on a test flight for this performance in 1999. Meanwhile the US painter Frank Pietronigro had finally persuaded NASA to allow his team from the San Francisco Art Institute to fly and for him to paint the first paintings in weightlessness. This was nearly cancelled when NASA discovered Pietronigro had incorporated a gay pride activity (an apparently innocent fan dance, iconic in gay clubs in San Francisco) into his flight plan. Next, the UK science-art organisation,
The Arts Catalyst, following Zhivadinov, with Peljhan as flight director, organised three sustained campaigns in Star City, flying over 50 artists and scientists during five flights, with multidisciplinary and multicultural objectives, chosen from mainly open calls, including flying a robot, a giant exoskeleton, a sound performance by former members of the Black Audio Film collective, a philosopher and a couple of guys flying a magic carpet. After having personally shown that anyone could do this in 1999 (I had no training or preparation) I acted as ground crew, writer and videographer on all these campaigns. This intensive 3 year period could be said to have gone a long way to democratise the zero gravity experience.

A number of other campaigns took place in Star City, mainly organised by Peljhan with a number of ‘firsts’. The spacesuit designer and artist Bradley Pitts performed the first solo naked parabolic flight. The maverick UK artist Lyn Hagen, partly fulfilled her ambitions to have a cat chase a mouse in zero gravity. The prosthetically-altered Stelarc travelled to Star City but failed the medical. Laurie Anderson visited the facility (again with The Arts Catalyst) and made an exhibition about it. In 2011 The transgressive burlesque artist Empress Stah made a zero gravity performance on the Zero Gravity Corporation’s plane in the US in a new series of flights pioneered by Frank Pietronigro and Lowry Burgess. Kitsou Dubois was flown a number of times by the European Space agency and now trains astronauts. So ‘difference’ was beginning to be accepted in space training finally, and the way is clearly open for diverse activities in zero gravity.

Finally, the team of 9 artists from Mexico, after 2 years of preparations and many setbacks, managed, in the face of a complete shutdown of Star City to foreign companies due to tension in Ukraine, to work with the German company Space Affairs to successfully fly 12 ambitious projects in the Ilyushin. I asked him how it felt to finally get there? “Even after all that time of talking to people who had been there, it wasn’t possible to imagine what it could be like, to be in zero gravity. It was...strange. I am a magician, and as a magician you are always in control. The loss of control is terrifying.”

The problems in Ukraine were not the only context the crew were dealing with. When they left Mexico, the long history of violence and oppression in Mexico, the collusion between corrupt governments and drug cartels combined with the US war on drugs, was still relatively under wraps. During the 10 days they were in Moscow, the fate of the 43 missing students was discovered, and by the time they got back the country was transformed with mass shutdowns, enormous demonstrations and popular outbursts of rage.

For them, floating in Zero Gravity there is a parallel to the fate of Sergei Krikalev, cosmonaut and the ‘last Soviet citizen’ who went up to the MIR space station from the Soviet Union, was stranded during the changes and the attempted coup and returned to another country, Russia. Juan Diaz Infante: “When we left Mexico and when we came back, Mexico was two different countries. We were doing a totally different reality than was happening in our country. When we came back we had climbed Everest, but Mexico was in a very dark place.”

Different gravities, different kinds of people in zero gravity and now a different country.

Rob La Frenais
Curatorial Advisor
Artists

Ale de la Puente
Arcángelo Constantini
Fabiola Torres-Alzaga
Gilberto Esparza
Iván Puig
Juan José Díaz Infante
Marcela Armas
Nahum
Tania Candiani
Process

Two years of preparations that included: seminars, workshops, symposiums about gravity, training in a funfair in Mexico City, intense medical check-ups, final training sessions at Star City in Russia and zero gravity flight.

The process for Matters Of Gravity went beyond simple preparations: our human condition was brought face to face with the technological and scientific knowledge of our time.
Seminars & Workshops
2012 - 2014
Funfair Arts Residency

2013
Funfair Arts Residency
2013
Medical Check-ups

2014
Training - Star City, Russia

2014
Training - Star City, Russia

2014
Training - Star City, Russia

2014
Training - Star City, Russia
2014
Zero Gravity Flight - Star City, Russia

2014
Zero Gravity Flight - Star City, Russia

2014
Zero Gravity Flight - Star City, Russia
2014
Zero Gravity Flight - Star City, Russia
2014
Artworks

After two years of preparations where all the projects and their artworks were devised, the pieces were produced during the zero gravity flight. The results will be exhibited in a series of international exhibitions. The first leg of the touring show includes:

**Laboratorio Arte Alameda**  
Mexico City / Jan - Mar 2015

**Polytechnic Museum**  
Moscow / Mar - Apr 2015

**European Cultural Centre For Space Technologies (KSEVT)**  
Vitanje, Slovenia / Jul - Sep 2015

**Rubin Center, University of Texas**  
El Paso, Texas / Nov 2015 - Feb 2016
Nucleus
Collective Piece

Expectations of an unknown environment that apparently failed to become another reality. Free falling in emptiness - what are the options? Just embracing one another, creating a nucleus, a body, a whole new planet with an affective gravity.
...And Earth Is In Zero Gravity
by Ale de la Puente
...And Earth Is In Zero Gravity
by Ale de la Puente

A planet Earth in zero gravity inside another Earth in zero gravity too. This globe was released during the parabolas in order to let it lose its weight to float freely around. Abandoned to forces (both cosmonauts and artists) the globe revolved in expected and unexpected ways, materialising mythology and creating an image of the invisible fate of our planet.
Geopsy
by Marcela Armas
Geopsy
by Marcela Armas

Is it possible to think of gravity as a determining vector in the writing of history? Considering that gravity participates in the formation of the geological writing of the Earth, in every phenomenon that influences the way in which the matter of the universe and its regions are organised. Geology discovers registers of time-space that allows a broader reading of the conditions and the changes of life on the planet. To extract a geological sample—a geopsy—from terrestrial tissue, meaning, from the interior of a system of conditions, implies incorporating it into a new system of values where gravity operates in a different way. When taking a geopsy in conditions of zero gravity, questions are formulated about the relative weight of things and the possibility of thinking and believing that other forms of writing history are conceivable, but especially, of allowing ourselves to face historical events.
Espherica
by Arcángelo Constantini

Analysis of water’s behaviour in free fall, to observe the formation of liquid spheres and to analysis its structure under the influence of oscillatory electro-magnetic fields based on the Schuman resonance and its harmonics. This project asks aesthetical, hypothetical, conceptual and theoretical questions about the water molecule, how forces of nature, such as gravity affect its behaviour and in consequence our relationship with water, from our surroundings to the interior of our own body.
An Infinity Without Destiny
by Ale de la Puente
An Infinity Without Destiny
by Ale de la Puente

The speed in which we perceive time in everyday life depends on the gravity of our circumstances. In an environment of zero gravity, disorientation is spatial and temporal. Time passes by unnoticed, creating the illusion of a brief eternity. If we perceive time as an entity able to exercise its will, even able to define the randomness of events and what will come about, then the force of gravity is its accomplice in how we perceive the passage of time. In gravity’s absence, time binds itself up.
Tide At 0.1428 Hz  
by Gilberto Esparza

Forms of movement that give place to poetic images. From the experience of navigating in a space without references, where the movement of the objects and particles in a space without gravity is the origin of an investigation focussed on the possibilities of inhabiting unknown places. On this occasion a box with pebbles was located at the back of the spacecraft – a place well known for having erratic changes of gravity. The result is an unexpected series of tidal forces on the diminutive rocks oscillating in a seemingly pattern.
Paradigmatic desintegration
by Iván Puig
Paradigmatic desintegration by Iván Puig

The possibility that a “truth” so absolute, dissolves in front of our eyes, is fascinating. The project makes visible the experience in zero gravity as a reflection that confronts other systems of beliefs that we assume are immovable.
Flight Motors
by Tania Candiani

The Ilyushin 76 MDK is a four-engine airplane designed for military purposes in 1967 in the former Soviet Union. Because of its sturdy fuselage this model was ideal for zero gravity flights. Flight Motors, is a 6-channel sound piece that reproduces a detailed recording of the motors of the airplane, capturing the point where they are switched off to produce zero gravity.
Machine For Flying. Besnier 1673
by Tania Candiani
Machine For Flying
Besnier 1673
by Tania Candiani

The project is based on pioneering anti-gravitational devices. Marvellous inventions that were ahead of their time. Independent from their success or failure they are part of the continuous human research to defeat forces that condition our existence. Artefacts designed to make possible the dream of flying challenging gravity and the human body itself. The project consists of reconstructing artefacts which failed their original objectives and in an environment of micro-gravity granting them the possibility to be successful. Perhaps at the time of their conception, they were simply in the wrong gravity.
Me-Paradigm
by Iván Puig

In conditions of zero gravity one of the biological paradigms more intimately bound to the definition of our existence and the existence of everything we know of this planet disintegrates. The body as we know it changes and we experience mental and physical alterations by breaking the paradigm of our bodies.
Your Body, My Body
by Juan José Díaz Infante

Three dimensional poem designed to activate in zero gravity: Your body, my body. A poem about bodies, all bodies and the forces that interact above and between them. It is a model that reflects on a force. Gravity does not exist without the presence of a body and it requires inevitably the other as the actor of that scene. Your body, my body is the whole text of the poem, everything else is geographies, distances, angles, resonances and movement. The poem is a geography, it is its process, its history.
Staging The Scene
by Fabiola Torres-Alzaga
Staging The Scene
by Fabiola Torres-Alzaga

An attempt to inhabit gravity backwards. Space without gravity was different, far from finding itself walking on an inverse space, it was found as an end to itself. A time that was extended and a space without orientation. The innumerable views of the same point. That’s how a project starts to deal with the idea of the open work. To search for a way of representing a weightless experience on the Earth approaching what gravity makes impossible of recreating or visualising. Are simulations a way of understanding what is real? An exercise of representing the memory of a weightless experience in its theatrical and cinematographic translation. The ways that we have of simulating to get closer to ways of reality far from the everyday.
Holding Air
by Nahum
Holding Air
by Nahum

We are beings that affect and give affection. While the future of our species may be found in distant places with different gravities, how will our emotions interact with our bodies? An impossible embrace that turns into a point of support and that vanishes with air. This piece reflects on the physical and emotional contact of the human in an environment that is only possible in dreams and in the stars.
Supernova
by Ale de la Puente, Juan José Díaz Infante, Nahum & Tania Candiani
Supernova, a star that has exploded creates such conditions where some of the fundamental bricks of life are created to be distributed to the universe. A Mexican piñata is a star-shaped object meant to be smashed to give away its contents to the participants. In zero gravity, the piñata’s contents don’t fall on the ground, instead, they fly to all possible directions behaving as a supernova. A metaphor of cosmic traditions.
Exhibition Views

Laboratorio Arte Alameda Mexico City / Jan - Mar 2015
Exhibition Views

Laboratorio Arte Alameda Mexico City / Jan - Mar 2015
Exhibition Views
Laboratorio Arte Alameda Mexico City / Jan - Mar 2015

Gravedad Cero:
Una pregunta silenciosa

Cuando nacemos pasamos en un instante de la oscuridad a la luz, de la ingravidez a la gravedad – aquí nuestro primer contacto con la vida. En las sueños recordamos este estado primitivo de levedad y vuelve sonámos con volver. Nuestro planeta y su vida están modelados por la gravedad y sin embargo, esta fuerza es la más débil en el universo. Encontramos su inefable presencia en nuestros cuerpos, en el lenguaje y la combustión para crecer y llegar a las estrellas.

La Gravedad de los Asuntos apunta a los temas fundamentales de lo humano. Con la ligereza para poder volar juntos, pero con la gravedad de que inevitablemente advenemos a caer. Todos los que estamos aquí, en la Tierra, estamos sujetos a una fuerza que va más allá de nuestra comprensión pero no de nuestras vidas.

Dos años de reflexión y unos segundos en gravedad cero, dan origen a una serie de obras artísticas que se han realizado en el Centro de Enseñamiento para Cosmonautas Yuri Gagarin en Rusia. Allí, a bordo del iconico y legendario MIR, nuevos artistas y un cierto número de mexicanos pudieron someterse a un ambiente de ingravidez.

Bastaron unos segundos en gravedad cero para experimentar la eternidad, dar cuenta de una historia, remplazar un paradigma, liberar una molécula, tejer una ilusión, experimentar el movimiento sin referencias, hacer de dos cuerpos poesía, para que la muerte se haga útil y buscar el abrazo imposible.

Director: Nahum
Director Artístico: Ale de la Puente
Exhibition Views
Laboratorio Arte Alameda Mexico City / Jan - Mar 2015
Exhibition Views

Laboratorio Arte Alameda Mexico City / Jan - Mar 2015
Appendix

Exhibition views, directors’ biographies, credits & thanks, contact details and more information.
Credits & Thanks

Artists
Ale de la Puente
Arcángel Constantini
Fabiola Torres-Alzaga
Gilberto Esparza
Iván Puig
Juan José Díaz Infante
Marcela Armas
Nahum
Tania Candiani

Director
Nahum

Artistic Director
Ale de la Puente

Curatorial Advisors
Kerry Doyle
Rob La Frenais

Planning Collaborator
Juan José Díaz Infante

Scientific Advisor
Miguel Alcubierre

Mission Director, Yuri Gagarin Cosmonaut Training Centre, Space Affairs
Andreas P. Bergweiler

Branding & Graphic Design
Marina Corach

Special Advisors & Collaborators
Jens Hauser, Jesús González y González, Nicola Triscott,
Marko Peljhan, Roger Malina

Supporting Organisations
Consejo Nacional para la Cultura y las Artes
Instituto Nacional de Bellas Artes
Agencia Mexicana de Cooperación Internacional para el Desarrollo Secretaría de Relaciones Exteriores Laboratorio Arte Alameda Centro de Cultura Digital Centro Multimedia, Centro Nacional de las Artes Fondo Nacional para la Cultura y las Artes Fundación Telefónica Fundación BBVA Bancomer Fundación INBA

Partner Organisations
The Arts Catalyst
Space Affairs
International Astronautical Federation Technical Activities Committee for the Cultural Utilisations of Space (ITACCUS)
Instituto de Ciencias Nucleares, UNAM
Instituto de Astronomía, UNAM
Embassy of Mexico in the Russian Federation
Instituto Nacional de Ciencias Médicas y Nutrición
Salvador Zubirán
Fundación Alumnos 47
CIBanco
Polytechnic Museum, Moscow
Yuri Gagarin Cosmonaut Training Centre ROSCOSMOS
Stanlee & Gerald Rubin Center For The Visual Arts European Cultural Centre For Space Technologies (KSEVT)
Six Flags México

Matters Of Gravity Give Thanks To
Alberto Guijosa, Atanacio Pani Cielo, Daniel Sánchez Taza, David Romero, Dyan Del Rivero, Gabriela Frías, Gala Eibenshutz, Jessica Berlanga, Jordi Funtanet, Jorge Reynoso, José Franco, Miha Tursic, Natalia Fuchs, Rubén Beltrán, Wyvern Bindery, & to all the pilots, instructors and cosmonauts of the Ilyushin 76 MDK at Star City.

The Artists Give Thanks To

Special Thanks To
Alejandro Almazán, Alejandro Roman y Adriana de la Puente, Alfredo Laborie, Alfonso Martínez, Antonio Farré, Arturo Talavera, Bernardo Márquez y Laura Carriazes, Carlos Pacheco y Alejandra Kiewek, David Ramirez Chávez, Ercilia Gómez Maqueo, Fabián Arnaud, Francisco y Andrea Laris, Bárbara Xacur y José Manuel Azpiroz y Susana Pliego.

Posthumous Thanks To
Albert Einstein, Carlo Michelstaedter, Herman Potočnik, Isaac Newton, Konstantin Tsolokovsky, Valentina Tereshkova y Yuri Gagarin.
Contact Details & More

Email
info@lagravedad.com

Website
www.lagravedad.com

Facebook
www.facebook.com/LaGravedadDeLosAsuntos

Twitter
#LaGravedad

Videos
What is Matters Of Gravity? (Spanish)
https://vimeo.com/121326546

Laboratorio Arte Alameda Exhibition Opening
https://vimeo.com/120495046

Laboratorio Arte Alameda Exhibition Teaser
https://vimeo.com/116825061
Thanks for watching!

2015 Matters Of Gravity / La Gravedad de los Asuntos